ITU-T

H.846

TELECOMMUNICATION STANDARDIZATION SECTOR OF ITU (11/2019)

SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS

E-health multimedia systems, services and applications – Interoperability compliance testing of personal health systems (HRN, PAN, LAN, TAN and WAN)

Conformance of ITU-T H.810 personal health system: Personal Health Devices interface Part 6: Personal Health Gateway

Recommendation ITU-T H.846



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Recommendation ITU-T H.846

Conformance of ITU-T H.810 personal health system: Personal Health Devices interface Part 6: Personal Health Gateway

Summary

Recommendation ITU-T H.846 provides a test suite structure (TSS) and the test purposes (TP) for Personal Health Gateways in the Personal Health Devices (PHD) interface, based on the requirements defined in the Recommendations of the ITU-T H.810 sub-series, of which Recommendation ITU-T H.810 (2017) is the base Recommendation. The objective of this test specification is to provide a high probability of interoperability at this interface.

Recommendation ITU-T H.846 is a transposition of Continua Test Tool DG2016, Test Suite Structure & Test Purposes, Personal Health Devices Interface; Part 6: Device Specializations. Personal Health Gateway (Version 1.9, 2016-09-20), that was developed by the Personal Connected Health Alliance. A number of versions of this specification existed before transposition.

This Recommendation includes an electronic attachment with the protocol implementation conformance statements (PICS) and the protocol implementation extra information for testing (PIXIT) required for the implementation of Annex A.

This 2019 revision includes the power status monitor of Personal Health Devices device specialization (ISO/IEEE 11073-10427:2018) test cases as well as minor corrections.

History

Edition	Recommendation	Approval	Study Group	Unique ID*
1.0	ITU-T H.846	2015-01-13	16	11.1002/1000/12275
2.0	ITU-T H.846	2016-07-14	16	11.1002/1000/12953
3.0	ITU-T H.846	2017-04-29	16	11.1002/1000/13233
4.0	ITU-T H.846	2018-08-29	16	11.1002/1000/13684
5.0	ITU-T H.846	2019-05-14	16	11.1002/1000/13909
6.0	ITU-T H.846	2019-11-29	16	11.1002/1000/14119

Keywords

Conformance testing, Continua Design Guidelines, e-health, IEEE 11073 device specialization, ITU-T H.810, personal area network, personal connected health devices, Personal Health Devices interface, Personal Health Gateway, touch area network.

^{*} To access the Recommendation, type the URL http://handle.itu.int/ in the address field of your web browser, followed by the Recommendation's unique ID. For example, http://handle.itu.int/11.1002/1000/11830-en.

FOREWORD

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

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Electronic attachment: This Recommendation includes an electronic attachment with the protocol implementation conformance statements (PICS) and the protocol implementation extra information for testing (PIXIT) required for the implementation of Annex A.

Introduction

This Recommendation is a transposition of Continua Test Tool DG2016, Test Suite Structure & Test Purposes, Personal Health Devices Interface; Part 6: Device Specializations. Personal Health Gateway (Version 1.9, 2016-09-20), that was developed by the Personal Connected Health Alliance. The table below shows the revision history of this test specification; it may contain versions that existed before transposition.

Version	Date	Revision history
1.4	2012-10-05	 Initial release for Test Tool DG2011. It uses "TSS&TP_1.5_PAN-LAN_PART_6_v1.3.doc" as a baseline and adds the following maintenance bugs fixes: TP/PLT/MAN/CLASS/AM/BV-032: Modified according to bug report 874 TP/PLT/MAN/CLASS/PF/BV-013: Modified according to bug report 875
1.5	2013-05-24	Initial release for Test Tool DG2012. It uses "TSS&TP_DG2011_PAN-LAN_PART_6_v1.4.doc" as a baseline and adds new features included in [b-CDG 2012]: • Adds glucose meter new spec version • Adds body composition analyser device specialization • Adds basic electrocardiograph device specialization
1.6	2014-01-24	Initial release for Test Tool DG2013. It uses "TSS&TP_DG2012_PAN-LAN_PART_6_v1.5.doc" as a baseline and adds new features included in [ITU-T H.810 (2013)]/[b-CDG 2013]: • Adds BLE glucose meter • Adds BLE SSP support • Adds NFC new transport • Adds INR Device Specialization
1.7	2014-04-24	TM Lite & Doc Enhancements (Test Tool v4.0 Maintenance Release 1). It uses "TSS&TP_DG2013_PLT_PART_6_v1.6.doc" as a baseline and adds new features included in Documentation Enhancements: • "Other PICS" row has been added
1.8	2015-07-01	Initial release for Test Tool DG2015. It uses "TSS&TP_DG2013_PLT_PART_6_v1.7.doc" as a baseline and adds new features included in [ITU-T H.810 (2015)]/[b-CDG 2015]
1.9	2016-09-20	Initial release for Test Tool DG2016. It uses "TSS&TP_DG2015_PLT_PART_6_v1.8.doc" as a baseline and adds new features included in [ITU-T H.810 (2016)]/[b-CDG 2016]
1.10	2018-02-27	Updates related to the inclusion of the power status monitor of Personal Health Devices device specialization [ISO/IEEE 11073-10427] Updates related to the inclusion of modifications of the glucose meter device specialization [ISO/IEEE 11073-10417]
1.11	2018-10-17	Updates related to the inclusion of the Power Status Monitor of Personal Health Devices device specialization (ISO/IEEE 11073-10427:2018) test cases.
1.12	2019-06-13	Second maintenance release for Test Tool DG2017. It uses ITU-T H.846 (05/2019) as a baseline and adds some updates according to the 2018/2019 maintenance activity.

Recommendation ITU-T H.846

Conformance of ITU-T H.810 personal health system: Personal Health Devices interface Part 6: Personal Health Gateway

1 Scope

The scope of this Recommendation¹ is to provide a test suite structure (TSS) and the test purposes (TP) for the Personal Health Devices interface based on the requirements defined in the Continua Design Guidelines (CDG) [ITU-T H.810 (2017)]. The objective of this test specification is to provide a high probability of interoperability at this interface.

The TSS and TP for the Personal Health Devices interface have been divided into the parts specified below. This Recommendation covers Part 6.

- Part 1: Optimized exchange protocol. Personal Health Device
- Part 2: Optimized exchange protocol. Personal Health Gateway
- Part 3: Continua design guidelines. Personal Health Device
- Part 4: Continua design guidelines. Personal Health Gateway
- Part 5: Device specializations. Personal Health Device. This document is divided into the following subparts:
 - Part 5A: Weighing scales
 - Part 5B: Glucose meter
 - Part 5C: Pulse oximeter
 - Part 5D: Blood pressure monitor
 - Part 5E: Thermometer
 - Part 5F: Cardiovascular fitness and activity monitor
 - Part 5G: Strength fitness equipment
 - Part 5H: Independent living activity hub
 - Part 5I: Adherence monitor
 - Part 5J: Insulin pump
 - Part 5K: Peak expiratory flow monitor
 - Part 5L: Body composition analyser
 - Part 5M: Basic electrocardiograph
 - Part 5N: International normalized ratio monitor
 - Part 50: Sleep apnoea breathing therapy equipment (SABTE)
 - Part 5P: Continuous glucose monitor (CGM)
 - Part 5Q: Power status monitor (PSM)

This Recommendation includes an electronic attachment with the protocol implementation conformance statements (PICS) and the protocol implementation extra information for testing (PIXIT) required for the implementation of Annex A.

- Part 6: Device specializations. Personal Health Gateway
- Part 7: Continua Design Guidelines. Personal Health Device BLE
- Part 8: Continua Design Guidelines. Personal Health Gateway BLE
- Part 9: Personal Health Devices Transcoding Whitepaper. Personal Health Device
- Part 10: Personal Health Devices Transcoding Whitepaper. Personal Health Gateway

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

[ITU-T H.810 (2017)]	Recommendation ITU-T H.810 (2017), Interoperability design guidelines for personal health systems.
[ISO/IEEE 11073-10404]	ISO/IEEE 11073-10404:2010, Health informatics – Personal health device communication – Part 10404: Device specialization – Pulse oximeter. https://www.iso.org/standard/54572.html
[ISO/IEEE 11073-10406]	ISO/IEEE 11073-10406-2012, Health informatics — Personal health device communication — Part 10406: Device specialization — Basic electrocardiograph (ECG) (1- to 3-lead ECG). https://www.iso.org/standard/61876.html
[ISO/IEEE 11073-10407]	ISO/IEEE 11073-10407:2010, Health informatics — Personal health device communication — Part 10407: Device specialization — Blood pressure monitor, version 1.0. http://www.iso.org/standard/54573.html
[ISO/IEEE 11073-10408]	ISO/IEEE 11073-10408:2010, Health informatics – Personal health device communication – Part 10408: Device specialization – Thermometer. https://www.iso.org/standard/54309.html
[ISO/IEEE 11073-10415]	ISO/IEEE 11073-10415:2010, Health informatics – Personal health device communication – Part 10415: Device specialization – Weighing scale. https://www.iso.org/standard/54310.html
[ISO/IEEE 11073-10417]	ISO/IEEE 11073-10417:2017, Health informatics – Personal health device communication – Part 10417: Device specialization – Glucose meter. https://www.iso.org/standard/70739.html
[ISO/IEEE 11073-10418C]	ISO/IEEE 11073-10418-2014, <i>Health informatics – Personal health device communication – Part 10418: Device specialization – International Normalized Ratio (INR) monitor</i> , including ISO/IEEE 11073-10418:2014/Cor 1:2016. https://www.iso.org/standard/61897.html with

https://www.iso.org/standard/70740.html

[ISO/IEEE 11073-10419] ISO/IEEE 11073-10419:2016, Health informatics – Personal health device communication - Part 10419: Device specialization – Insulin pump. https://www.iso.org/standard/69528.html [ISO/IEEE 11073-10420] ISO/IEEE 11073-10420-2012, Health informatics – Personal health device communication – Part 10420: Device specialization – Body composition analyzer. https://www.iso.org/standard/61055.html [ISO/IEEE 11073-10421] ISO/IEEE 11073-10421:2012, Health informatics – Personal health device communication - Part 10421: Device specialization – Peak expiratory flow monitor (peak flow). https://www.iso.org/standard/61056.html [ISO/IEEE 11073-10424] ISO/IEEE 11073-10424:2016, Health informatics – Personal health device communication – Part 10424: Device specialization – Sleep apnoea breathing therapy equipment (SABTE). https://www.iso.org/standard/68906.html NOTE – equivalent to IEEE 11073-10424-2014, Health informatics – Personal health device communication – Part 10424: Device Specialization – Sleep Apnoea Breathing Therapy Equipment (SABTE). http://dx.doi.org/10.1109/IEEESTD.2014.6911927 [ISO/IEEE 11073-10425] ISO/IEEE 11073-10425:2016, Health informatics – Personal health device communication - Part 10425: Device specialization – Continuous glucose monitor (CGM). https://www.iso.org/standard/67821.html ISO/IEEE 11073-10427:2018, Health informatics – Personal [ISO/IEEE 11073-10427] health device communication - Part 10427: Device specialization – Power status monitor of personal health https://www.iso.org/standard/73759.html Same publication as https://standards.ieee.org/findstds/standard/11073-10427-2016.html ISO/IEEE 11073-10441:2015, Health informatics – Personal [ISO/IEEE 11073-10441] Health Device Communication – Part 10441: Device *Specialization – Cardiovascular fitness and activity monitor.* (Revision of IEEE Std 11073-10441-2008). https://www.iso.org/standard/64868.html [ISO/IEEE 11073-104xx] ISO/IEEE 11073-104xx (in force), Health informatics – *Personal health device communication – Device specialization.* NOTE – This is shorthand to refer to the collection of device specialization standards that utilize [ISO/IEEE 11073-20601-2015A], where xx can be any number from 01 to 99, inclusive. ISO/IEEE 11073-10442:2015, Health informatics – Personal [ISO/IEEE 11073-10442] health device communication - Part 10442: Device specialization – Strength fitness equipment. http://standards.ieee.org/findstds/standard/11073-10442-2008.html ISO/IEEE 11073-10471:2010, Health informatics – Personal [ISO/IEEE 11073-10471] health device communication - Part 10471: Device specialization – Independent living activity hub. https://www.iso.org/standard/54328.html

[ISO/IEEE 11073-10472] ISO/IEEE 11073-10472:2012, Health informatics – Personal

health device communication - Part 10472: Device

specialization - Medication monitor. https://www.iso.org/standard/54364.html

[ISO/IEEE 11073-20601-2015A] ISO/IEEE 11073-20601:2010, Health informatics – Personal

health device communication – Part 20601: Application profile

- Optimized exchange protocol,

including ISO/IEEE 11073-20601:2010 Amd 1:2015.

https://www.iso.org/standard/54331.html with https://www.iso.org/standard/63972.html

[ISO/IEEE 11073-20601-2016C] ISO/IEEE 11073-20601:2016, *Health informatics – Personal*

health device communication – Part 20601: Application profile – Optimized exchange protocol, including ISO/IEEE 11073-

20601:2016/Cor.1:2016.

https://www.iso.org/standard/=66717.html with https://www.iso.org/standard/71886.html

3 Definitions

3.1 Terms defined elsewhere

This Recommendation uses the following terms defined elsewhere:

- **3.1.1 agent** [ISO/IEEE 11073-20601-2016C]: A node that collects and transmits personal health data to an associated manager.
- **3.1.2** manager [ISO/IEEE 11073-20601-2016C]: A node receiving data from one or more agent systems. Some examples of managers include a cellular phone, health appliance, set top box, or a computer system.

3.2 Terms defined in this Recommendation

None.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

ATS Abstract Test Suite

BPM Blood Pressure Monitor

CDG Continua Design Guidelines

CGM Continuous Glucose Monitor

DUT Device Under Test

GUI Graphical User Interface

INR International Normalized Ratio

IP Insulin Pump

IUT Implementation Under Test

MAP Mean arterial pressureMDS Medical Device System

NaN Not a number

NFC Near Field Communication

NRes Not at this resolution

PAN Personal Area Network

PCO Point of Control and Observation

PCT Protocol Conformance Testing

PHD Personal Health Device

PHDC Personal Healthcare Device Class

PHG Personal Health Gateway

PICS Protocol Implementation Conformance Statement

PIXIT Protocol Implementation extra Information for Testing

PSM Power Status Monitor

SABTE Sleep Apnoea Breathing Therapy Equipment

SCR Static Conformance Review

SDP Service Discovery Protocol

SOAP Simple Object Access Protocol

TCRL Test Case Reference List

TCWG Test and Certification Working Group

TP Test Purpose

TSS Test Suite Structure

UI User interface

USB Universal Serial Bus

WDM Windows Driver Model

5 Conventions

The key words "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "MAY", "MAY NOT" in this Recommendation are to be interpreted as in [b-ETSI SR 001 262].

- SHALL is equivalent to "must" or "it is required to".
- SHALL NOT is equivalent to "must not" or "it is not allowed".
- SHOULD is equivalent to "it is recommended to".
- SHOULD NOT is equivalent to "it is not recommended to".
- MAY is equivalent to "is permitted".
- MAY NOT is equivalent to "it is not required that".

NOTE – The above-mentioned key words are capitalized for illustrative purposes only and they do not appear capitalized within this Recommendation.

In this document, "0x" denotes a number in hexadecimal format and a B after a number enclosed by single quotation marks (e.g., '0100'B) denotes a number in binary format. INT-Ux is used to denote an unsigned integer number with x bits (e.g., INT-U16 is an unsigned integer with 16 bits).

Reference is made in the ITU-T H.800-series of Recommendations to different versions of the Continua Design Guidelines (CDG) by a specific designation. The list of terms that may be used in this Recommendation is provided in Table 1.

Table 1 – List of designations associated with the various versions of the CDG

CDG release	Transposed as	Version	Description	Designation
2017	_	7.0	Release 2017 of the CDG including maintenance updates of the CDG 2016 and additional guidelines that cover new functionalities.	-
2016 plus errata	[ITU-T H.810 (2016)]	6.1	Release 2016 plus errata noting all ratified bugs [ITU-T H.810 (2016)].	_
2016	_	6.0	Release 2016 of the CDG including maintenance updates of the CDG 2015 and additional guidelines that cover new functionalities.	Iris
2015 plus errata	[b-ITU-T H.810 (2015)]	5.1	Release 2015 plus errata noting all ratified bugs [b-ITU-T H.810 (2015)]. The 2013 edition of H.810 is split into eight parts in the H.810-series.	_
2015	_	5.0	Release 2015 of the CDG including maintenance updates of the CDG 2013 and additional guidelines that cover new functionalities.	Genome
2013 plus errata	[ITU-T H.810 (2013)]	4.1	Release 2013 plus errata noting all ratified bugs [b-ITU-T H.810 (2013)].	_
2013	_	4.0	Release 2013 of the CDG including maintenance updates of the CDG 2012 and additional guidelines that cover new functionalities.	Endorphin
2012 plus errata	_	3.1	Release 2012 plus errata noting all ratified bugs [b-CDG 2012].	_
2012 –		3.0	Release 2012 of the CDG including maintenance updates of the CDG 2011 and additional guidelines that cover new functionalities.	Catalyst
2011 plus errata	_	2.1	CDG 2011 integrated with identified errata.	_
2011	_	2.0	Release 2011 of the CDG including maintenance updates of the CDG 2010 and additional guidelines that cover new functionalities [b-CDG 2011].	Adrenaline
2010 plus errata	_	1.6	CDG 2010 integrated with identified errata	_
2010	-	1.5	Release 2010 of the CDG with maintenance updates of the CDG Version 1 and additional guidelines that cover new functionalities [b-CDG 2010].	1.5
1.0	_	1.0	First released version of the CDG [b-CDG 1.0].	_

6 Test suite structure (TSS)

The test purposes (TPs) for the Personal Health Devices interface have been divided into the main subgroups specified below. Annex A describes the TPs for subgroups 2.3.1, 2.3.2, 2.3.3, 2.3.4, 2.3.5, 2.3.6, 2.3.7, 2.3.8, 2.3.9, 2.3.10, 2.3.11, 2.3.12, 2.3.13, 2.3.14, 2.3.15 and 2.3.16 (shown in bold).

- Group 1: Personal Health Device (PHD)
 - Group 1.1: Transport (TR)
 - Subgroup 1.1.1: Design guidelines: Common (DGC)
 - Subgroup 1.1.2: USB design guidelines (UDG)
 - Subgroup 1.1.3: Bluetooth design guidelines (BDG)
 - Subgroup 1.1.4: Pulse oximeter design guidelines (PODG)
 - Subgroup 1.1.5: Cardiovascular design guidelines (CVDG)
 - Subgroup 1.1.6: Activity hub design guidelines (HUBDG)
 - Subgroup 1.1.7: ZigBee design guidelines (ZDG)
 - Subgroup 1.1.8: Glucose meter design guidelines (GLDG)
 - Subgroup 1.1.9: Bluetooth low energy design guidelines (BLEDG)
 - Subgroup 1.1.10: Basic electrocardiograph design guidelines (ECGDG)
 - Subgroup 1.1.11: NFC design guidelines (NDG)
 - Group 1.2: IEEE 20601 Optimized exchange protocol (OXP)
 - Subgroup 1.2.1: PHD domain information model (DIM)
 - Subgroup 1.2.2: PHD service model (SER)
 - Subgroup 1.2.3: PHD communication model (COM)
 - Group 1.3: Devices class specializations (CLASS)
 - Subgroup 1.3.1: Weighing scales (WEG)
 - Subgroup 1.3.2: Glucose meter (GL)
 - Subgroup 1.3.3: Pulse oximeter (PO)
 - Subgroup 1.3.4: Blood pressure monitor (BPM)
 - O Subgroup 1.3.5: Thermometer (TH)
 - Subgroup 1.3.6: Cardiovascular (CV)
 - Subgroup 1.3.7: Strength (ST)
 - Subgroup 1.3.8: Activity hub (HUB)
 - Subgroup 1.3.9: Adherence monitor (AM)
 - Subgroup 1.3.10: Insulin pump (IP)
 - Subgroup 1.3.11: Peak flow (PF)
 - Subgroup 1.3.12: Body composition analyser (BCA)
 - Subgroup 1.3.13: Basic electrocardiograph (ECG)
 - Subgroup 1.3.14: International normalized ratio (INR)
 - Subgroup 1.3.15: Sleep apnoea breathing therapy equipment (SABTE)
 - Subgroup 1.3.16: Continuous glucose monitor (CGM)
 - Subgroup 1.3.17: Power status monitor (PSM)
 - Group 1.4: Personal health device transcoding whitepaper (PHDTW)
 - Subgroup 1.4.1: Whitepaper general requirements (GEN)

- Subgroup 1.4.2: Whitepaper thermometer requirements (TH)
- Subgroup 1.4.3: Whitepaper blood pressure requirements (BPM)
- O Subgroup 1.4.4: Whitepaper heart rate requirements (HR)
- Subgroup 1.4.5: Whitepaper glucose meter requirements (GL)
- Subgroup 1.4.6: Whitepaper weight scale requirements (WS)
- Subgroup 1.4.7: Whitepaper pulse oximeter requirements (PLX)
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 - Subgroup 2.3.1: Weighing scales (WEG)
 - Subgroup 2.3.2: Glucose meter (GL)
 - Subgroup 2.3.3: Pulse oximeter (PO)
 - Subgroup 2.3.4: Blood pressure monitor (BPM)
 - Subgroup 2.3.5: Thermometer (TH)
 - Subgroup 2.3.6: Cardiovascular (CV)
 - Subgroup 2.3.7: Strength (ST)
 - Subgroup 2.3.8: Activity hub (HUB)
 - Subgroup 2.3.9: Adherence monitor (AM)
 - Subgroup 2.3.10: Insulin pump (IP)
 - O Subgroup 2.3.11: Peak flow (PF)
 - Subgroup 2.3.12: Body composition analyser (BCA)
 - Subgroup 2.3.13: Basic electrocardiograph (ECG)
 - Subgroup 2.3.14: International normalized ratio (INR)
 - Subgroup 2.3.15: Sleep apnoea breathing therapy equipment (SABTE)
 - Subgroup 2.3.16: Continuous glucose monitor (CGM)
 - Subgroup 2.3.17: Power status monitor (PSM)

- Group 2.4: Personal health device transcoding whitepaper (PHDTW)
 - Subgroup 2.4.1: Whitepaper general requirements (GEN)
 - Subgroup 2.4.2: Whitepaper thermometer requirements (TH)
 - Subgroup 2.4.3: Whitepaper blood pressure requirements (BPM)
 - Subgroup 2.4.4: Whitepaper heart rate requirements (HR)
 - Subgroup 2.4.5: Whitepaper glucose meter requirements (GL)
 - Subgroup 2.4.6: Whitepaper weight scale requirements (WS)
 - Subgroup 2.4.7: Whitepaper pulse oximeter requirements (PLX)
 - Subgroup 2.4.8: Whitepaper continuous glucose monitoring requirements (CGM)

7 Electronic attachment

The protocol implementation conformance statements (PICS) and the protocol implementation extra information for testing (PIXIT) required for the implementation of Annex A can be downloaded from http://handle.itu.int/11.1002/2000/12067. See [b-PHD PICS & PIXIT] and [b-PHG PICS & PIXIT] and [b-TI].

In the electronic attachment, letters "C" and "I" in the column labelled "Mandatory" are used to distinguish between "PICS" and "PIXIT" respectively during testing. If the cell is empty, the corresponding PICS is "independent". If the field contains a "C", the corresponding PICS is dependent on other PICS, and the logical expression is detailed in the "SCR_Expression" field. The static conformance review (SCR) is used in the test tool to assert whether the PICS selection is consistent.

Annex A

Test purposes

(This annex forms an integral part of this Recommendation.)

A.1 TP definition conventions

The test purposes (TPs) are defined according to the following rules:

- **TP Id**: This is a unique identifier (TP/TT>/<DUT>/<GR>/<SGR>/<XX> <NNN>). It is specified according to the naming convention defined below:
 - Each test purpose identifier is introduced by the prefix "TP".
 - <TT>: This is the test tool that will be used in the test case.
 - PAN: Personal area network (Bluetooth or USB)
 - LAN: Local area network (ZigBee)
 - PAN-LAN: Personal area network (Bluetooth or USB) Local area network (ZigBee)
 - LP-PAN: Low power personal area network (Bluetooth Low Energy)
 - TAN: Touch area network (NFC)
 - PLT: Personal area network (Bluetooth or USB) Local area network (ZigBee) Touch area network (NFC)
 - O <DUT>: This is the device under test.
 - PHD: Personal Health Device
 - PHG: Personal Health Gateway
 - <GR>: This identifies a group of test cases.
 - <SGR>: This identifies a subgroup of test cases.
 - <XX>: This identifies the type of testing.
 - BV: Valid behaviour test
 - BI: Invalid behaviour test
 - <NNN>: This is a sequential number that identifies the test purpose.
- **TP label**: This is the TP's title.
- **Coverage**: This contains the specification reference and clause to be checked by the TP.
 - Spec: This indicates the earliest version of the specification from which the testable items to be checked by the TP were included.
 - Testable item: This contains the testable items to be checked by the TP.
- **Test purpose**: This is a description of the requirements to be tested.
- **Applicability**: This contains the PICS items that define if the test case is applicable or not for a specific device. When a TP contains an "ALL" in this field it means that it applies to the device under test within that scope of the test (specialization, transport used, etc.).
- Other PICS: This contains additional PICS items (apart from the PICS specified in the Applicability row) which are used within the test case implementation and can modify the final verdict. When this row is empty, it means that only the PICS specified in the Applicability row are used within the test case implementation.

- **Initial condition**: This indicates the state to which the DUT needs to be moved at the beginning of TC execution.
- **Test procedure**: This describes the steps to be followed in order to execute the test case.
- **Pass/Fail criteria**: This provides criteria to decide whether the DUT passes or fails the test case.

A.2 Subgroup 2.3.1: Weighing scales (WEG)

Page	A.2 Su	bgroup 2.	3.1: Weighing scales (WF	EG)		
Testable items Weighing.Association 8; O Weighing.Association 12; M Weighing.Association 13; M Weighing.Association 14; M Weighing.Association 16; M Weighing.Association 16; M Weighing.Association 16; M Weighing.Association 16; M Weighing.Association 19; M Weighing.Association 19; M Weighing.Association 19; M Weighing.Association 19; M Weighing.Association 22; M Weighing.Association 23; M Weighing.Association 22; M Weighing.Association 23; M Weighing.Association 23; M Weighing.Association 22; M Weighing.Association 23; M Weighing.Association 22; M Weighing.Association 23; M Weighing.Association 22; M Weighing.Association 22; M Weighing.Association 23; M Weighing.Association 24; M Weighing.Association 22; M Weighing.Association 24; M	TP ld		TP/PLT/PHG/CLASS/WEG/BV-001			
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Weighing-Association 14;M Weighing-Association 15;M Weighing-Association 16;M Weighing-Association 17;M Weighing-Association 19;M Weighing-Association 20;M Weighing-Association 22;M Weighing-Association 22;M Weighing-Association 23;M Weighing-Association 23;M Weighing-Association 23;M Weighing-Association 23;M Weighing-Association 23;M Weighing-Association Response data exchange (data-proto-id, data- proto-info): (data-proto-info field parameters): The Personal Health Gateway (PHG) may use this field (System-Id) to determine the identity of the weighing scale with which it is associating and, optionally, to implement a simple access restriction policy [AND] [association response]: The result field shall be set to an appropriate response from those defined in ISO/IEEE P11073-20601. [AND] [association response]: In the DataProtoList structure element, the data protocol identifier shall be set to data-proto-id-20601 (i.e., data-proto-id = 0x5079) [AND] [association response data-proto-info field parameters]: The version of the data exchange protocol shall be set to protocol-version1 (i.e., protocol-version = 0x80000000) [AND] [association response data-proto-info field parameters]: The PHG shall respond with a single selected encoding rule that is supported by both Personal Health Device (PHD) and PHG. [AND] [association response data-proto-info field parameters]: The PHG shall support at least the MDER encoding rules [AND] [association response data-proto-info field parameters]: The field functional-units shall have all bits reset except for those relating to a Test Association [AND] [association response data-proto-info field parameters]: The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000) [AND] [association response data-proto-info field parameters]: The field dev-config-id shall be manager-config-response (data-proto-info field parameters]: The field dev-config-id shall be manager-config-response (data-proto-info field parameters]: The field dev-config-id shall be man			Weighing.Association 8;O	Weighing.Association 12;M	Weighing.Association 13;M	
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[association response data-proto-info field parameters]: The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000) [AND] [association response data-proto-info field parameters]: The system-id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier [AND] [association response data-proto-info field parameters]: The field dev-config-id shall be manager-config-response (0)			-	•	eld functional-units shall have	
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[association response data-proto-info field parameters]: The system-id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier [AND] [association response data-proto-info field parameters]: The field dev-config-id shall be manager-config-response (0)					eld system-type shall be set to	
unique system id of the PHG device, which shall be a valid EUI-64 type identifier [AND] [association response data-proto-info field parameters]: The field dev-config-id shall be manager-config-response (0)						
[association response data-proto-info field parameters]: The field dev-config-id shall be manager-config-response (0)						
manager-config-response (0)						
FAAID			=	to-info field parameters]: The fie	eld dev-config-id shall be	
[AND]			[AND]			

	[association response data-proto-info field parameters]: The field data-req-mode-capab shall be 0
	[AND] [association response data-proto-info field parameters]: The fields data-req-init-*-count shall be 0
Amaliankilitu	
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_024
Other PICS	
Initial condition	The PHG is in the Unassociated state.
Test procedure	1. The simulated PHD sends an association request to the PHG under test, with the fields:
	□ protocol-version = '100000000000000000000000000000000000
	☐ encoding-rules= '10000000000000'B
	□ nomenclature-version = '100000000000000000000000000000000000
	☐ functional-units = '00000000000000000000000000000000000
	□ system-type = '000000001000000000000000000000000000
	☐ dev-config-id = 16449
	☐ data-rep-mode-capab =
	data_req_mode_flags= '00000000000001'B
	data_req_init_agent_count = 1
	data_req_init_manager_count = 0
	□ option-list.length= 0;
	2. The PHG under test sends an association response. The fields of interest are:
	a. APDU Type
	☐ field-length = 2 bytes
	☐ field-value = 0xE3 0x00 (AareApdu)
	b. Result
	☐ field-type = AssociateResult
	☐ field-length = 2 bytes
	☐ field-value = One of the following:
	 If association is accepted, field-value= 0x00 0x00.
	 If association is rejected-permanent, field-value= 0x00 0x01.
	If association is rejected-transient, field-value= 0x00 0x02.
	 If association is accepted-unknown-config, field-value= 0x00 0x03.
	If association is rejected-no-common-protocol, field-value= 0x00 0x04.
	 If association is rejected-no-common-parameter, field-value= 0x00 0x05.
	 If association is rejected-unknown, field-value = 0x00 0x06.
	If association is rejected-unauthorized, field-value= 0x00 0x07.
	 If association is rejected–unsupported-assoc-version, field-value= 0x00 0x08.
	c. selected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data-proto-info(defined by data-proto-id))
	d. data-proto-id
	☐ field-type = DataProtoId
	☐ field-length = 2 bytes
	☐ field-value= 0x50 0x79 (20601)

e.	protocol-version
	☐ field-type = Protocol Version
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value= 0x80 0x00 0x00 0x00
f.	encoding-rules
	☐ field-type = EncodingRules
	☐ field-length = 2 bytes (BITS-16)
	field-value= depends on the encoding rules supported/selected, but only one can be supported at a time
g.	nomenclature version
	☐ field-type = NomenclatureVersion
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value= Bit 0 must be set (nom-version1)
h.	functional units
	☐ field-type = FunctionalUnits
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value =
	■ Bit 0 must be 0
	 Bits 1 and 2 may be set
	 The rest of the bits must not be set
i.	system type
	☐ field-type = SystemType
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
j.	system-id
	☐ field-type = OCTET STRING
	☐ field-length = 8 bytes
	☐ field-value = (EUI-64 manufacturer and device)
k.	dev-config-id
	☐ field-type = Configld
	☐ field-length = 2 bytes
	☐ field-value = 0x00 0x00 (manager-config-response)
l.	data-req-mode-flags (DataReqModeCapab)
	☐ field-type = DataReqModeFlags
	☐ field-length = 2 bytes
	☐ field-value = 0x00 0x00
	□ PHG response to data-req-mode-flags is always 0.
m.	data-req-init-agent-count (DataReqModeCapab)
	☐ field-type = INT-U8
	☐ field-length = 1 byte
	☐ field-value = 0x00
n.	data-req-init-manager-count (DataReqModeCapab)
	☐ field-type = INT-U8
	☐ field-length = 1 byte

	☐ field-value = 0x00 b
Pass/Fail criteria	All checked values are as specified in the test procedure.
Notes	Value for protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].

TP ld		TP/PLT/PHG/CLASS/WEG/BV-002				
TP label			Configuration Event Report. Weighing Scale standard configuration			
Coverage	Spec	[ISC	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
	Testable items	Con	ıfEven	tRep 18;M		
Test purpos	e	Che	ck tha	t:		
		A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4				
		ente	er the	ely, the PHG may request the PHD to send the standard configuration in order to Configuring state and check attributes from the MDS object prior to final acceptance on) of the PHD.		
Applicability	7	C_N	//AN_C	DXP_000 AND C_MAN_OXP_024		
Other PICS						
Initial condit	ion	The	simul	ated PHD and the PHG under test are in the Unassociated state.		
Test proced	ure	1.		imulated PHD sends an association request to the PHG under test with dev-config-to 0x05 0xDC (Weighing Scales).		
		2.	The F	PHG under test responds with an association response, the field of interest is:		
			a. F	Result		
				ifield-type = INT-U16		
				ifield-length = 2 bytes		
				field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)		
		If th	e resu	It of the association response was "accepted-unknown-config"		
		3.	The s	imulated PHD sends a configuration event report with config-report-id set to 0x05		
		4.	The F	PHG under test must respond with:		
			a. A	APDU Type		
				ifield-length = 2 bytes		
				field-value = 0xE7 0x00 (PrstApdu)		
			b. I	nvoke-id		
				ifield-type = INT-U16		
				ifield-length = 2 bytes		
			C	ifield-value= it must be the same as the invoke-id of the simulated PHD's message.		
			c. (Dbj-Handle:		
			Ţ	ield-type = HANDLE		
				ifield-length = 2 bytes		
			C	field-value = 0x00 0x00		
			d. E	Event-time:		

		☐ field-type = INT-U32
		☐ field-length = 4 bytes
		☐ field-value: 0xXX 0xXX
	e.	Event-type:
		☐ field-length = 2 bytes
		☐ field-value= MDC_NOTI_CONFIG
	f.	The following six bytes indicate:
		☐ Event-replay-info.length (2 bytes)
		☐ ConfigReportRsp.config-report-id: it must be the same as config-report-id of the simulated PHD's message
		☐ ConfigReportRsp.config-result: One of:
		accepted-config: 0x00 0x00
	5. IF	C_MAN_OXP_085 THEN:
	a.	The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes.
	b.	The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.
	C.	Once in the Operating state the PHG is forced to enable the scanner object
	Wait ur	til the Operating state is reached in both cases.
	6. Th	e simulated PHD sends a fixed event report with one measurement.
Pass/Fail criteria		e PHG under test must respond either to the association request with an "accepted" ssage or to the Configuration Event Report with an "accepted-config".
	• Th	e measurement is correctly presented.
Notes	See bu	g http://continua.plugfests.com/show_bug.cgi?id=123

TP Id		TP/PLT/PHG/CLASS/WEG/BV-003		
TP label		Attribute-Value-Map. Order change.		
Coverage	Spec	[ISO/IEEE 11073-10415]		
	Testable items	WeightNumClass 22;M		
Test purpose	e	Check that:		
		For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present		
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_SIMP, then MDC_ATTR_TIME_STAMP_ABS		
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_024	
Other PICS				
Initial condition		The simulated PHD and the PH configuration.	G under test are in the Operatin	g state using the standard

Test procedure	 The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of MDC_ATTR_NU_VAL_OBS_SIMP, then MDC_ATTR_TIME_STAMP_ABS.
	2. The simulated PHD waits until it receives a confirmation.
	 The simulated PHD sends a confirmed variable event report to change the Attribute- Value-Map configuration of handle 1 (Body Weight Object) to reverse the values to: MDC_ATTR_TIME_STAMP_ABS, then MDC_ATTR_NU_VAL_OBS_SIMP.
	4. The simulated PHD waits until it receives a confirmation.
	Send a confirmed fixed format event report with the date first followed by a weight value (in kilograms since it is the standard configuration unit code).
	6. The simulated PHD waits until it receives a confirmation.
	7. The simulated PHD sends an association release request (normal).
	8. The simulated PHD waits until there is an association release response.
	The simulated PHD sends an association request using the same standard configuration that was used previously.
	 If the PHG under test responds with association request response with "accepted- unknown-config", then
	 The simulated PHD sends the confirmed configuration event report with the standard configuration.
	 The simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_NU_VAL_OBS_SIMP, then MDC_ATTR_TIME_STAMP_ABS). The weight observation should be a reasonable kilogram weight observation.
	12. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	 In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes. E.g., if there is a user interface (UI), verify that the measurement and date are displayed properly.
	 In steps 2, 6 and 12 verify that the PHG under test uses kilograms as the unit-code for the measurement report (or reports the proper value after conversion to another unit code).
	 In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e., the actual observation may have occurred sometime in the past).
	 When automated, it is necessary to be careful about sending these messages back to back since the ability to look at things like an UI may require that there be pauses for operator verification.
Notes	

TP ld		TP/PLT/PHG/CLASS/WEG/BV-004	
TP label		Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map	
Coverage	Coverage Spec [ISO/IEEE 11073-10415]		
	Testable items	WeightNumClass 22;M	

Test purpose	Check that:
	For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present
	The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_SIMP, then MDC_ATTR_TIME_STAMP_ABS. The PHG accepts the measurements (fixed format event report) and shows them correctly when the unit-code is changed.
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_024 AND C_MAN_WEG_001
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration. (Body Weight Numeric standard configuration Unit code attribute is set to MDC_DIM_KILO_G)
Test procedure	 The simulated PHD sends a confirmed variable event report to change the Attribute- Value-Map configuration of handle 1 (Body Weight Object) to set the values to: MDC_ATTR_NU_VAL_OBS_SIMP, MDC_ATTR_UNIT_CODE, then MDC_ATTR_TIME_STAMP_ABS.
	2. The simulated PHD waits until it receives a confirmation.
	3. Send a confirmed fixed format event report with the new data layout. For the unit-code attribute, use pounds MDC_DIM_LB (1760).
	4. The simulated PHD waits until it receives a confirmation.
	 The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_SIMP attribute.
	6. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).
	• In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement is displayed properly).
	 In steps 4 and 6, verify that the PHG under test uses pounds as the unit-code for the measurement reports.
Notes	

TP ld		TP/PLT/PHG/CLASS/WEG/BV	-005			
TP label		Unit-Code. Change from defaul	It kilograms to pounds – fixed for	mat observation		
Coverage	Spec	[ISO/IEEE 11073-10415]				
	Testable items	WeightNumClass 20;M	WeightNumClass 20;M			
Test purpose		Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present				
		The value of the [Unit-Code] att	tribute shall be MDC_DIM_KILO	_G.		
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_024 AND C_MAN_WE	G_001		
Other PICS						
Initial condition		The simulated PHD and the PH configuration.	IG under test are in the Operatin	g state using the standard		

Test procedure	1.	The simulated PHD sends a confirmed variable event report to change the Unit-Code of handle 1 (Body Weight Object) to pounds nomenclature code MDC_DIM_LB (1760).
	2.	The simulated PHD waits until it receives a confirmation.
	3.	Send a confirmed fixed format event report using a measurement in pounds followed by date and time stamp.
	4.	The simulated PHD waits until it receives a confirmation.
	5.	The simulated PHD sends an association release request (normal).
	6.	The simulated PHD waits until it receives an association release response.
	7.	The simulated PHD sends an association request using the same configuration that was used initially.
	8.	If the PHG under test responds with association request response with "accepted-unknown-config", then
		 The simulated PHD sends the confirmed configuration event report with the standard configuration.
		 The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.
	9.	The simulated PHD sends a fixed event report with an observation in kilograms followed by date and time stamp.
	10.	The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	•	In step 4, verify that the PHG under test is able to accept the data properly and applies pounds to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
	•	In step 10, verify that the PHG under test is able to accept the data properly and applies kilograms to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
Notes		

TP ld		TP/PLT/PHG/CLASS/WEG/BV-005_A		
TP label		Unit-Code. Do not change from default kilograms to pounds – fixed format observation		
Coverage Spec [ISO/		[ISO/IEEE 11073-10415]		
	Testable items	WeightNumClass 20;M		
Test purpos	se .	Check that:		
		For [Standard-Configuration] the [Unit-Code] attribute shall be present		
		The value of the [Unit-Code] attribute shall be MDC_DIM_KILO_G.		
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_024 AND (NOT(C_MAN_WEG_001))		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		The simulated PHD sends a confirmed variable event report to change the Unit-Code of handle 1 (Body Weight Object) to pounds nomenclature code MDC_DIM_LB (1760).		
		2. The simulated PHD waits until it receives a confirmation, roer message, abrt message, release association or rorj message or until TO cer-mds expires.		
		3. If the PHG has sent a confirmation in step 2, send a confirmed fixed format event report using a measurement in pounds followed by date and time stamp.		

	4.	The simulated PHD waits until it receives a confirmation, roer message, abrt message, release association or rorj message or TO cer-mds expires.
	5.	If the PHG has sent a confirmation in step 4, ask to the operator if the measurements have been properly received and displayed.
Pass/Fail criteria	•	In step 2, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message.
	•	In step 4, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message.
	•	In step 5, verify that measurements do not appear, or if they do appear, they are somehow designated as 'unsupported' data.
Notes		

TP ld		TP/PLT/PHG/CLASS/WEG/BV-006		
TP label		Unit-Code. Use default kilograms – variable format observation.		
Coverage	Spec	[ISO/IEEE 11073-10415]		
	Testable items	WeightNumClass 20;M		
Test purpose	9	Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present The value of the [Unit-Code] attribute shall be MDC_DIM_KILO_G		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_024		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		 Send a confirmed variable format event report using a measurement in kilograms. The simulated PHD waits until it receives a confirmation. 		
Pass/Fail criteria		Verify that the PHG under test is able to accept the data properly and applies kilograms to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).		
Notes				

TP ld		TP/PLT/PHG/CLASS/WEG/BV-007
TP label		Unit-Code. Change from default kilograms to pounds – variable format observation
Coverage Spec [ISO/IEEE 11073-10415]		[ISO/IEEE 11073-10415]
	Testable items	WeightNumClass 20;M
Test purpose		Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present The value of the [Unit-Code] attribute shall be MDC_DIM_KILO_G
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_024 AND C_MAN_WEG_001

Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure	Send a confirmed variable format event report to set the unit code to pounds MDC_DIM_LB (1760) for handle 1 (Body Weight Object) and a measurement in pounds
	2. The simulated PHD waits until it receives a confirmation.
	3. Send a second confirmed variable format event report with just a measurement in pounds (i.e., do not transmit the unit-code attribute in the event report).
	4. The simulated PHD waits until it receives a confirmation.
	5. The simulated PHD sends an association release request (normal).
	6. The simulated PHD waits until it receives an association release response.
	7. The simulated PHD sends an association request using the same configuration that was used initially.
	8. If the PHG under test responds with association request response with "accepted-unknown-config", then
	 The simulated PHD sends the confirmed configuration event report with the standard configuration.
	 The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.
	9. The simulated PHD sends a confirmed variable event report with an observation in kilograms followed by date and time stamp (i.e., do not send the unit-code attribute it should be set to kilograms by the standard configuration).
	10. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	 In steps 2 and 4, verify that the PHG under test is able to accept the data properly and applies pounds to the observations (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
	 In step 10, verify that the PHG under test is able to accept the data properly and applies kilograms to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
Notes	

TP Id		TP/PLT/PHG/CLASS/WEG/BV-008		
TP label		Maximum APDU size: Weighing Scale		
Coverage Spec		[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	CommonCharac 4;M		
Test purpos	se	Check that:		
		If a PHG receives APDU that is larger than the PHG's receive buffer, it s error (roer) code of protocol-violation.	shall reply with an	
		The PHG's receive buffer shall be at least as large as the largest buffer specializations the PHG supports. The buffer size limitations in this bulle apply to all APDUs regardless of whether a standard or extended config	et and the next on	
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_024		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		

```
Test procedure
                      1. The simulated PHD sends a Confirmed variable event report:
                         a. ScanReportInfoVar. obs_scan_var:
                             ☐ Count = 2
                             ☐ Length = 858
                              ObservationScan ::= {
                                  obj-handle: 1
                                  attributes: AttributeList ::= {
                                    AVA-Type ::= {
                                       attribute-id: 61441
                                       attribute-value: '00.....(832 bytes)..... 00'0
                                  }
                                 }
                                ObservationScan ::= {
                                  obj-handle: 1
                                  attributes: AttributeList ::= {
                                    AVA-Type ::= {
                                       attribute-id: 2646 (MDC ATTR NU VAL OBS SIMP)
                                       attribute-value: 68
                                  }
                                }
                      2.
                        Check the response of the PHG under test.
                      3.
                         The simulated PHD sends a confirmed fixed format event report with one measurement.
                         Check the response of the PHG under test.
Pass/Fail criteria
                         In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
                         In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
Notes
```

TP ld		TP/PLT/PHG/CLASS/WEG/BV-009
TP label		Special values. Not a number – fixed format
Coverage	Spec	[ISO/IEEE 11073-10415]
	Testable items	WeightNumClass 22; M
Test purpose	е	Check that:
		The PHG receives a NaN value (fixed format event report) but it does not use this value.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_024
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 1 (Body Weight Object) containing an observation with the value for "not a number" (NaN, [exponent 0, mantissa +(2**23 -1) = 0x007FFFFF]) and a time stamp.
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as

	if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).
Notes	This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/WEG/BV-010
TP label		Special values. Not a number – variable format
Coverage	Spec	[ISO/IEEE 11073-10415]
	Testable items	WeightNumClass 27; C
Test purpos	е	Check that:
		The PHG receives a NaN value (variable format event report) but it does not use this value.
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_024
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Body Weight Object) containing an observation with the value for NaN ([exponent 0, mantissa +(2**23 -1) = 0x007FFFFF]). The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).
Notes		This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/WEG/BV-011
TP label		Special values. Not at this resolution – fixed format
Coverage	Spec	[ISO/IEEE 11073-10415]
	Testable items	WeightNumClass 22; M
Test purpose		Check that:
		The PHG receives NRes value (fixed format event report) but it does not use this value.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_024
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure		The simulated PHD sends a confirmed fixed event report for handle 1 (Body Weight Object) containing an observation with the value for "not at this resolution" (NRes, [exponent 0, mantissa –(2**23) = 0x00800000]) and a time stamp.
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.

Notes	This test case has been considered as an implicit test case.
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).

TP ld		TP/PLT/PHG/CLASS/WEG/BV-012
TP label		Special values. Not at this resolution – variable format
Coverage	Spec	[ISO/IEEE 11073-10415]
	Testable items	WeightNumClass 27; C
Test purpose	е	Check that:
		The PHG receives NRes value (variable format event report) but it does not use this value.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_024
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure		The simulated PHD sends a confirmed variable event report for handle 1 (Body Weight Object) containing an observation with the value for NRes ([exponent 0, mantissa – (2**23) = 0x00800000])
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes		This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/WEG/BV-013
TP label		Special values. Positive infinity – fixed format
Coverage	Spec	[ISO/IEEE 11073-10415]
	Testable items	WeightNumClass 22; M
Test purpos	se	Check that:
		The PHG receives a +INFINITY value (fixed format event report) but it does not use this value.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_024
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure		The simulated PHD sends a confirmed fixed event report for handle 1 containing an observation with the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**23 -2) = 0x007FFFFE]) and a time stamp.
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.

Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/WEG/BV-014
TP label		Special values. Positive infinity – variable format
Coverage	Spec	[ISO/IEEE 11073-10415]
	Testable items	WeightNumClass 27; C
Test purpos	ie .	Check that:
		The PHG receives a +INFINITY value (variable format event report) but it does not use this value.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_024
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Body Weight Object) containing an observation with the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**23 -2) = 0x007FFFFE]).
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes		This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/WEG/BV-015
TP label		Special values. Negative infinity – fixed format
Coverage	Spec	[ISO/IEEE 11073-10415]
	Testable items	WeightNumClass 22; M
Test purpos	se .	Check that:
		The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_024
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure		The simulated PHD sends a confirmed fixed event report for handle 1 (Body Weight Object) containing an observation with the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**23 –2) = 0x00800002]) and a time stamp.

	The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/WEG/BV-016
TP label		Special values. Negative infinity – variable format
Coverage	Spec	[ISO/IEEE 11073-10415]
	Testable items	WeightNumClass 27; C
Test purpos	se	Check that:
		The PHG receives a –INFINITY value (variable format event report) but it does not use this value.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_024
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Body Weight Object) containing an observation with the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**23 –2) = 0x00800002]).
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes		This test case has been considered as an implicit test case.

TP Id TP label		TP/PLT/PHG/CLASS/WEG/BV-017 Special values. Reserved – fixed format		
	Testable items	WeightNumClass 22; M		
Test purpose		Check that:		
		The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_024		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		The simulated PHD sends a confirmed fixe	ed event report for handle 1 (Body Weight	

	Object) containing an observation with the value that is reserved (Reserved for future use, [exponent 0, mantissa $-(2^{**}23-1) = 0x00800001$]) and a time stamp.
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/WEG/BV-018		
TP label		Special values. Reserved – variable format		
Coverage	Spec	[ISO/IEEE 11073-10415]		
	Testable items	WeightNumClass 27; C		
Test purpose		Check that:		
		The PHG receives a Reserved for future use value (variable format event report) but it does not use this value.		
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_024		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Body Weight Object) containing an observation with the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**23–1) = 0x00800001]). 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes		This test case has been considered as an implicit test case.		

A.3 Subgroup 2.3.2: Glucose meter (GL)

A.5 Subgroup 2.3.2. Glucose meter (GL)					
TP Id		TP/PLT/PHG/CLASS/GL/BV-000			
TP label		Association procedure PHG GL			
Coverage	Spec	[ISO/IEEE 11073-10417]			
	Testable	ManProcAs 1;M	ManProcAs 2;M	ManProcAs 3;M	
	items	ManProcAs 4;M	ManProcAs 5;M	ManProcAs 6;M	
		ManProcAs 7;M	ManProcAs 8;M	ManProcAs 9;M	
		ManProcAs 10;M	ManProcAs 11;M	ManProcAs 12;M	
Test purpose		Check that:			
		The result field shall be set to an appropriate response from those defined in ISO/IEEE P11073-20601.			

	[AND]			
	In the DataProtoList structure element, the data protocol identifier shall be set to data-pro id-20601.			
	[AND]			
	The data-proto-info field shall be filled in with a PhdAssociationInformation structure			
	[AND]			
	The version of the data exchange protocol shall be set to protocol-version3 (i.e., protocol-version = 0x20000000)			
	[AND]			
	The PHG shall respond with a single selected encoding rule that is supported by both PHD and PHG. The PHG shall support at least the MDER encoding rules			
	[AND]			
	The version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000)			
	[AND]			
	The field functional-units shall have all bits reset except for those relating to a Test Association.			
	[AND]			
	The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000)			
	[AND]			
	The System-Id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier			
	[AND]			
	The field dev-config-id shall be manager-config-response (0)			
	[AND]			
	The field data-req-mode-capab shall be 0			
	[AND] The fields data reg init * count shall be 0			
	The fields data-req-init-*-count shall be 0			
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_019			
Other PICS				
Initial condition	The PHG is in the Unassociated state			
	The PHG is in the Unassociated state.			
Test procedure	1. The simulated PHD sends an association request to the PHG under test, with the fields:			
	□ protocol-version = '001000000000000000000000000000000000			
	□ encoding-rules= '10000000000000'B			
	□ nomenclature-version = '100000000000000000000000000000000000			
	☐ functional-units = '00000000000000000000000000000000000			
	□ system-type = '000000010000000000000000000000000000			
	dev-config-id = 16440			
	☐ data-rep-mode-capab =			
	data_req_mode_flags= '00000000000001'B			
	data_req_init_agent_count = 1			
	data_req_init_manager_count = 0			
	□ option-list.length= 0			
	2. The PHG under test sends an association response. The fields of interest are:			

a.	APDU Type
	☐ field-length = 2 bytes
	☐ field-value = 0xE3 0x00 (AareApdu)
b.	Result
	☐ field-type = AssociateResult
	☐ field-length = 2 bytes
	☐ field-value = One of the following:
	 If association is accepted, field-value= 0x00 0x00.
	 If association is rejected-permanent, field-value= 0x00 0x01.
	 If association is rejected-transient, field-value= 0x00 0x02.
	 If association is accepted-unknown-config, field-value= 0x00 0x03.
	 If association is rejected-no-common-protocol, field-value= 0x00 0x04.
	 If association is rejected-no-common-parameter, field-value= 0x00 0x05.
	If association is rejected–unknown = 0x00 0x06.
	 If association is rejected-unauthorized, field-value= 0x00 0x07.
	 If association is rejected–unsupported-assoc-version, field-value= 0x00 0x08.
C.	selected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data-proto-info(defined by data-proto-id))
d.	data-proto-id
	☐ field-type = DataProtoId
	☐ field-length = 2 bytes
	☐ field-value= 0x50 0x79 (20601)
e.	protocol-version
	☐ field-type = Protocol Version
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value= 0x20 0x00 0x00 0x00
f.	encoding-rules
	☐ field-type = EncodingRules
	☐ field-length = 2 bytes (BITS-16)
	field-value= depends on the encoding rules supported/selected, but only one can be supported at a time
g.	nomenclature version
	☐ field-type = NomenclatureVersion
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value= Bit 0 must be set (nom-version1)
h.	functional units
	☐ field-type = FunctionalUnits
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value =
	■ Bit 0 must be 0
	 Bits 1 and 2 may be set
	 The rest of the bits must not be set
i.	system type

	1	
		☐ field-type = SystemType
		☐ field-length = 4 bytes (BITS-32)
		☐ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
	j.	system-id
		☐ field-type = OCTET STRING
		☐ field-length = 8 bytes
		☐ field-value = (EUI-64 manufacturer and device)
	k.	dev-config-id
		☐ field-type = Configld
		☐ field-length = 2 bytes
		☐ field-value = 0x00 0x00 (manager-config-response)
	I.	data-req-mode-flags (DataReqModeCapab)
		☐ field-type = DataReqModeFlags
		☐ field-length = 2 bytes
		$\Box \text{field-value} = 0x00 \ 0x00$
		☐ PHG response to data-req-mode-flags is always 0.
	m.	data-req-init-agent-count (DataReqModeCapab)
		☐ field-type = INT-U8
		☐ field-length = 1 byte
		$\Box \text{field-value} = 0x00$
	n.	data-req-init-manager-count (DataReqModeCapab)
		☐ field-type = INT-U8
		☐ field-length = 1 byte
		☐ field-value = 0x00
Pass/Fail criteria	All chec	ked values are as specified in the test procedure.
Notes	Value fo	or protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].
Notes	value to	or protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].

TP ld		TP/PLT/PHG/CLASS/GL/BV-001_A			
TP label		Configuration Event Report. Glucose Meter standard configuration 1701			
Coverage	Spec	[ISO/IEEE 11073-10417]			
	Testable items	ConfProc 4;M	MDSEvents 2;M	ObjAccServ 5;M	
	Spec	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
	Testable items	ConfEventRep 18;M			

Test purpose	Check that:			
	The PHG shall respond to a configuration notification message using a "Remote Operation Response Confirmed Event Report" data message with an MDC_NOTI_CONFIG event using the ConfigReportRsp structure for the event-info field.			
	[AND]			
	A PHG shall support both single-person and multi-person event reports.			
	[AND]			
	A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.			
	[AND]			
	Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the Configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.			
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_019			
Other PICS	C_MAN_OXP_085			
Initial condition	The simulated PHD and the PHG under test are in the Unassociated state. The simulated PHD implements a glucose meter device specialization with standard configuration 1701.			
Test procedure	The simulated PHD sends an association request to the PHG under test with dev-configid set to 0x06 0xA5 (Glucose Meter – Std Config 1701).			
	2. The PHG under test responds with an association response, the field of interest is:			
	a. Result			
	☐ field-type = INT-U16			
	☐ field-length = 2 bytes			
	☐ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)			
	If the result of the association response was "accepted-unknown-config"			
	3. The simulated PHD sends a configuration event report with config-report-id set to 0x06 0xA5			
	4. The PHG under test must respond with:			
	a. APDU Type			
	☐ field-length = 2 bytes			
	☐ field-value = 0xE7 0x00 (PrstApdu)			
	b. Invoke-id			
	☐ field-type = INT-U16			
	☐ field-length = 2 bytes			
	field-value= it must be the same as the invoke-id of the simulated PHD's message.			
	c. Obj-Handle:			
	☐ field-type = HANDLE			
	☐ field-length = 2 bytes			
	☐ field-value = 0x00 0x00			
	d. Event-time:			
	☐ field-type = INT-U32			
	☐ field-length = 4 bytes			
	☐ field-value: 0xXX 0xXX			
	e. Event-type:			

			☐ field-length = 2 bytes
			☐ field-value= MDC_NOTI_CONFIG
		f.	The following six bytes indicate:
			☐ Event-replay-info.length (2 bytes)
			☐ ConfigReportRsp.config-report-id: it must be the same as config-report-id of the simulated PHD's message
			☐ ConfigReportRsp.config-result: One of:
			accepted-config: 0x00 0x00
	Wa	ait unti	il the Operating state is reached in both cases.
	5.	IF C	MAN_OXP_085 THEN:
		a.	The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes.
		b.	The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.
		c.	Once in Operating state the PHG is forced to enable the scanner object.
	Wa	ait unti	il the Operating state is reached in both cases.
	6.	plas	simulated PHD sends a fixed event report with one Blood Glucose (Undetermined ma reference method) measurement and other fixed event report with Control ution measurement.
Pass/Fail criteria	•		PHG under test must respond either to the association request with an "accepted" sage or to the Configuration Event Report with an "accepted-config".
	•	The	measurements are correctly presented.
Notes			
L			

TP ld		TP/PLT/PHG/CLASS/GL/BV-001_B				
TP label	bel Configuration Event Report. Glucose Meter standard configuration 1702					
Coverage	Spec	[ISO/IEEE 11073-10417]				
Testable items		ConfProc 4;M	MDSEvents 2;M	ObjAccServ 5;M		
	Spec	[ISO/IEEE 11073-20601-2015A	A] and [ISO/IEEE 11073-20601-2	2016C]		
	Testable items	ConfEventRep 18;M				

Test purpose	Check that:			
	The PHG shall respond to a configuration notification message using a "Remote Operation Response Confirmed Event Report" data message with an MDC_NOTI_CONFIG event using the ConfigReportRsp structure for the event-info field.			
	[AND]			
	A PHG shall support both single-person and multi-person event reports.			
	[AND]			
	A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.			
	[AND]			
	Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the Configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.			
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_019			
Other PICS	C_MAN_OXP_085			
Initial condition	The simulated PHD and the PHG under test are in the Unassociated state. The simulated PHD implements a glucose meter device specialization with standard configuration 1701.			
Test procedure	The simulated PHD sends an association request to the PHG under test with dev-configid set to 0x06 0xA6 (Glucose Meter – Std Config 1702).			
	2. The PHG under test responds with an association response, the field of interest is:			
	a. Result			
	☐ field-type = INT-U16			
	☐ field-length = 2 bytes			
	☐ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)			
	If the result of the association response was "accepted-unknown-config"			
	3. The simulated PHD sends a configuration event report with config-report-id set to 0x06 0xA6			
	4. The PHG under test must respond with:			
	a. APDU Type			
	☐ field-length = 2 bytes			
	☐ field-value = 0xE7 0x00 (PrstApdu)			
	b. Invoke-id			
	☐ field-type = INT-U16			
	☐ field-length = 2 bytes			
	field-value= it must be the same as the invoke-id of the simulated PHD's message.			
	c. Obj-Handle:			
	☐ field-type = HANDLE			
	☐ field-length = 2 bytes			
	$\Box \text{field-value} = 0x00 \ 0x00$			
	d. Event-time:			
	☐ field-type = INT-U32			
	☐ field-length = 4 bytes			
	☐ field-value: 0xXX 0xXX			
	e. Event-type:			

			☐ field-length = 2 bytes
			☐ field-value= MDC_NOTI_CONFIG
		f.	The following six bytes indicate:
			☐ Event-replay-info.length (2 bytes)
			☐ ConfigReportRsp.config-report-id: it must be the same as config-report-id of the simulated PHD's message
			☐ ConfigReportRsp.config-result: One of:
			accepted-config: 0x00 0x00
	Wa	ait unti	I the Operating state is reached in both cases.
	5.	IF C	_MAN_OXP_085 THEN:
			The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes.
			The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.
		c.	Once in Operating state the PHG is forced to enable the scanner object.
	Wa	ait unti	I the Operating state is reached in both cases.
	6.	plas	simulated PHD sends three fixed event reports: Blood Glucose (Undetermined ma reference method) measurement, Control Solution measurement and Meal text measurement.
Pass/Fail criteria	•		PHG under test must respond either to the association request with an "accepted" sage or to the Configuration Event Report with an "accepted-config".
	•	The	measurements are correctly presented.
Notes			
The state of the s			

TP Id		TP/PLT/PHG/CLASS/GL/BV-002		
TP label		Maximum APDU size: Glucose Meter without PM-Store		
Coverage Spec		[ISO/IEEE 11073-20601-2015A] and [ISo	O/IEEE 11073-20601-2016C]	
	Testable items	CommonCharac 4;M		
	Spec	[ISO/IEEE 11073-10417]		
	Testable items	ComChar 2; M		
Test purpos	se .	Check that:		
		If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.		
		specializations the PHG supports. The b	st as large as the largest buffer specified in the uffer size limitations in this bullet and the next on r a standard or extended configuration is being used.	
Applicability	у	C_MAN_OXP_000 AND C_MAN_OXP_	019	
Other PICS				
Initial condition The PHG under test is in the Operating state.		state.		

```
Test procedure
                      1. The simulated PHD sends a Confirmed variable event report:
                         a. ScanReportInfoVar. obs_scan_var:
                             ☐ Count = 2
                             ☐ Length = 5080
                              ObservationScan ::= {
                                  obj-handle: 1
                                  attributes: AttributeList ::= {
                                     AVA-Type ::= {
                                       attribute-id: 61441
                                       attribute-value: '00.....(5056 bytes)..... 00'0
                                  }
                                 }
                                ObservationScan ::= {
                                  obj-handle: 1
                                  attributes: AttributeList ::= {
                                     AVA-Type ::= {
                                       attribute-id: 2636 (MDC ATTR NU VAL OBS BASIC)
                                       attribute-value: 100
                                     }
                                  }
                                }
                         Check the response of the PHG under test.
                      3.
                         The simulated PHD sends a confirmed fixed format event report with one measurement.
                      4.
                         Check the response of the PHG under test.
Pass/Fail criteria
                         In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
                         In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
Notes
```

TP Id TP/PLT/PHG/CLASS/GL/BV-002_A				
TP label Maximum APDU size: Glucose Meter with PM-Store				
Coverage	overage Spec [ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			2016C]
Testable items		CommonCharac 4;M		
	Spec	[ISO/IEEE 11073-10417]		
Testable items ComChar 2; M		ComChar 2; M		
Test purpos	se	Check that:		
		If a PHG receives an APDU t error (roer) code of protocol-v	hat is larger than the PHG's recei riolation.	ve buffer, it shall reply with an
		specializations the PHG supp	all be at least as large as the large ports. The buffer size limitations in s of whether a standard or extend	this bullet and the next on
Applicability C_MAN_OXP_000 AND C_MAN_0		MAN_OXP_019 AND C_MAN_OX	P_003	
Other PICS				
Initial condition The PHG under test is in the Operating state.				

```
Test procedure
                      1. The simulated PHD sends a Confirmed variable event report:
                         a. ScanReportInfoVar. obs_scan_var:
                             ☐ Count = 2
                             ☐ Length = 64472
                              ObservationScan ::= {
                                  obj-handle: 1
                                  attributes: AttributeList ::= {
                                    AVA-Type ::= {
                                       attribute-id: 61441
                                       attribute-value: '00.....(64448 bytes).....
                      00'0
                                  }
                                 }
                                ObservationScan ::= {
                                  obj-handle: 1
                                  attributes: AttributeList ::= {
                                    AVA-Type ::= {
                                       attribute-id: 2636 (MDC ATTR NU VAL OBS BASIC)
                                       attribute-value: 80
                                  }
                                }
                      2. Check the response of the PHG under test.
                      3.
                         The simulated PHD sends a confirmed fixed format event report with one measurement.
                         Check the response of the PHG under test.
Pass/Fail criteria
                         In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
                         In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
Notes
```

TP ld		TP/PLT/PHG/CLASS/GL/BV-003		
TP label		Blood Glucose Attribute-Value-Map. Order change (Std Config 1701)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	BloodGL 10;M		
Test purpose		Check that: For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC MDC_ATTR_TIME_STAMP_ABS		
Applicability	/	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure			a confirmed fixed format event of MDC_ATTR_NU_VAL_OBS_IP_ABS.	

	2. The simulated PHD waits until it receives a confirmation.
	3. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 1 (Blood Glucose Object) to reverse the values to: MDC_ATTR_TIME_STAMP_ABS, then MDC_ATTR_NU_VAL_OBS_BASIC.
	4. The simulated PHD waits until it receives a confirmation.
	5. Send a confirmed fixed format event report with the date first followed by a blood glucose value (in mg/dL since it is the standard configuration unit code).
	6. The simulated PHD waits until it receives a confirmation.
	7. The simulated PHD sends an association release request (normal).
	8. The simulated PHD waits until there is an association release response.
	9. The simulated PHD sends an association request using the same standard configuration that was used previously.
	10. If the PHG under test responds with association request response with "accepted-unknown-config", then
	 The simulated PHD sends the confirmed configuration event report with the standard configuration.
	 The simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_ABS). The observation should be a reasonable mg/dL blood glucose observation.
	12. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	 In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).
	 In steps 2, 6 and 12 verify that the PHG under test uses mg/dL as the unit code for the measurement report (or reports the proper value after conversion to another unit code).
	• In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e., the actual observation may have occurred sometime in the past).
	When automated, it is necessary to be careful about sending these messages back to back since the ability to look at things like an UI may require that there be pauses for operator verification.
Notes	
	1

TP Id		TP/PLT/PHG/CLASS/GL/BV-003_A			
TP label		Blood Glucose Attribute-Value-Map. Order change (Std Config 1702)			
Coverage Spec		[ISO/IEEE 11073-10417]			
	Testable items	BloodGL 32; M			
Test purpose		Check that:	no [Attributo-Value-Man] attributo	shall be present	
		For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC MDC_ATTR_TIME_STAMP_BO			
Applicability					

Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure	 The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_BO.
	2. The simulated PHD waits until it receives a confirmation.
	3. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 1 (Blood Glucose Object) to reverse the values to: MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_NU_VAL_OBS_BASIC.
	4. The simulated PHD waits until it receives a confirmation.
	5. Send a confirmed fixed format event report with the date first followed by a blood glucose value (in mg/dL since it is the standard configuration unit code).
	6. The simulated PHD waits until it receives a confirmation.
	7. The simulated PHD sends an association release request (normal).
	8. The simulated PHD waits until there is an association release response.
	9. The simulated PHD sends an association request using the same standard configuration that was used previously.
	10. If the PHG under test responds with association request response with "accepted-unknown-config", then
	 The simulated PHD sends the confirmed configuration event report with the standard configuration.
	 The simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_BO). The observation should be a reasonable mg/dL blood glucose observation.
	12. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	 In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).
	 In steps 2, 6 and 12 verify that the PHG under test uses mg/dL as the unit code for the measurement report (or reports the proper value after conversion to another unit code).
	 In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e., the actual observation may have occurred sometime in the past).
	 When automated, it is necessary to be careful about sending these messages back to back since the ability to look at things like an UI may require that there be pauses for operator verification.
Notes	

TP ld		TP/PLT/PHG/CLASS/GL/BV-004			
TP label		Blood Glucose Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map (Std Config 1701)			
Coverage	Coverage Spec [ISO/IEEE 11073-10417]				
	Testable items	BloodGL 10;M			

Test purpose	Check that:		
	For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present		
	The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC MDC_ATTR_TIME_STAMP_ABS		
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_019 AND C_MAN_GL_001		
Other PICS			
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration. (Blood Glucose Numeric standard configuration Unit code attribute is set to MDC_DIM_MILLI_G_PER_DL)		
Test procedure	The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 1 (Blood Glucose Object) to set the values to: MDC_ATTR_NU_VAL_OBS_BASIC, MDC_ATTR_UNIT_CODE, then MDC_ATTR_TIME_STAMP_ABS.		
	2. The simulated PHD waits until it receives a confirmation.		
	3. Send a confirmed fixed format event report with the new data layout. For the unit-code attribute, use MDC_DIM_MILLI_MOLE_PER_L (4722).		
	4. The simulated PHD waits until it receives a confirmation.		
	 The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC attribute. 		
	6. The simulated PHD waits until it receives a confirmation.		
Pass/Fail criteria	 In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly). 		
	• In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement is displayed properly).		
	In steps 4 and 6, verify that the PHG under test uses mmol/L as the unit code for the measurement reports.		
Notes			

TP ld		TP/PLT/PHG/CLASS/GL/BV-004_A			
TP label	Blood Glucose Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map (Std Config 1702)		s to the Attribute-Value-Map		
Coverage	Spec	[ISO/IEEE 11073-10417]			
	Testable items	BloodGL 32; M	BloodGL 32; M		
Test purpose	•	Check that:			
		For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present			
		The value of the [Attribute-ValuMDC_ATTR_TIME_STAMP_B	e-Map] attribute shall be MDC_/ O	ATTR_NU_VAL_OBS_BASIC	
Applicability C_MAN_OXP_000 AND C_MAN_OXP_019 AND C_MAN_GL_001		.001			
Other PICS					
Initial condition			HG under test are in the Operatin Numeric standard configuration (

Test procedure	1. The simulated PHD sends a confirmed variable event report to change the Attrib Value-Map configuration of handle 1 (Blood Glucose Object) to set the values to: MDC_ATTR_NU_VAL_OBS_BASIC, MDC_ATTR_UNIT_CODE, then MDC_ATTR_TIME_STAMP_BO.	
	2.	The simulated PHD waits until it receives a confirmation.
	3.	Send a confirmed fixed format event report with the new data layout. For the unit-code attribute, use MDC_DIM_MILLI_MOLE_PER_L (4722).
	4.	The simulated PHD waits until it receives a confirmation.
	5.	The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC attribute.
	6.	The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	•	In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).
	•	In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement is displayed properly).
	•	In steps 4 and 6, verify that the PHG under test uses mmol/L as the unit code for the measurement reports.
Notes		

TP ld		TP/PLT/PHG/CLASS/GL/BV-005		
TP label Blood Glucose Unit-Code. Change from default mg/dL to mmol/L – fixed form		/L – fixed format observation		
Coverage	ge Spec [ISO/IEEE 11073-10417]			
	Testable items	BloodGL 8;M		
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	Communication 9; M		
Test purpos	ie .	Check that:		
		For [Standard-Configuration] the [Unit-Code] attribute shall be present		
		The value of the [Unit-Code] attribute shall be MDC_DIM_MILLI_G_PER_DL		
		[AND]		
		Continua PAN client components that receive a report of a configuration change shall apply the change to future measurements only		
Applicability C_MAN_OXP_000 AND C_MAN_OXP_019 AND C_MAN_GL_001		_001		
Other PICS				
Initial condition The simulated PHD and the PHG under test are in the Operating state using the configuration.		ng state using the standard		
Test procedure		 The simulated PHD sends a confirmed variable event report to change the Unit-Code of handle 1 (Blood Glucose Object) to mmol/L nomenclature code MDC_DIM_MILLI_MOLE_PER_L (4722). 		
		2. The simulated PHD waits until it receives a confirmation.		
		Send a confirmed fixed form date and time stamp.	mat event report using a measu	rement in mmol/L followed by

	4.	The simulated PHD waits until it receives a confirmation.
	5.	The simulated PHD sends an association release request (normal).
	6.	The simulated PHD waits until it receives an association release response.
	7.	The simulated PHD sends an association request using the same configuration that was used initially.
	8.	If the PHG under test responds with association request response with "accepted-unknown-config", then
		• The simulated PHD sends the confirmed configuration event report with the standard configuration.
		 The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.
	9.	The simulated PHD sends a fixed event report with an observation in mg/dL followed by date and time stamp.
	10.	The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	•	In step 4, verify that the PHG under test is able to accept the data properly and applies mmol/L to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
	•	In step 10, verify that the PHG under test is able to accept the data properly and applies mg/dL to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
Notes		

TP ld		TP/PLT/PHG/CLASS/GL/BV-005_A		
TP label		Blood Glucose Unit-Code. Do not change from default mg/dL to mmol/L – fixed format observation		
Coverage	Coverage Spec [ISO/IEEE 11073-10417]			
	Testable items	BloodGL 8;M		
Test purpos	se	Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present The value of the [Unit-Code] attribute shall be MDC_DIM_MILLI_G_PER_DL		
Applicabilit	y	C_MAN_OXP_000 AND C_MAN_OXP_019 AND (NOT(C_MAN_GL_001))		
Other PICS	Other PICS			
Initial condition The simulated PHD and the PHG under test are in the Operating state using the configuration.		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		The simulated PHD sends a confirmed variable event report to change the Unit-Code of handle 1 (Blood Glucose Object) to mmol/L nomenclature code MDC_DIM_MILLI_MOLE_PER_L (4722).		
1		2. The simulated PHD waits until it receives a confirmation, roer message, abrt message, release association or rorj message or until TO cer-mds expires.		
		3. If the PHG has sent a confirmation in step 2, send a confirmed fixed format event report using a measurement in mmol/L followed by date and time stamp.		
		4. The simulated PHD waits until it receives a confirmation, roer message, abrt message, release association or rorj message or TO cer-mds expires.		
		5. If the PHG has sent a confirmation in step 4, ask to the operator if the measurements have been properly received and displayed.		

Pass/Fail criteria	 In step 2, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message.
	 In step 4, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message.
	 In step 5, verify that measurements do not appear, or if they do appear, they are somehow designated as 'unsupported' data.
Notes	

TP Id		TP/PLT/PHG/CLASS/GL/BV-006		
TP label		Blood Glucose Unit-Code. Use default mg/dL – variable format observation		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	BloodGL 8;M		
Test purpose	Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present The value of the [Unit-Code] attribute shall be MDC_DIM_MILLI_G_PER_DL			
Applicability C_MAN_OXP_000 AND C_MAN_OXP_019		C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condit	Initial condition The simulated PHD and the PHG under test are in the Operating state using the state configuration.			
Test procedure 1.		 Send a confirmed variable format event report using a measurement in mg/dL. The simulated PHD waits until it receives a confirmation. 		
Pass/Fail criteria		Verify that the PHG under test is able to accept the data properly and applies mg/dL to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).		
Notes				

TP Id		TP/PLT/PHG/CLASS/GL/BV-007	
TP label Blood Glucose Unit-Code. Change from default mg/dL to mmol/L – variable format observation		lefault mg/dL to mmol/L – variable format	
Coverage Spec		[ISO/IEEE 11073-10417]	
	Testable items	BloodGL 8;M	
Spec		[b-ITU-T H.810 (2015)]	
	Testable items	Communication 9; M	
Test purpose		Check that:	
		For [Standard-Configuration] the [Unit-Code] attribute shall be present	
		The value of the [Unit-Code] attribute shall be MDC_DIM_MILLI_G_PER_DL	
		[AND]	

	Continua PAN client components that receive a report of a configuration change shall apply the change to future measurements only		
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_019 AND C_MAN_GL_001		
Other PICS			
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure	 Send a confirmed variable format event report to set the unit code to mmol/L MDC_DIM_MILLI_MOLE_PER_L (4722) for handle 1 (Blood Glucose Object) and a measurement in mmol/L. 		
	2. The simulated PHD waits until it receives a confirmation.		
	 Send a second confirmed variable format event report with just a measurement in mmol/L (i.e., do not transmit the unit-code attribute in the event report). 		
	4. The simulated PHD waits until it receives a confirmation.		
	5. The simulated PHD sends an association release request (normal).		
	6. The simulated PHD waits until it receives an association release response.		
	7. The simulated PHD sends an association request using the same configuration that was used initially.		
	8. If the PHG under test responds with association request response with "accepted-unknown-config", then		
	 The simulated PHD sends the confirmed configuration event report with the standard configuration. 		
	 The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent. 		
	 The simulated PHD sends a confirmed variable event report with an observation in mg/dL followed by date and time stamp (i.e., do not send the unit-code attribute it should be set to mg/dL by the standard configuration). 		
	10. The simulated PHD waits until it receives a confirmation.		
Pass/Fail criteria	 In steps 2 and 4, verify that the PHG under test is able to accept the data properly and applies mmol/L to the observations (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units). 		
	 In step 10, verify that the PHG under test is able to accept the data properly and applies mg/dL to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units). 		
Notes			

TP Id TP/PLT/PHG/CLASS/GL/BV-008				
TP label		Special values. Blood Glucose - Not a number – fixed format (Std Config 1701)		t (Std Config 1701)
Coverage Spec		[ISO/IEEE 11073-10417]	[ISO/IEEE 11073-10417]	
	Testable items	BloodGL 10; M		
Test purpose		Check that: The PHG receives a NaN	value (fixed format event report) b	out it does not use this value.
Applicability C_MAN_OXP_000 AND C_MAN_OXP_019				
Other PICS				

Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.	
Test procedure	 The simulated PHD sends a confirmed fixed event report for handle 1 (Blood Glucose Object) containing an observation value with the value for NaN ([exponent 0, mantissa +(2**11 -1) = 0x07FF]) and a time stamp. 	
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.	
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area). 	
Notes	This test case has been considered as an implicit test case.	

TP ld		TP/PLT/PHG/CLASS/GL/BV-009		
TP label		Special values. Blood Glucose - Not a number – variable format (Std Config 1701)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	BloodGL 20; M		
Test purpose	•	Check that:		
		The PHG receives a NaN value (variable format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Blood Glucose Object) containing an observation value set to the value for NaN ([exponent 0, mantissa +(2**11 -1) = 0x07FF]). The simulated PHD waits until it receives a confirmation from the PHG under test. 		
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or by blanking the display area).		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/GL/BV-0	10	
TP label		Special values. Blood Glucose - Not at this resolution – fixed format (Std Config 1701)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	BloodGL 10; M		
Test purpose		Check that: The PHG receives NRes value	(fixed format event report) but it	t does not use this value.
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_019	

Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.
Test procedure	 The simulated PHD sends a confirmed fixed event report for handle 1 (Blood Glucose Object) containing an observation value set to the value for NRes ([exponent 0, mantissa –(2**11) = 0x0800]) and a time stamp.
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

		TD/DLT/DUG/GLAGG/GL/DV.c./		
TP Id		TP/PLT/PHG/CLASS/GL/BV-011		
TP label		Special values. Blood Glucose - Not at this resolution – variable format (Std Config 1701)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	BloodGL 20; M		
Test purpose	е	Check that:		
		The PHG receives NRes value (variable format event report) but it does not use this value.		
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Blood Glucose Object) containing an observation value set to the value for NRes ([exponent 0, mantissa –(2**11) = 0x0800]). 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI,, verify that the measurement is displayed in some form that indicates it is not a measurement).		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/GL/E	sV-012	
TP label		Special values. Blood Gluc	cose - Positive infinity – fixe	ed format (Std Config 1701)
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	BloodGL 10; M		
Test purpose		Check that: The PHG receives a +INFI value.	NITY value (fixed format e	event report) but it does not use this
Applicability		C_MAN_OXP_000 AND C	_MAN_OXP_019	

Other PICS		
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.	
Test procedure	 The simulated PHD sends a confirmed fixed event report for handle 1 (Blood Glucose Object) containing an observation value set to the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**11 -2) = 0x07FE]) and a time stamp. 	
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.	
Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).	
Notes	This test case has been considered as an implicit test case.	

TP ld		TP/PLT/PHG/CLASS/GL/BV-013		
TP label		Special values. Blood Glucose - Positive infinity – variable format (Std Config 1701)		
Coverage	Coverage Spec [ISO/IEEE 11073-10417]			
	Testable items	BloodGL 20; M		
Test purpos	е	Check that:		
		The PHG receives a +INFINITY value (variable format event report) but it does not use this value.		
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Blood Glucose Object) containing an observation value set to the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**11 -2) = 0x07FE]). 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/GL/BV-014		
TP label		Special values. Blood Glucose - Negative infinity – fixed format (Std Config 1701)		
Coverage Spec		[ISO/IEEE 11073-10417]		
	Testable items	BloodGL 10; M		
Test purpose		Check that:		
		The PHG receives a –INFINITY value (fivalue.	ked format event report) but it does not use this	

Applicability	C_MAN_OXP_000 AND C_MAN_OXP_019	
Other PICS		
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.	
Test procedure	1. The simulated PHD sends a confirmed fixed event report for handle 1 (Blood Glucose Object) containing an observation value set to the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**11 –2) = 0x0802]) and a time stamp.	
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.	
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 	
Notes	This test case has been considered as an implicit test case.	

TP ld		TP/PLT/PHG/CLASS/GL/BV-015		
TP label		Special values. Blood Glucose - Negative infinity – variable format (Std Config 1701)		
Coverage	verage Spec [ISO/IEEE 11073-10417]			
	Testable items	BloodGL 20; M		
Test purpos	se	Check that:		
		The PHG receives a –INFINITY value (variable format event report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating stat configuration 1701.	e using the standard	
Test procedure		 The simulated PHD sends a confirmed variable event report for the Object) containing an observation value set to the value for negal [exponent 0, mantissa –(2**11 –2) = 0x0802]). 	`	
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but doe they were an actual measurement (e.g., if there is a UI, verify tha displayed in some form that indicates it is not a measurement). 		
Notes		This test case has been considered as an implicit test case.		

TP Id		TP/PLT/PHG/CLASS/GL/BV-016	
TP label		Special values. Blood Glucose - Reserved – fixed format (Std Config 1701)	
Coverage	Spec	[ISO/IEEE 11073-10417]	
	Testable items	BloodGL 10; M	
Test purpose		Check that: The PHG receives a Reserved for future	use value (fixed format event report) but it does not

	use this value.	
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_019	
Other PICS		
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.	
Test procedure	 The simulated PHD sends a confirmed fixed event report for handle 1 (Blood Glucose Object) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**11 –1) = 0x0801]) and a time stamp. 	
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.	
Pass/Fail criteria	 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 	
Notes	This test case has been considered as an implicit test case.	

TP ld		TP/PLT/PHG/CLASS/GL/BV-017		
TP label		Special values. Blood Glucose - Reserved – variable format (Std Config 1701)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	BloodGL 20; M		
Test purpose)	Check that:		
		The PHG receives a Reserved for future use value (variable format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Blood Glucose Object) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**11 –1) = 0x0801]). 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/GL/BV-018		
TP label		Control Solution Attribute-Value-Map. Order change (Std Config 1701)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	CtrlSol 8;M		

Test purpose	Check that:			
	For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present			
	The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC MDC_ATTR_ID_PHYSIO MDC_ATTR_TIME_STAMP_ABS			
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_019			
Other PICS				
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure	The simulated PHD sends a Control Solution confirmed fixed format event report that matches the Attribute-Value-Map order of MDC_ATTR_NU_VAL_OBS_BASIC, the MDC_ATTR_ID_PHYSIO, then MDC_ATTR_TIME_STAMP_ABS			
	2. The simulated PHD waits until it receives a confirmation.			
	3. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Control Solution Object) to reverse the values to: MDC_ATTR_TIME_STAMP_ABS, then MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_ID_PHYSIO.			
	4. The simulated PHD waits until it receives a confirmation.			
	 Send a confirmed fixed format event report with the date first followed by a control solution value (in mg/dL since it is the standard configuration unit code). 			
	6. The simulated PHD waits until it receives a confirmation.			
	7. The simulated PHD sends an association release request (normal).			
	8. The simulated PHD waits until there is an association release response.			
	The simulated PHD sends an association request using the same standard configuration that was used previously.			
	If the PHG under test responds with association request response with "accepted-unknown-config", then			
	 The simulated PHD sends the confirmed configuration event report with the standard configuration. 			
	 The simulated PHD waits until there is a confirmation to the configuration event report that was sent. 			
	11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_ID_PHYSIO, then MDC_ATTR_TIME_STAMP_ABS). The observation should be a reasonable mg/dL blood glucose observation.			
	12. The simulated PHD waits until it receives a confirmation.			
• In steps 2, 6 and 12 verify that the PHG under test is able to accept the dapplies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the PHG under test is able to accept the dapplies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the PHG under test is able to accept the dapplies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the PHG under test is able to accept the dapplies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the PHG under test is able to accept the dapplies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the PHG under test is able to accept the dapplies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the PHG under test is able to accept the dapplies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the PHG under test is able to accept the dapplies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the PHG under test is able to accept the dapplies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the PHG under test is able to accept the dapper test is a UI at the photon of the correct bytes to the correct attributes (e.g., if there is a UI, verify that the PHG under test is able to accept the dapper test is a UI at the photon of the under test is a UI at the under test is a UI				
	 In steps 2, 6 and 12 verify that the PHG under test uses mg/dL as the unit code for the measurement report (or reports the proper value after conversion to another unit code). 			
	• In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e., the actual observation may have occurred sometime in the past).			
	When automated, it is necessary to be careful about sending these messages back to back since the ability to look at things like an UI may require that there be pauses for operator verification.			
Notes				

TP ld		TP/PLT/PHG/CLASS/GL/BV-018_A		
TP label		Control Solution Attribute-Value-Map. Order change (Std Config 1702)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	CtrlSol 18; M		
Test purpos	е	Check that:		
		For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present		
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC MDC_ATTR_ID_PHYSIO MDC_ATTR_TIME_STAMP_BO		
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condit	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test proced	ure	The simulated PHD sends a Control Solution confirmed fixed format event report that matches the Attribute-Value-Map order of MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_ID_PHYSIO, then MDC_ATTR_TIME_STAMP_BO		
		2. The simulated PHD waits until it receives a confirmation.		
		3. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Control Solution Object) to reverse the values to: MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_ID_PHYSIO.		
		4. The simulated PHD waits until it receives a confirmation.		
		Send a confirmed fixed format event report with the date first followed by a control solution value (in mg/dL since it is the standard configuration unit code).		
		6. The simulated PHD waits until it receives a confirmation.		
		7. The simulated PHD sends an association release request (normal).		
		8. The simulated PHD waits until there is an association release response.		
		 The simulated PHD sends an association request using the same standard configuration that was used previously. 		
		 If the PHG under test responds with association request response with "accepted- unknown-config", then 		
		 The simulated PHD sends the confirmed configuration event report with the standard configuration. 		
		 The simulated PHD waits until there is a confirmation to the configuration event report that was sent. 		
		11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_ID_PHYSIO, then MDC_ATTR_TIME_STAMP_BO). The observation should be a reasonable mg/dL blood glucose observation.		
		12. The simulated PHD waits until it receives a confirmation.		
Pass/Fail criteria		 In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly). 		
		In steps 2, 6 and 12 verify that the PHG under test uses mg/dL as the unit code for the measurement report (or reports the proper value after conversion to another unit code).		
		• In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e., the actual observation may have occurred sometime in the past).		

	When automated, it is necessary to be careful about sending these messages back to back since the ability to look at things like an UI may require that there be pauses for operator verification.
Notes	

TP ld		TP/PLT/PHG/CLASS/GL/BV-019			
TP label		Control Solution Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map (Std Config 1701)			
Coverage	Spec	[ISO/IEEE 11073-10417]			
	Testable items	CtrlSol 8;M			
Test purpose	•	Check that:			
		For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present			
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC MDC_ATTR_ID_PHYSIO MDC_ATTR_TIME_STAMP_ABS			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_019 AND C_MAN_GL_002			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (Control Solution Numeric standard configuration Unit code attribute is set to MDC_DIM_MILLI_G_PER_DL).			
Test procedu	ire	The simulated PHD sends a confirmed variable event report to change the Attribute- Value-Map configuration of handle 2 (Control Solution Object) to set the values to: MDC_ATTR_NU_VAL_OBS_BASIC, MDC_ATTR_UNIT_CODE, MDC_ATTR_ID_PHYSIO, then MDC_ATTR_TIME_STAMP_ABS.			
		2. The simulated PHD waits until it receives a confirmation.			
		 Send a confirmed fixed format event report with the new data layout. For the unit-code attribute, use MDC_DIM_MILLI_MOLE_PER_L (4722). 			
		In the simulated PHD waits until it receives a confirmation.			
		 The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC attribute. 			
		6. The simulated PHD waits until it receives a confirmation.			
Pass/Fail criteria		In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).			
		• In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement is displayed properly).			
		In steps 4 and 6, verify that the PHG under test uses mmol/L as the unit code for the measurement reports.			
Notes					

TP Id	TP/PLT/PHG/CLASS/GL/BV-019_A
TP label	Control Solution Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map (Std Config 1702)

Coverage Spec		[ISO	D/IEEE 11073-10417]			
	Testable items	Ctrl	Sol 18; M			
Test purpos	е	Che	Check that:			
		For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present				
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC MDC_ATTR_ID_PHYSIO MDC_ATTR_TIME_STAMP_BO				
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_019 AND C_MAN_GL_002				
Other PICS						
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (Control Solution Numeric standard configuration Unit code attribute is set to MDC_DIM_MILLI_G_PER_DL).				
Test procedure		 The simulated PHD sends a confirmed variable event report to change the Attribute- Value-Map configuration of handle 2 (Control Solution Object) to set the values to: MDC_ATTR_NU_VAL_OBS_BASIC, MDC_ATTR_UNIT_CODE, MDC_ATTR_ID_PHYSIO, then MDC_ATTR_TIME_STAMP_BO. 				
		2.	2. The simulated PHD waits until it receives a confirmation.			
		 Send a confirmed fixed format event report with the new data layout. For the unit-code attribute, use MDC_DIM_MILLI_MOLE_PER_L (4722). 				
		4. The simulated PHD waits until it receives a confirmation.				
		5. The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC attribute.				
		6. The simulated PHD waits until it receives a confirmation.				
Pass/Fail criteria		• In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).				
		•	• In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement is displayed properly).			
		In steps 4 and 6, verify that the PHG under test uses mmol/L as the unit code for the measurement reports.				
Notes	Notes					

TP ld		TP/PLT/PHG/CLASS/GL/BV-020		
TP label		Control Solution Unit-Code. Change from default mg/dL to mmol/L – fixed format observation		
Coverage	rage Spec [ISO/IEEE 11073-10417]			
	Testable items	CtrlSol 6;M		
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	Communication 9; M		
Test purpose		Check that:		
		For [Standard-Configuration] the [Unit-Code] attribute shall be present		

	The value of the [Unit-Code] attribute shall be MDC_DIM_MILLI_G_PER_DL			
	[AND]			
	Continua PAN client components that receive a report of a configuration change shall apply the change to future measurements only			
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_019 AND C_MAN_GL_002			
Other PICS				
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure	The simulated PHD sends a confirmed variable event report to change the Unit-Code of handle 2 (Control Solution Object) to mmol/L nomenclature code MDC_DIM_MILLI_MOLE_PER_L (4722).			
	2. The simulated PHD waits until it receives a confirmation.			
	3. Send a confirmed fixed format event report using a measurement in mmol/L followed by date and time stamp.			
	4. The simulated PHD waits until it receives a confirmation.			
	5. The simulated PHD sends an association release request (normal).			
	6. The simulated PHD waits until it receives an association release response.			
	7. The simulated PHD sends an association request using the same configuration that was used initially.			
	8. If the PHG under test responds with association request response with "accepted-unknown-config", then			
	 The simulated PHD sends the confirmed configuration event report with the standard configuration. 			
	 The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent. 			
	9. The simulated PHD sends a fixed event report with an observation in mg/dL followed by date and time stamp.			
	10. The simulated PHD waits until it receives a confirmation.			
Pass/Fail criteria	In step 4, verify that the PHG under test is able to accept the data properly and applies mmol/L to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).			
	 In step 10, verify that the PHG under test is able to accept the data properly and applies mg/dL to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units). 			
Notes				

TP ld		TP/PLT/PHG/CLASS/GL/BV-021		
TP label		Control Solution Unit-Code. Do not change from default mg/dL to mmol/L – fixed format observation		
Coverage Spec [ISO/IEEE 11073-10417]				
	Testable items	CtrlSol 6;M		

Test purpose	Check that:		
	For [Standard-Configuration] the [Unit-Code] attribute shall be present		
	The value of the [Unit-Code] attribute shall be MDC_DIM_MILLI_G_PER_DL		
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_019 AND (NOT(C_MAN_GL_002))		
Other PICS			
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure	The simulated PHD sends a confirmed variable event report to change the Unit-Code of handle 2 (Control Solution Object) to mmol/L nomenclature code MDC_DIM_MILLI_MOLE_PER_L (4722).		
	2. The simulated PHD waits until it receives a confirmation, roer message, abrt message, release association or rorj message or until TO cer-mds expires.		
	3. If the PHG has sent a confirmation in step 2, send a confirmed fixed format event report using a measurement in mmol/L followed by date and time stamp.		
	4. The simulated PHD waits until it receives a confirmation, roer message, abrt message, release association or rorj message or TO cer-mds expires.		
	5. If the PHG has sent a confirmation in step 4, ask to the operator if the measurements have been properly received and displayed.		
Pass/Fail criteria	In step 2, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message.		
	• In step 4, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message.		
	 In step 5, verify that measurements do not appear, or if they do appear, they are somehow designated as 'unsupported' data. 		
Notes			

TP ld		TP/PLT/PHG/CLASS/GL/BV-022		
TP label		Control Solution Unit-Code. Use default mg/dL – variable format observation		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	CtrlSol 6;M		
Test purpos	se	Check that:		
		For [Standard-Configuration] the [Unit-Code] attribute shall be present		
		The value of the [Unit-Code] attribute shall be MDC_DIM_MILLI_G_PER_DL		
Applicabilit	y	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		Send a confirmed variable format event report using a measurement in mg/dL.		asurement in mg/dL.
		2. The simulated PHD waits until it receives a confirmation.		

Pass/Fail criteria	Verify that the PHG under test is able to accept the data properly and applies mg/dL to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
Notes	

TP Id		TP/PLT/PHG/CLASS/GL/BV-023			
TP label		Control Solution Unit-Code. Change from default mg/dL to mmol/L – variable format observation			
Coverage Spec		[ISO/IEEE 11073-10417]			
	Testable items	CtrlSol 6;M			
	Spec	[b-ITU-T H.810 (2015)]			
	Testable items	Communication 9; M			
Test purpos	е	Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present			
		The value of the [Unit-Code] attribute shall be MDC_DIM_MILLI_G_PER_DL			
		[AND]			
		Continua PAN client components that receive a report of a configuration change shape the change to future measurements only	nall apply		
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_019 AND C_MAN_GL_002			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test proced	ure	 Send a confirmed variable format event report to set the unit code to mmol/L MDC_DIM_MILLI_MOLE_PER_L (4722) for handle 2 (Control Solution Object) and a measurement in mmol/L. 			
		2. The simulated PHD waits until it receives a confirmation.			
		3. Send a second confirmed variable format event report with just a measurement in mmol/L (i.e., do not transmit the unit-code attribute in the event report).			
		4. The simulated PHD waits until it receives a confirmation.			
		5. The simulated PHD sends an association release request (normal).			
		6. The simulated PHD waits until it receives an association release response.			
		7. The simulated PHD sends an association request using the same configuration that was used initially.			
		8. If the PHG under test responds with association request response with "accepted-unknown-config", then			
		 The simulated PHD sends the confirmed configuration event report with the standard configuration. 			
		 The simulated PHD waits until it receives a confirmation from the confirme configuration event report just sent. 	∍d		
		9. The simulated PHD sends a confirmed variable event report with an observation followed by date and time stamp (i.e., do not send the unit-code attribute it shows to mg/dL by the standard configuration).	time stamp (i.e., do not send the unit-code attribute it should be set		
		10. The simulated PHD waits until it receives a confirmation.			

Pass/Fail criteria	 In steps 2 and 4, verify that the PHG under test is able to accept the data properly and applies mmol/L to the observations (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units). In step 10, verify that the PHG under test is able to accept the data properly and applies mg/dL to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
Notes	

TP Id		TP/PLT/PHG/CLASS/GL/BV-024		
TP label		Special values. Control Solution - Not a number – fixed format (Std Config 1701)		
Coverage Spec		[ISO/IEEE 11073-10417]		
	Testable items	CtrlSol 8; M		
Test purpos	е	Check that:		
		The PHG receives a NaN value (fixed format event report) but it does not use this value.		
Applicability	/	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.		
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 2 (Control Solution Object) containing an observation value with the value for NaN ([exponent 0, mantissa +(2**11 -1) = 0x07FF]) and a time stamp. 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area). 		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/GL/BV-025		
TP label		Special values. Control Solution - Not a number – variable format (Std Config 1701)		
Coverage	ge Spec [ISO/IEEE 11073-10417]			
	Testable items	CtrlSol 12; M		
Test purpose		Check that: The PHG receives a NaN value (variable format event report) but it does not use this value.		
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condition		The simulated PHD and the PH configuration 1701.	G under test are in the Operatin	g state using the standard

Test procedure	 The simulated PHD sends a confirmed variable event report for handle 2 (Control Solution Object) containing an observation value set to the value for NaN ([exponent 0, mantissa +(2**11 -1) = 0x07FF]).
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/GL/BV-026		
TP label		Special values. Control Solution - Not at this resolution - fixed format (Std Config 1701)		
Coverage Spec		[ISO/IEEE 11073-10417]		
	Testable items	CtrlSol 8; M		
Test purpos	se	Check that:		
		The PHG receives NRes value (fixed format event report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condi	ition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.		
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 2 (Control Solution Object) containing an observation value set to the value for NRes ([exponent 0, mantissa –(2**11) = 0x0800]) and a time stamp. 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes		This test case has been considered as an implicit test case.		

TP Id		TP/PLT/PHG/CLASS/GL/BV-027		
TP label		Special values. Control Solution - Not at this resolution - variable format (Std Config 1701)		
Coverage Spec [ISO/IEEE 11073-10417]				
	Testable items	CtrlSol 12; M		
Test purpose		Check that:		
		The PHG receives NRes value (variable format event report) but it does not use this value.		
Applicability	/	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condition		The simulated PHD and the PH configuration 1701.	G under test are in the Operatin	g state using the standard

Test procedure	The simulated PHD sends a confirmed variable event report for handle 2 (Control Solution Object) containing an observation value set to the value for NRes ([exponent 0, mantissa –(2**11) = 0x0800]).
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld TP label		TP/PLT/PHG/CLASS/GL/BV-028 Special values. Control Solution - Positive infinity – fixed format (Std Config 1701)		
	Testable items	CtrlSol 8; M		
Test purpos	se	Check that:		
		The PHG receives a +INFINITY value (fixed format event report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.		
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 2 (Control Solution Object) containing an observation value set to the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**11 -2) = 0x07FE]) and a time stamp. 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/GL/BV-029		
TP label		Special values. Control Solution - Positive infinity – variable format (Std Config 1701)		
Coverage Spec [ISO/IEEE 11073-10417]				
	Testable items	CtrlSol 12; M		
Test purpose		Check that: The PHG receives a +INFI value.	NITY value (variable format event re	eport) but it does not use this
Applicability		C_MAN_OXP_000 AND C	_MAN_OXP_019	
Other PICS				

Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.		
Test procedure	1. The simulated PHD sends a confirmed variable event report for handle 2 (Control Solution Object) containing an observation value set to the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**11 -2) = 0x07FE]).		
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes	This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/GL/BV-030		
TP label		Special values. Control Solution - Negative infinity – fixed format (Std Config 1701)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
Testable items		CtrlSol 8; M		
Test purpos	se	Check that:		
		The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 AND C_	_MAN_OXP_019	
Other PICS				
Initial condition		The simulated PHD and the configuration 1701.	e PHG under test are in the Operation	ng state using the standard
Test procedure		Object) containing an o	nds a confirmed fixed event report fobservation value set to the value fo $-(2^{**}11 - 2) = 0x0802])$ and a time s	r negative infinity (-INFINITY,
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes This test case has been considered as an implicit test case.				

TP ld		TP/PLT/PHG/CLASS/GL/BV-031		
TP label Special values. Control Solution - Negative infinity – variable format (Std Config 17		rmat (Std Config 1701)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
Testable items		CtrlSol 12; M		
Test purpose		Check that: The PHG receives a –INFINITY value (variable format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_019	

Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.
Test procedure	 The simulated PHD sends a confirmed variable event report for handle 2 (Control Solution Object) containing an observation value set to the value for negative infinity (– INFINITY, [exponent 0, mantissa –(2**11 –2) = 0x0802]).
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/GL/BV-032		
TP label		Special values. Control Solution - Reserved – fixed format (Std Config 1701)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	CtrlSol 8; M		
Test purpose	е	Check that:		
		The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.		
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.		
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 2 (Control Solution Object) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**11 –1) = 0x0801]) and a time stamp. 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes		This test case has been considered as an implicit test case.		

TP Id		TP/PLT/PHG/CLASS/GL/BV-033		
TP label Special values. Control Solution - Reserved – variable format (Std Config 1701)		Std Config 1701)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
Testable items		CtrlSol 12; M		
Test purpose		Check that:		
		The PHG receives a Reserved not use this value.	for future use value (variable for	rmat event report) but it does

Applicability	C_MAN_OXP_000 AND C_MAN_OXP_019
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.
Test procedure	 The simulated PHD sends a confirmed variable event report for handle 2 (Control Solution Object) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**11 –1) = 0x0801]).
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

A.4 Subgroup 2.3.3: Pulse oximeter (PO)					
TP ld		TP/PLT/PHG/CLASS/PO/BV-003			
TP label		Association procedure PHG PC)		
Coverage	Spec	[ISO/IEEE 11073-10404]	[ISO/IEEE 11073-10404]		
	Testable	PulseAssocResp 1;M	PulseAssocResp 2;M	PulseAssocResp 5;M	
	items	PulseAssocResp 6;M	PulseAssocResp 7;M	PulseAssocResp 8;M	
		PulseAssocResp 9;M PulseAssocResp 10;M PulseAsso		PulseAssocResp 11;M	
Test purpose)	Check that:			
		In the DataProtoList structure e id-20601 (i.e., data-proto-id = 0	element, the data protocol identif x5079)	ier shall be set to data-proto-	
		[AND]			
		The data-proto-info field shall be filled in with a PhdAssociationInformation structure and the version of the data exchange protocol shall be set to protocol-version1 (i.e., protocol-version = 0x80000000)			
		[AND]			
		The data-proto-info field shall be filled in with a PhdAssociationInformation structure and the version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000)			
		[AND]			
		The data-proto-info field shall be filled in with a PhdAssociationInformation structure and the field functional-units shall have all bits reset except for those relating to a Test Association			
		[AND]			
		The data-proto-info field shall be filled in with a PhdAssociationInformation structure and the field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000)			
		[AND]			
		The data-proto-info field shall be filled in with a PhdAssociationInformation structure and the system-id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier			
		[AND]			
		The data-proto-info field shall be filled in with a PhdAssociationInformation structure and the field dev-config-id shall be manager-config-response			
		[AND]			

	The data-proto-info field shall be filled in with a PhdAssociationInformation structure and the field data-req-mode-capab-flags shall be 0			
	[AND]			
	The data-proto-info field shall be filled in with a PhdAssociationInformation structure and the fields data-req-init-*-count shall be 0			
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_026			
Other PICS				
Initial condition	The PHG is in the Unassociated state.			
Test procedure	1. The simulated PHD sends an association request to the PHG under test, with the fields:			
	□ protocol-version = '100000000000000000000000000000000000			
	□ encoding-rules= '100000000000000'B			
	□ nomenclature-version = '100000000000000000000000000000000000			
	☐ functional-units = '00000000000000000000000000000000000			
	□ system-type = '000000001000000000000000000000000000			
	☐ dev-config-id = 16443			
	data-rep-mode-capab =			
	 data_req_mode_flags= '00000000000001'B 			
	data_req_init_agent_count = 1			
	data_req_init_manager_count = 0			
	option-list.length= 0			
	2. The PHG under test sends an association response. The fields of interest are:			
	a. APDU Type			
	ifield-length = 2 bytes			
	☐ field-value = 0xE3 0x00 (AareApdu)			
	b. Result			
	☐ field-type = AssociateResult			
	☐ field-length = 2 bytes			
	☐ field-value = One of the following:			
	 If association is accepted, field-value= 0x00 0x00. 			
	 If association is rejected-permanent, field-value= 0x00 0x01. 			
	 If association is rejected-transient, field-value= 0x00 0x02. 			
	 If association is accepted-unknown-config, field-value= 0x00 0x03. 			
	 If association is rejected-no-common-protocol, field-value= 0x00 0x04. 			
	 If association is rejected-no-common-parameter, field-value= 0x00 0x05. 			
	If association is rejected–unknown = 0x00 0x06.			
	 If association is rejected-unauthorized, field-value= 0x00 0x07. 			
	 If association is rejected—unsupported-assoc-version, field-value= 0x00 0x08. 			
	c. selected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data-proto-info(defined by data-proto-id))			
	d. data-proto-id			
	☐ field-type = DataProtold			
	☐ field-length = 2 bytes			
	☐ field-value= 0x50 0x79 (20601)			
	□ IIEIU-VAIUE - 0.00 03/3 (20001)			

e.	protocol-version
	☐ field-type = Protocol Version
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value= 0x80 0x00 0x00 0x00
f.	encoding-rules
	☐ field-type = EncodingRules
	☐ field-length = 2 bytes (BITS-16)
	field-value= depends on the encoding rules supported/selected, but only one can be supported at a time
g.	nomenclature version
	☐ field-type = NomenclatureVersion
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value= Bit 0 must be set (nom-version1)
h.	functional units
	☐ field-type = FunctionalUnits
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value =
	■ Bit 0 must be 0
	 Bits 1 and 2 may be set
	 The rest of the bits must not be set
i.	system type
	☐ field-type = SystemType
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
j.	system-id
	☐ field-type = OCTET STRING
	☐ field-length = 8 bytes
	☐ field-value = (EUI-64 manufacturer and device)
k.	dev-config-id
	☐ field-type = Configld
	☐ field-length = 2 bytes
	☐ field-value = 0x00 0x00 (manager-config-response)
I.	data-req-mode-flags (DataReqModeCapab)
	☐ field-type = DataReqModeFlags
	☐ field-length = 2 bytes
	☐ field-value = 0x00 0x00
	☐ PHG response to data-req-mode-flags is always 0.
m.	data-req-init-agent-count (DataReqModeCapab)
	☐ field-type = INT-U8
	☐ field-length = 1 byte
	☐ field-value = 0x00
n.	data-req-init-manager-count (DataReqModeCapab)
	☐ field-type = INT-U8
	☐ field-length = 1 byte

	☐ field-value = 0x00
Pass/Fail criteria All checked values are as specified in the test procedure.	
Notes Value for protocol-version has been modified according to [ISO/IEEE 11073-20601-207]	

TP Id		TP/PLT/PHG/CLASS/PO/BV-004			
TP label		Configuration Event Report. Pulse Oximeter standard configuration 400			
Coverage	Spec	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
	Testable items	ConfEv	ventRep 18;M		
Test purpose		Check that: A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4. Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the Configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.			
Applicability		C_MAN	N_OXP_000 AND C_MAN_OXP_026		
Other PICS		C_MAN	N_OXP_085		
Initial conditi	on	The sin	mulated PHD and the PHG under test are in the Unassociated state		
Test procedure		id 2. Th a. If the re 3. Th	☐ field-type = INT-U16 ☐ field-length = 2 bytes ☐ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config) result of the association response was "accepted-unknown-config" re simulated PHD sends a configuration event report with config-report-id set to 0x01 x90. re PHG under test must respond with: APDU Type ☐ field-length = 2 bytes ☐ field-value = 0xE7 0x00 (PrstApdu) Invoke-id ☐ field-type = INT-U16 ☐ field-length = 2 bytes ☐ field-value= it must be the same as the invoke-id of the simulated PHD's message.		
		d.	Event-time:		

		☐ field-type = INT-U32			
		☐ field-length = 4 bytes			
		☐ field-value: 0xXX 0xXX			
	e.	Event-type:			
		☐ field-length = 2 bytes			
		☐ field-value= MDC_NOTI_CONFIG			
	f.	The following six bytes indicate:			
		☐ Event-replay-info.length (2 bytes)			
		☐ ConfigReportRsp.config-report-id: it must be the same as config-report-id of the simulated PHD's message			
		☐ ConfigReportRsp.config-result: One of:			
		 accepted-config: 0x00 0x00 			
	5. IF (IF C_MAN_OXP_085 THEN:			
	a.	The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes.			
	b.	The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.			
	C.	Once in the Operating state the PHG is forced to enable the scanner object.			
	Wait until the Operating state is reached in both cases.				
	6. The	simulated PHD sends a fixed event report with one measurement.			
Pass/Fail criteria	The PHG under test must respond either to the association request with an "accepted" message or to the Configuration Event Report with an "accepted-config".				
	• The	measurement is correctly presented.			
Notes	See http	o://continua.plugfests.com/show_bug.cgi?id=123			

TP Id		TP/PLT/PHG/CLASS/PO/BV-005						
TP label		Configuration Event Report. Pulse Oximeter standard configuration 401						
Coverage	Spec	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]						
	Testable items	ConfEventRep 18;M						
Test purpose		Check that:						
		A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.						
		Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the Configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.						
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_026						
Other PICS		C_MAN_OXP_085						
Initial condi	tion	The simulated PHD and the PHG under test are in the Unassociated state.						
Test proced	ure	The simulated PHD sends an association request to the PHG under test with dev-configid set to 0x01 0x91 (PulseOximeter).						

	2.	The	ne PHG under test responds with an association response, the field of interest is:			
		a.	Result			
				field-type = INT-U16		
				field-length = 2 bytes		
				field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)		
	If th	e res	sult o	f the association response was "accepted-unknown-config"		
	3.	The simulated PHD sends a configuration event report with config-report-id set to 0x01 0x91.				
	4.	The PHG under test must respond with:				
	ı	b.	APE	DU Type		
				field-length = 2 bytes		
				field-value = 0xE7 0x00 (PrstApdu)		
		C.	Invo	ke-id		
				field-type = INT-U16		
				field-length = 2 bytes		
				field-value= it must be the same as the invoke-id of the simulated PHD's message.		
		d.	Obj-	Handle:		
				field-type = HANDLE		
				field-length = 2 bytes		
				field-value = 0x00 0x00		
		e.	Eve	nt-time:		
				field-type = INT-U32		
				field-length = 4 bytes		
				field-value: 0xXX 0xXX		
		f.	Eve	nt-type:		
				field-length = 2 bytes		
				field-value= MDC_NOTI_CONFIG		
		g.	The	following six bytes indicate:		
				Event-replay-info.length (2 bytes)		
				ConfigReportRsp.config-report-id: it must be the same as config-report-id of the simulated PHD's message		
				ConfigReportRsp.config-result: One of:		
				 accepted-config: 0x00 0x00 		
	5.	IF C	IF C_MAN_OXP_085 THEN:			
		a.	roiv-	PHG under test moves to Configuring/Sending GetMDS substate and issues -cmip-command with handle set to 0 (request for MDS object) and attribute-id-list to 0 to indicate all attributes.		
		b.	attri	simulated PHD responds with a rors-cmip-get service message in which the bute-list contains a list of all implemented attributes of the MDS object and the s-time-mgr-set-time bit is not set.		
		c. Once in the Operating state the PHG is forced to enable the scanner object.				
	Wai	it unt	il the	Operating state is reached in both cases.		
	6.	The	sim	ulated PHD sends a fixed event report with one measurement.		
Pass/Fail criteria	•			G under test must respond either to the association request with an "accepted" e or to the Configuration Event Report with an "accepted-config".		

	The measurement is correctly presented.
Notes	See http://continua.plugfests.com/show_bug.cgi?id=123

TP Id		TP/PLT/PHG/CLASS/PO/BV-006		
TP label		Maximum APDU size: Pulse Oximeter		
Coverage	Spec	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	CommonCharac 4;M		
Test purpose	е	Check that:		
		If a PHG receives APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.		
		The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitiations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.		
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_026		
Other PICS				
Initial condit	ion	The PHG under test is in the Operating state.		
Test procedu	ure	The simulated PHD sends a Confirmed variable event report:		
		a. ScanReportInfoVar. obs_scan_var:		
		☐ Count = 2		
		☐ Length = 5080 ObservationScan ::= {		
		obj-handle: 1 (SPO2)		
		<pre>attributes: AttributeList ::= { AVA-Type ::= {</pre>		
		AVA-Type ::= { attribute-id: 61441		
		attribute-value: '00(5056 bytes) 00'0		
		}		
		}		
		ObservationScan ::= { obj-handle: 1 (SPO2)		
		<pre>attributes: AttributeList ::= {</pre>		
		AVA-Type ::= {		
		attribute-id: 2636 (MDC_ATTR_NU_VAL_OBS_BASIC) attribute-value: 98		
		}		
		}		
		Check the response of the PHG under test.		
		 Check the response of the PHG under test. The simulated PHD sends a confirmed fixed event report with one measurement. 		
		Check the response of the PHG under test.		
Pass/Fail cri	teria	In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".		
		In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".		
Notes				
		1		

TP ld		TP/PLT/PHG/CLASS/PO/BV-007		
TP label		Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map		
Coverage	Spec	[ISO/IEEE 11073-10404]		
	Testable items	SpO2NumObjAttr 11;M		
Test purpose		Check that:		
		For [Standard-Configuration] [Attribute-Value-Map] attribute must be present and with value MDC_ATTR_NU_VAL_OBS_BASIC		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_026		
Other PICS				
Initial conditi	on	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 0x190.		
Test procedure		1. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 1 (SpO ₂ Object) to set the values to: MDC_ATTR_TIME_STAMP_ABS, then MDC_ATTR_NU_VAL_OBS_BASIC. For handle 10 (Pulse Rate Object), set the attribute value map to: MDC_ATTR_TIME_STAMP_ABS, then MDC_ATTR_NU_VAL_OBS_BASIC		
		2. The simulated PHD waits until it receives a confirmation.		
		3. Send a confirmed fixed format event report with the new data layout.		
		4. The simulated PHD waits until it receives a confirmation.		
Pass/Fail criteria		• In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).		
		 In step 4, verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e., the actual observation may have occurred sometime in the past). 		
Notes				

TP ld		TP/PLT/PHG/CLASS/PO/BV-008		
TP label	Unit-Code. Use default % and beats per minute (BPM) – variable format observation.		le format observation.	
Coverage	Spec	[ISO/IEEE 11073-10404]		
	Testable items	SpO2NumObjAttr 10;M		
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	Communication 9; M		

Test purpose	Check that:	
	For [Standard-Configuration] [Unit-Code] value is MDC_DIM_PERCENT	
	[AND]	
	Continua PAN client components that receive a report of a configuration change shall apply the change to future measurements only]	
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_026	
Other PICS		
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 0x190.	
Test procedure	 Send a confirmed variable format event report for handle 1 using a measurement in % and for handle 10 using a measurement in BPM. 	
	2. The simulated PHD waits until it receives a confirmation.	
Pass/Fail criteria	Verify that the PHG under test is able to accept the data properly and applies % and BPM to the observations (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).	
Notes		

TP ld		TP/PLT/PHG/CLASS/PO/BV-009	
TP label Supplemental-Type: SpO ₂ — Standard configuration 0x191		Supplemental-Type: SpO ₂ — Standard configuration 0x191	
Coverage	Spec [ISO/IEEE 11073-10404]		
	Testable items	Spo2StandConf 1;C	
Test purpos	Check that: For SpO2 numeric Object the and for Dev-Configuration-Id to 0x191 the Supplementa attribute shall contain a single entry in its SupplementalTypeList, and its value shall be MDC MODALITY SPOT.		
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_026	
Other PICS			
Initial condi	Initial condition The simulated PHD and the PHG under test are in the Operating state using the st configuration 0x191.		
Test proced	Test procedure 1. The simulated PHD sends a confirmed fixed format event report from handle 1 (South Company of MDC_ATTR_NU_VAL_OBS_BASIC. 2. The simulated PHD waits until it receives a confirmation.		
correct bytes to the correct attributes and Supplemental-Type for Object wit		In step 2. Verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes and Supplemental-Type for Object with handle 1 is MDC_MODALITY_SPOT (e.g., if there is a UI, verify that the measurement and date are displayed properly).	
Notes			

TP ld	TP/PLT/PHG/CLASS/PO/BV-010
TP label	Supplemental-Type: Pulse Rate— Standard configuration 0x191

Coverage	Spec	[ISO/IEEE 11073-10404]		
	Testable items	PulseRateStandConf 1;C		
Test purpose		Check that:		
			the and for Dev-Configuration-lesingle entry in its SupplementalT	
Applicability	,	C_MAN_OXP_000 AND C_MA	N_OXP_026	
Other PICS				
Initial condit	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 0x191.		ng state using the standard	
Test procedure		 Simulated PHD sends a confirmed fixed format event report from handle 10 (Pulse Rate Object) that matches the Attribute-Value-Map order of MDC_ATTR_NU_VAL_OBS_BASIC. 		
2. The simulated PHD waits until it receives a confirmation.				
Pass/Fail criteria In step 2. Verify that the PHG under test is able to accept the data properly and app correct bytes to the correct attributes and Supplemental-Type for Object with handle MDC_MODALITY_SPOT (e.g., if there is a UI, verify that the measurement and date displayed properly).		or Object with handle 10 is		
Notes				

TP Id		TP/PLT/PHG/CLASS/PO/BV-011		
TP label	Special values. Not a number – fixed format			
Coverage	Spec	[ISO/IEEE 11073-10404]		
	Testable items	SpO2NumObjAttr 11; M	PulseRateNumObjAttr 28; M	
Test purpose	e	Check that:		
		The PHG receives a NaN va	lue (fixed format event report) but	it does not use this value.
Applicability	7	C_MAN_OXP_000 AND C_N	MAN_OXP_026	
Other PICS				
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		ng state using the standard
Test procedu	1. The simulated PHD sends a confirmed fixed event report for handle 1 (SpO ₂ Objection handle 10 (Pulse Rate Object) containing an observation value set to the value for ([exponent 0, mantissa +(2**11 –1) = 0x07FF]).			
		2. The simulated PHD wait	ts until it receives a confirmation fro	om the PHG under test.
Verify that the PHG under test is able to accept the data, but does not us if they were an actual measurement (e.g., if there is a UI, verify that the r displayed in some form that indicates it is not a measurement such as "—the display area).		verify that the measurement is		
Notes This test case has been considered as an implicit test case.				

TP ld		TP/PLT/PHG/CLASS/PO/BV-012		
TP label	Special values. Not a number – variable format			
Coverage	Spec	[ISO/IEEE 11073-10404]		
	Testable items	SpO2NumObjAttr 16; C	PulseRateNumObjAttr 33; C	
Test purpos	е	Check that:		
		The PHG receives a NaN v	alue (variable format event report) b	out it does not use this value.
Applicability	7	C_MAN_OXP_000 AND C_MAN_OXP_026		
Other PICS				
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standar configuration.		ng state using the standard
Test procedo	ure	 The simulated PHD sends a confirmed variable event report for handle 1 (SpO₂ Object) and handle 10 (Pulse Rate Object) containing an observation value set to the value for NaN ([exponent 0, mantissa +(2**11 -1) = 0x07FF]). The simulated PHD waits until it receives a confirmation from the PHG under test. 		ion value set to the value for
Pass/Fail criteria • Verify that the PHG under test is able to accept the data, but does not use the if they were an actual measurement (e.g., if there is a UI, verify that the measurement displayed in some form that indicates it is not a measurement such as "—" of the display area).		out does not use the values as verify that the measurement is		
Notes This test case has been considered as an implicit test case.				

TP ld		TP/PLT/PHG/CLASS/PO/BV-013		
TP label	P label Special values. Not at this resolution – fixed format			
Coverage Spec		[ISO/IEEE 11073-10404]		
	Testable items	SpO2NumObjAttr 11; M	PulseRateNumObjAttr 28; M	
Test purpos	se	Check that: The PHG receives NRes value (fixed format event report) but it does not use this value.		t does not use this value.
Applicabilit	у	C_MAN_OXP_000 AND C_	_MAN_OXP_026	
Other PICS				
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		ng state using the standard
Test proced	t procedure 1. The simulated PHD sends a confirmed fixed event report for handle 1 (SpO ₂ Objective handle 10 (Pulse Rate Object) containing an observation value set to the value for ([exponent 0, mantissa –(2**11) = 0x0800]).			
		2. The simulated PHD wa	its until it receives a confirmation fro	om the PHG under test.
• Verify that the PHG under test is able to accept the data, but does not use to if they were an actual measurement (e.g., if there is a UI, verify that the measurement displayed in some form that indicates it is not a measurement).		verify that the measurement is		
Notes This test case has been considered as an implicit test case.				

TP Id		TP/PLT/PHG/CLASS/PO/BV-014		
TP label		Special values. Not at this resolution – variable format		
Coverage	Spec	[ISO/IEEE 11073-10404]		
	Testable items	SpO2NumObjAttr 16; C	PulseRateNumObjAttr 33; C	
Test purpose	•	Check that: The PHG receives NRes value (variable format event report) but it does not use this value.		ut it does not use this value.
Applicability		C_MAN_OXP_000 AND C_I	MAN_OXP_026	
Other PICS				
Initial condit	The simulated PHD and the PHG under test are in the Operating state using the state configuration.		ng state using the standard	
Test procedu	1. The simulated PHD sends a confirmed variable event report for handle 1 (SpO ₂ Ob and handle 10 (Pulse Rate Object) containing an observation value set to the value NRes ([exponent 0, mantissa –(2**11) = 0x0800]).		on value set to the value for	
The simulated PHD waits until it receives a confirmation from the PHG und		om the PHG under test.		
• Verify that the PHG under test is able to accept the data, but does not use if they were an actual measurement (e.g., if there is a UI, verify that the displayed in some form that indicates it is not a measurement).		erify that the measurement is		
Notes This test case has been considered as an implicit test case.				

TP ld		TP/PLT/PHG/CLASS/PO/BV-015			
TP label		Special values. Positive infinity – fixed format			
Coverage	Spec	[ISO/IEEE 11073-10404]		-	
	Testable items	SpO2NumObjAttr 11; M	PulseRateNumObjAttr 28; M		
Test purpos	se	Check that:			
		The PHG receives a +INFINITY value (fixed format event report) but it does not use this value.			
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_026			
Other PICS					
Initial condi	ition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 1 (SpO ₂ Object) and handle 10 (Pulse Rate Object) containing an observation value set to the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**11 -2) = 0x07FE]).			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).			
Notes		This test case has been co	nsidered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/PO/BV-016			
TP label		Special values. Positive infinity – variable format			
Coverage	Spec	[ISO/IEEE 11073-10404]			
	Testable items	SpO2NumObjAttr 16; C	PulseRateNumObjAttr 33; C		
Test purpos	se	Check that:			
		The PHG receives a +INFINITY value (variable format event report) but it does not use this value.			
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_026			
Other PICS					
Initial condi	ition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (SpO₂ Object) and handle 10 (Pulse Rate Object) containing an observation value set to the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**11 -2) = 0x07FE]). 			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		they were an actual me	nder test is able to accept the data, be easurement (e.g., if there is a UI, ven that indicates it is not a measurem	rify that the measurement is	
Notes		This test case has been considered as an implicit test case.			

TP ld		TP/PLT/PHG/CLASS/PO/BV-017			
TP label		Special values. Negative infinity – fixed format			
Coverage	Spec	[ISO/IEEE 11073-10404]	[ISO/IEEE 11073-10404]		
	Testable items	SpO2NumObjAttr 11; M	PulseRateNumObjAttr 28; M		
Test purpos	е	Check that:			
		The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.			
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_026			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 1 (SpO₂ Object) and handle 10 (Pulse Rate Object) containing an observation value set to the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**11 –2) = 0x0802]). 			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 			
Notes		This test case has been considered as an implicit test case.			

TP Id		TP/PLT/PHG/CLASS/PO/BV-018				
TP label		Special values. Negative infinity – variable format				
Coverage	Spec	[ISO/IEEE 11073-10404]	[ISO/IEEE 11073-10404]			
	Testable items	SpO2NumObjAttr 16; C	PulseRateNumObjAttr 33; C			
Test purpose	e	Check that:				
		The PHG receives a –INFINITY value (variable format event report) but it does not use this value.				
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_026				
Other PICS						
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.				
Test procedure		1. The simulated PHD sends a confirmed variable event report for handle 1 (SpO ₂ Object) and handle 10 (Pulse Rate Object) containing an observation value set to the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**11 –2) = 0x0802]).				
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.				
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 				
Notes		This test case has been considered as an implicit test case.				

TP Id		TP/PLT/PHG/CLASS/PO/BV-019				
TP label		Special values. Reserved – fixed format				
Coverage	Spec	[ISO/IEEE 11073-10404]	ISO/IEEE 11073-10404]			
	Testable items	SpO2NumObjAttr 11; M	PulseRateNumObjAttr 28; M			
Test purpose		Check that: The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.				
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_026				
Other PICS						
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.				
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 1 (SpO₂ Object) and handle 10 (Pulse Rate Object) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**11 –1) = 0x0801]). The simulated PHD waits until it receives a confirmation from the PHG under test. 				

Pass/Fail criteria	 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/PO/BV-020			
TP label		Special values. Reserved – variable format			
Coverage	Spec	[ISO/IEEE 11073-10404]			
	Testable items	SpO2NumObjAttr 16; C	PulseRateNumObjAttr 33; C		
Test purpos	se .	Check that:			
		The PHG receives a Reserved for future use value (variable format event report) but it does not use this value.			
Applicability	/	C_MAN_OXP_000 AND C_MAN_OXP_026			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (SpO₂ Object) and handle 10 (Pulse Rate Object) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**11 –1) = 0x0801]). 			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 			
Notes		This test case has been considered as an implicit test case.			

A.5 Subgroup 2.3.4: Blood pressure monitor (RPM)

TP Id TP label		TP/PLT/PHG/CLASS/BPM/BV-000				
		Association procedure PHG BPM				
Coverage	Spec	[ISO/IEEE 11073-10407]				
	Testable	ConfProc_4;M	AsProc_14;M	AsProc_15;M		
	items	AsProc_16;M	AsProc_17;M	AsProc_18;M		
		AsProc_19;M	AsProc_20;M	AsProc_21;M		
		AsProc_22;M	AsProc_23;M	AsProc_24;M		
		AsProc_25;M				
Test purpose		Check that:				
The PHG shall respond to a configuration notification message using a "Remote C Response Confirmed Event Report" data message with an MDC_NOTI_CONFIG			0 0 1			

	using the ConfigReportRsp structure for the event-info field (see Table 3).				
	[AND]				
	In the association response message sent by the PHG:				
	The result field shall be set to an appropriate response from those defined in ISO/IEEE P11073-20601.				
	[AND]				
	In the DataProtoList structure element, the data protocol identifier shall be set to data-proto-id-20601				
	[AND]				
	The data-proto-info field shall be filled in with a PhdAssociationInformation structure				
	AND]				
	The version of the data exchange protocol shall be set to protocol-version1 (i.e., protocol-version = 0x80000000)				
	[AND]				
	The PHG shall respond with a single selected encoding rule that is supported by both PHD and PHG. The PHG shall support at least the MDER encoding rules				
	[AND]				
	The version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000)				
	[AND]				
	The field functional-units shall have all bits reset except for those relating to a Test Association.				
	[AND]				
	The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000) [AND]				
	The System-Id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier				
	[AND]				
	The field dev-config-id shall be manager-config-response (0)				
	[AND]				
	The field data-req-mode-capab shall be 0				
	[AND]				
	The fields data-req-init-*-count shall be 0				
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_020				
Other PICS					
Initial condition	The PHG is in the Unassociated state.				
Test procedure	1. The simulated PHD sends an association request to the PHG under test, with the fields:				
	□ protocol-version = '100000000000000000000000000000000000				
	☐ encoding-rules= '10000000000000'B				
	□ nomenclature-version = '100000000000000000000000000000000000				
	☐ functional-units = '00000000000000000000000000000000000				
	□ system-type = '000000001000000000000000000000000000				
	☐ dev-config-id = 16437				
	☐ data-rep-mode-capab =				
	 data_req_mode_flags= '00000000000001'B 				

		data_req_init_agent_count = 1	
		data_req_init_manager_count = 0	
		option-list.length= 0	
2.	The	PHG under test sends an association response. The fields of interest are:	
	a.	APDU Type	
		☐ field-length = 2 bytes	
		☐ field-value = 0xE3 0x00 (AareApdu)	
	b.	Result	
		☐ field-type = AssociateResult	
		☐ field-length = 2 bytes	
		☐ field-value = One of the following:	
		 If association is accepted, field-value= 0x00 0x00. 	
		 If association is rejected-permanent, field-value= 0x00 0x01. 	
		 If association is rejected-transient, field-value= 0x00 0x02. 	
		 If association is accepted-unknown-config, field-value= 0x00 0x03. 	
		If association is rejected-no-common-protocol, field-value= 0x00 0x04.	
		 If association is rejected-no-common-parameter, field-value= 0x00 0x05. 	
		If association is rejected—unknown = 0x00 0x06.	
		If association is rejected-unauthorized, field-value= 0x00 0x07.	
		 If association is rejected-unsupported-assoc-version, field-value= 0x00 0x08. 	
	C.	selected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data-proto-info(defined by data-proto-id))	-
	d.	data-proto-id	
		☐ field-type = DataProtoId	
		☐ field-length = 2 bytes	
		☐ field-value= 0x50 0x79 (20601)	
	e.	protocol-version	
		☐ field-type = Protocol Version	
		☐ field-length = 4 bytes (BITS-32)	
		☐ field-value= 0x80 0x00 0x00 0x00	
	f.	encoding-rules	
		☐ field-type = EncodingRules	
		☐ field-length = 2 bytes (BITS-16)	
		☐ field-value= depends on the encoding rules supported/selected, but only one can be supported at a time	
	g.	nomenclature version	
		☐ field-type = NomenclatureVersion	
		☐ field-length = 4 bytes (BITS-32)	
		☐ field-value= Bit 0 must be set (nom-version1)	
	h.	functional units	
		☐ field-type = FunctionalUnits	
		☐ field-length = 4 bytes (BITS-32)	
		☐ field-value =	
		■ Bit 0 must be 0	

	■ Bits 1 and 2 may be set
	 The rest of the bits must not be set
	i. system type
	☐ field-type = SystemType
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
	j. system-id
	☐ field-type = OCTET STRING
	☐ field-length = 8 bytes
	☐ field-value = (EUI-64 manufacturer and device)
	k. dev-config-id
	☐ field-type = Configld
	☐ field-length = 2 bytes
	☐ field-value = 0x00 0x00 (manager-config-response)
	I. data-req-mode-flags (DataReqModeCapab)
	☐ field-type = DataReqModeFlags
	☐ field-length = 2 bytes
	☐ field-value = 0x00 0x00
	☐ PHG response to data-req-mode-flags is always 0.
	m. data-req-init-agent-count (DataReqModeCapab)
	☐ field-type = INT-U8
	☐ field-length = 1 byte
	☐ field-value = 0x00
	n. data-req-init-manager-count (DataReqModeCapab)
	☐ field-type = INT-U8
	☐ field-length = 1 byte
	☐ field-value = 0x00
Pass/Fail criteria	All checked values are as specified in the test procedure.
Notes	Value for protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].

TP ld		TP/PLT/PHG/CLASS/BPM/BV-001 Configuration Event Report. Blood Pressure Meter standard configuration			
					Coverage Spec
	Testable items	MDSEvents 8;M			
	Spec	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
	Testable items	ConfEventRep 18;M			
Test purpose		Check that:			
		A blood pressure monitor PHG shall respond to an [MDS-Configuration-Event] using a [Confirmed] event report response.			

	The Response shall include the event-reply-info [ConfigReportRsp]			
	[AND	[AND]		
	stand	A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.		
	enter	the C	y, the PHG may request the PHD to send the standard configuration in order to onfiguring state and check attributes from the MDS object prior to final acceptance of the PHD.	
Applicability	C_MA	C_MAN_OXP_000 AND C_MAN_OXP_020		
Other PICS	C_MA	AN O	KP_085	
Initial condition	The s	imulat	ed PHD and the PHG under test are in the Unassociated state.	
Test procedure			nulated PHD sends an association request to the PHG under test with dev-configox02 0xBC (Blood Pressure Meter).	
			IG under test responds with an association response, the field of interest is:	
			esult	
			field-type = INT-U16	
			field-length = 2 bytes	
			field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)	
	If the	result	of the association response was "accepted-unknown-config"	
	4. T	4. The PHG under test must respond with:		
	а	ı. AF	PDU Type	
			field-length = 2 bytes	
			field-value = 0xE7 0x00 (PrstApdu)	
	b	. Inv	voke-id	
			field-type = INT-U16	
			field-length = 2 bytes	
			field-value= it must be the same as the invoke-id of the simulated PHD's message.	
	C	. Ob	oj-Handle:	
			field-type = HANDLE	
			field-length = 2 bytes	
			field-value = 0x00 0x00	
	C	l. Ev	ent-time:	
			field-type = INT-U32	
			field-length = 4 bytes	
			field-value: 0xXX 0xXX	
	e	e. Ev	ent-type:	
			field-length = 2 bytes	
			field-value= MDC_NOTI_CONFIG	
	f.	. Th	e following six bytes indicate:	
			Event-replay-info.length (2 bytes)	
			ConfigReportRsp.config-report-id: it must be the same as config-report-id of the simulated PHD's message	

	☐ ConfigReportRsp.config-result: One of:
	accepted-config: 0x00 0x00
	5. IF C_MAN_OXP_085 THEN:
	 a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes.
	b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.
	c. Once in Operating state the PHG is forced to enable the scanner object.
	Wait until the Operating state is reached in both cases.
	6. The simulated PHD sends a fixed event report with one measurement with:
	event_type = MDC_NOTI_SCAN_REPORT_FIXED
	event_info = ScanReportInfoFixed
	 obs_scan_fixed: Sys-Diast-MAP 120-90-100 mmHg and pulse rate 60 BPM
Pass/Fail criteria	The PHG under test must respond either to the association request with an "accepted" message or to the Configuration Event Report with an "accepted-config".
	The measurement is correctly presented.
Notes	See bug http://continua.plugfests.com/show_bug.cgi?id=123

TP ld		TD/DLT/DUC/CLASS/DDM/DV/003			
IP IQ		TP/PLT/PHG/CLASS/BPM/BV-003			
TP label		Attribute-Value-Map. Order change.			
Coverage	Spec	[ISO/IEEE 11073-10407]			
	Testable items	SystDiast_23;M			
Test purpose	•	Check that:			
		For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present. The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_CMPD_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_ABS			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_020			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		The simulated PHD sends a confirmed fixed format event report with a report from handle 1 (Non-invasive blood pressure) that matches the Attribute-Value-Map order of MDC_ATTR_NU_CMPD_VAL_OBS_BASIC, MDC_ATTR_TIME_STAMP_ABS and handle 2 (pulse) that matches the Attribute-Value-Map order of MDC_ATTR_NU_VAL_OBS_BASIC, MDC_ATTR_TIME_STAMP_ABS			
		2. The simulated PHD waits until it receives a confirmation.			
		3. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 1 to reverse the values to: MDC_ATTR_TIME_STAMP_ABS, then MDC_MDC_ATTR_NU_CMPD_VAL_OBS_ BASIC and to reverse handle 2 values to: MDC_ATTR_TIME_STAMP_ABS, MDC_ATTR_NU_VAL_OBS_BASIC.			
		4. The simulated PHD waits until it receives a confirmation.			
		5. Send a confirmed fixed format event report with handle 1 values set to the date first			

	followed by blood pressure values (in millimetres of mercury (MDC_DIM_MMHG) since it is the standard configuration unit code) and handle 2 values set to the date first followed by pulse rate (in beats per minute (MDC_DIM_BEAT_PER_MIN)).
	6. The simulated PHD waits until it receives a confirmation.
	7. The simulated PHD sends an association release request (normal).
	8. The simulated PHD waits until there is an association release response.
	9. The simulated PHD sends an association request using the same standard configuration that was used previously.
	10. If the PHG under test responds with association request response with "accepted-unknown-config", then
	 The simulated PHD sends the confirmed configuration event report with the standard configuration.
	 The simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	11. The simulated PHD sends a fixed event report for handles 1 and 2 following the standard configuration attribute-value-format (MDC_ATTR_NU_CMPD_VAL_OBS_BASIC, MDC_ATTR_TIME_STAMP_ABS) and (MDC_ATTR_NU_VAL_OBS_BASIC, MDC_ATTR_TIME_STAMP_ABS), respectively.
	12. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	• In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly). If the PHG only displays the values from handle 1 (non-invasive blood pressure) that is fine since the specification implies that PHD s nor PHG have to support (pulse) but the pulse object must be there in the standard configuration.
	• In steps 2, 6 and 12 verify that the PHG under test uses millimetres of mercury as the unit code for the measurement report (or reports the proper value after conversion to another unit code).
	• In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e., the actual observation may have occurred sometime in the past).
Notes	This may require the simulated PHD to provide a proper date-and-time attribute in the MDS object.
	When automated, it is necessary to be careful about sending these messages back to back since the ability to look at things like an UI may require that there be pauses for operator verification.

TP ld		TP/PLT/PHG/CLASS/BPM/BV-004		
TP label	TP label Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map			e-Value-Map
Coverage	Spec	[ISO/IEEE 11073-10407]		
	Testable items	SystDiast_23;M		
Test purpose		Check that:		
			e [Attribute-Value-Map] attribute ute shall be MDC_ATTR_NU_CI BS	
Applicability		C_MAN_OXP_000 AND C_MA	.N_OXP_020 AND C_MAN_BPN	И_001
Other PICS				
Initial condition		The simulated PHD and the PH	IG under test are in the Operatin	ng state using the standard

configuration. (Non-invasive blood pressure Compound Numeric standard configuration code attribute is set to millimetres of mercury (MDC_DIM_MMHG)). 1. The simulated PHD sends a confirmed variable event report to change the Attr Value-Map configuration of handle 1 (Non-invasive blood pressure) to set the v MDC_ATTR_NU_CMPD_VAL_OBS_BASIC, MDC_ATTR_UNIT_CODE, then MDC_ATTR_TIME_STAMP_ABS. For handle 2 (pulse), set the attribute value MDC_ATTR_MSMT_STAT, MDC_ATTR_NU_VAL_OBS_BASIC, MDC_ATTR_UNIT_CODE, then MDC_ATTR_TIME_STAMP_ABS. 2. The simulated PHD waits until it receives a confirmation. 3. Send a confirmed fixed format event report with the new data layout. For the urattribute of handle 1, use MDC_DIM_KILO_PASCAL (3843), for handle 2, use MDC_DIM_BEAT_PER_MIN (2720). 4. The simulated PHD waits until it receives a confirmation.	tion Unit	
Value-Map configuration of handle 1 (Non-invasive blood pressure) to set the v MDC_ATTR_NU_CMPD_VAL_OBS_BASIC, MDC_ATTR_UNIT_CODE, then MDC_ATTR_TIME_STAMP_ABS. For handle 2 (pulse), set the attribute value MDC_ATTR_MSMT_STAT, MDC_ATTR_NU_VAL_OBS_BASIC, MDC_ATTR_UNIT_CODE, then MDC_ATTR_TIME_STAMP_ABS. 2. The simulated PHD waits until it receives a confirmation. 3. Send a confirmed fixed format event report with the new data layout. For the unattribute of handle 1, use MDC_DIM_KILO_PASCAL (3843), for handle 2, use MDC_DIM_BEAT_PER_MIN (2720).	configuration. (Non-invasive blood pressure Compound Numeric standard configuration Unit code attribute is set to millimetres of mercury (MDC_DIM_MMHG)).	
 Send a confirmed fixed format event report with the new data layout. For the unattribute of handle 1, use MDC_DIM_KILO_PASCAL (3843), for handle 2, use MDC_DIM_BEAT_PER_MIN (2720). 	alues to:	
attribute of handle 1, use MDC_DIM_KILO_PASCAL (3843), for handle 2, use MDC_DIM_BEAT_PER_MIN (2720).		
4. The simulated PHD waits until it receives a confirmation.	nit-code	
 The simulated PHD sends a confirmed variable event report with handle 1 report MDC_ATTR_NU_CMPD_VAL_OBS_BASIC attribute and handle 2 just a MDC_ATTR_NU_VAL_OBS_BASIC. 	rting just a	
6. The simulated PHD waits until it receives a confirmation.		
• In step 4, verify that the PHG under test is able to accept the data properly and the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).	applies	
 In step 6, verify that the PHG under test is able to accept the data properly and the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement is displayed properly). 	applies	
 In steps 4 and 6, verify that the PHG under test uses kilopascals and beats per the unit codes for the measurement reports. 	minute as	
Notes		

TP ld		TP/PLT/PHG/CLASS/BPM/BV-005			
TP label		Unit-Code. Change from default millimetres of mercury (mmHg) to kilopascals (kPa) – fixed format observation.			
Coverage	Spec	[ISO/IEEE 11073-10407]			
	Testable items	SystDiast_21;M			
	Spec	[b-ITU-T H.810 (2015)]			
	Testable items	Communication 9; M			
Test purpose		Check that:			
		For [Standard-Configuration] the	[Unit-Code] attribute shall be present		
		The value of the [Unit-Code] attribute shall be MDC_DIM_MMHG			
		[AND]			
		Continua PAN client components that receive a report of a configuration change shall apply the change to future measurements only			
Applicabilit	Applicability C_MAN_OXP_000 AND C_MAN_OXP_020 AND C_MAN_BPM_001				
Other PICS					
Initial condi	tion	The simulated PHD and the PHG configuration.	under test are in the Operating state using the standard		

Test procedure		The simulated PHD sends a confirmed variable event report to change the Unit-Code of handle 1 (non-invasive blood pressure) to kPa nomenclature code MDC_DIM_KILO_PASCAL (3843). NOTE – No need to change handle 2 (pulse), since the only option is beats/minute.
	2.	The simulated PHD waits until it receives a confirmation.
	3.	Send a confirmed fixed format event report for handle 1 using a measurement in kPa (e.g., 16 kPa is 120 mmHg and 10 kPa is 80 mmHg) followed by date and time stamp and for handle 2 using a measurement in beats per minute followed by date and time stamp.
	4.	The simulated PHD waits until it receives a confirmation.
	5.	The simulated PHD sends an association release request (normal).
	6.	The simulated PHD waits until it receives an association release response.
	7.	The simulated PHD sends an association request using the same configuration that was used initially.
	8.	If the PHG under test responds with association request response with "accepted-unknown-config", then
		 The simulated PHD sends the confirmed configuration event report with the standard configuration.
		 The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.
	9.	The simulated PHD sends a fixed event report for handle 1 using a measurement in mmHg followed by date and time stamp and for handle 2 using a measurement in beats per minute followed by date and time stamp.
	10.	The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	•	In step 4, verify that the PHG under test is able to accept the data properly and applies kPa and BPM to the observations (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
	•	In step 10, verify that the PHG under test is able to accept the data properly and applies mmHg and BPM to the observations (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
Notes		

TP ld		TP/PLT/PHG/CLASS/BPM/BV-005_A		
TP label		Unit-Code. Do not change from fixed format observation.	n default millimetres of mercury (mmHg) to kilopascals (kPa) –
Coverage	Spec	[ISO/IEEE 11073-10407]		
	Testable items	SystDiast_21;M		
Test purpose		Check that:		
		For [Standard-Configuration] the [Unit-Code] attribute shall be present		
		The value of the [Unit-Code] attribute shall be MDC_DIM_MMHG		
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_020 AND (NOT(C_MA	N_BPM_001))
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure			a confirmed variable event repo od pressure) to kPa nomenclatu	•

	MDC_DIM_KILO_PASCAL (3843). NOTE – No need to change handle 2 (pulse), since the only option is beats/minute.
2.	The simulated PHD waits until it receives a confirmation, roer message, abrt message, release association or rorj message or until TO cer-mds expires.
3.	If the PHG has sent a confirmation in step 2, send a confirmed fixed format event report for handle 1 using a measurement in kPa (e.g., 16 kPa is 120 mmHg and 10 kPa is 80 mmHg) followed by date and time stamp and for handle 2 using a measurement in beats per minute followed by date and time stamp.
4.	The simulated PHD waits until it receives a confirmation, roer message, abrt message, release association or rorj message or TO cer-mds expires.
5.	If the PHG has sent a confirmation in step 4, ask to the operator if the measurements have been properly received and displayed.
•	In step 2, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message.
•	In step 4, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message.
•	In step 5, verify that measurements do not appear, or if they do appear, they are somehow designated as 'unsupported' data.
	3.4.5.•

TP ld		TP/PLT/PHG/CLASS/BPM/BV-006			
TP label		Unit-Code. Use default millimetres of mercury (mmHg) and beats per minute (BPM) – variable format observation.			
Coverage	Spec	[ISO/IEEE 11073-10407]			
	Testable items	SystDiast_21;M			
Test purpose	e	Check that:			
		For [Standard-Configuration] the [Unit-Code] attribute shall be present			
		The value of the [Unit-Code] attribute shall be MDC_DIM_MMHG			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_020			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		Send a confirmed variable format event report for handle 1 using a measurement in mmHg and for handle 2 using a measurement in BPM.			
		2. The simulated PHD waits until it receives a confirmation.			
Pass/Fail criteria		Verify that the PHG under test is able to accept the data properly and applies mmHg and BPM to the observations (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).			
Notes					

TP ld	TP/PLT/PHG/CLASS/BPM/BV-007
TP label	Unit-Code. Change from default millimetres of mercury (mmHg) to kilopascals (kPa) – variable format observation.

Coverage	Spec	[ISO/IEEE 11073-10407]		
	Testable items	SystDiast_21;M		
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	Communication 9; M		
Test purpose		Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present The value of the [Unit-Code] attribute shall be MDC_DIM_MMHG [AND] Continua PAN client components that receive a report of a configuration change shall apply the change to future measurements only		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_020 AND C_MAN_BPM_001		
Other PICS				
Initial conditi	on	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		 Send a confirmed variable format event report to set the unit code to kPa MDC_DIM_KILO_PASCAL (3843) for handle 1 (non-invasive blood pressure) and a measurement in kPa. For handle 2, set the unit code to beats per minute MDC_DIM_BEAT_PER_MIN (2720) and a BPM measurement value. The simulated PHD waits until it receives a confirmation. Send a second confirmed variable format event report with just a measurement in kPa and beats/min (i.e., do not transmit the unit-code attribute in the event report). The simulated PHD waits until it receives a confirmation. The simulated PHD sends an association release request (normal). The simulated PHD waits until it receives an association release response. The simulated PHD sends an association request using the same configuration that was used initially. If the PHG under test responds with association request response with "accepted-unknown-config", then The simulated PHD sends the confirmed configuration event report with the standard configuration. The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent. 		
		9. The simulated PHD sends a confirmed variable event report for handle 1 with an observation in mmHg (i.e., do not send the unit-code attribute it should be set to mmHg by the standard configuration). For handle 2, use an observation of BPM.		
Pass/Fail criteria		 10. The simulated PHD waits until it receives a confirmation. In steps 2 and 4, verify that the PHG under test is able to accept the data properly and applies kPa and BPM to the observations (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units). 		
		 In step 10, verify that the PHG under test is able to accept the data properly and applies mmHg and BPM to the observations (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units). 		
Notes				

TP ld		TP/PLT/PHG/CLASS/BPM/BV-008		
TP label		Metric-id-list. Standard configuration		
Coverage	Spec	[ISO/IEEE 11073-10407]		
	Testable items	SystDiast_17;M		
Test purpose	•	Check that:		
		For [Standard-Configuration] the [Metric-Id-List] attribute shall be present. The value of the [Metric-Id-List] attribute shall be MDC_PRESS_BLD_NONINV_SYS, MDC_PRESS_BLD_NONINV_DIA, then MDC_PRESS_BLD_NONINV_MEAN.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_020		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		blood pressure object) cor	a confirmed variable event repontaining an observation with the containing and for handle 2 contains.	compound field values
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		• Verify that the PHG under test is able to accept the data and applies the data properly as systolic = 120.0, diastolic = 80.0, mean arterial pressure (MAP) = 93.3, and pulse = 60.0.		
Notes		If there are no other tests for various different FLOAT and SFLOAT values, the values above at least help cover the negative exponent values (e.g., 120.0 is 0xF4B0 as the SFLOAT).		

TP ld		TP/PLT/PHG/CLASS/BPM/BV-009		
TP label		Metric-id-list. Id order change – fixed format		
Coverage	Spec	[ISO/IEEE 11073-10407]		
	Testable items	SystDiast_17;M		
Test purpos	se	Check that:		
		For [Standard-Configuration] the [Metric-Id-List] attribute shall be present. The value of the [Metric-Id-List] attribute shall be MDC_PRESS_BLD_NONINV_SYS, MDC_PRESS_BLD_NONINV_DIA, then MDC_PRESS_BLD_NONINV_MEAN.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_020		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		The simulated PHD sends a confirmed variable event report for handle 1 (non-invasive blood pressure object) setting MDC_ATTR_ID_PHYSIO_LIST to (MDC_PRESS_BLD_NONINV_MEAN, MDC_PRESS_BLD_NONINV_SYS, then MDC_PRESS_BLD_NONINV_DIA).		
		 The simulated PHD sends a confirmed fixed event report for handle 1 containing an observation with the compound field values (SFLOAT) set to (106.6, 140.0, 90.0) along with a known time stamp, and Pulse Rate of 60 BPM along with a known time stamp. 		

	3.	The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	•	Verify that the PHG under test is able to accept the data and time stamp and applies the data properly as systolic = 140.0, diastolic = 90.0, MAP = 106.6.
Notes		

[Metric-Id-List] attribute shall be MDC_PRESS_BLD_NONINV_SYS, MDC_PRESS_BLD_NONINV_DIA, then MDC_PRESS_BLD_NONINV_MEAN C_MAN_OXP_000 AND C_MAN_OXP_020 Other PICS Initial condition The simulated PHD and the PHG under test are in the Operating state using the configuration. 1. The simulated PHD sends a confirmed variable event report for handle 1 blood pressure object) setting MDC_ATTR_ID_PHYSIO_LIST to (MDC_PRESS_BLD_NONINV_DIA, MDC_PRESS_BLD_NONINV_MEAN MDC_PRESS_BLD_NONINV_SYS) in the first observation scan. In a second observation scan, for handle 1 set the compound field values (SFLOAT) to 110.0) along with a known time stamp. 2. The simulated PHD waits until it receives a confirmation from the PHG under test is able to accept the data and time stamp a data properly as systolic = 110.0, diastolic = 74.0, MAP = 86.0.	TP ld		TP/PLT/PHG/CLASS/BPM/BV-010		
Test purpose Check that: For [Standard-Configuration] the [Metric-Id-List] attribute shall be present. The [Metric-Id-List] attribute shall be MDC_PRESS_BLD_NONINV_SYS, MDC_PRESS_BLD_NONINV_DIA, then MDC_PRESS_BLD_NONINV_MEAN Applicability C_MAN_OXP_000 AND C_MAN_OXP_020 Other PICS Initial condition The simulated PHD and the PHG under test are in the Operating state using the configuration. Test procedure 1. The simulated PHD sends a confirmed variable event report for handle 1 blood pressure object) setting MDC_ATTR_ID_PHYSIO_LIST to (MDC_PRESS_BLD_NONINV_DIA, MDC_PRESS_BLD_NONINV_MEAN MDC_PRESS_BLD_NONINV_SYS) in the first observation scan. In a second observation scan, for handle 1 set the compound field values (SFLOAT) to 110.0) along with a known time stamp. 2. The simulated PHD waits until it receives a confirmation from the PHG under test is able to accept the data and time stamp a data properly as systolic = 110.0, diastolic = 74.0, MAP = 86.0.	TP label		Metric-id-list. Id order change – variable format		
Test purpose Check that: For [Standard-Configuration] the [Metric-Id-List] attribute shall be present. The [Metric-Id-List] attribute shall be MDC_PRESS_BLD_NONINV_SYS, MDC_PRESS_BLD_NONINV_DIA, then MDC_PRESS_BLD_NONINV_MEAN C_MAN_OXP_000 AND C_MAN_OXP_020 Other PICS Initial condition The simulated PHD and the PHG under test are in the Operating state using the configuration. Test procedure 1. The simulated PHD sends a confirmed variable event report for handle 1 blood pressure object) setting MDC_ATTR_ID_PHYSIO_LIST to (MDC_PRESS_BLD_NONINV_DIA, MDC_PRESS_BLD_NONINV_MEAN MDC_PRESS_BLD_NONINV_SYS) in the first observation scan. In a second observation scan, for handle 1 set the compound field values (SFLOAT) to 110.0) along with a known time stamp. 2. The simulated PHD waits until it receives a confirmation from the PHG under test is able to accept the data and time stamp a data properly as systolic = 110.0, diastolic = 74.0, MAP = 86.0.	Coverage Spec		[ISO/IEEE 11073-10407]		
For [Standard-Configuration] the [Metric-Id-List] attribute shall be present. The [Metric-Id-List] attribute shall be MDC_PRESS_BLD_NONINV_SYS, MDC_PRESS_BLD_NONINV_DIA, then MDC_PRESS_BLD_NONINV_MEAN C_MAN_OXP_000 AND C_MAN_OXP_020 Other PICS Initial condition The simulated PHD and the PHG under test are in the Operating state using the configuration. 1. The simulated PHD sends a confirmed variable event report for handle 1 blood pressure object) setting MDC_ATTR_ID_PHYSIO_LIST to (MDC_PRESS_BLD_NONINV_DIA, MDC_PRESS_BLD_NONINV_MEAN MDC_PRESS_BLD_NONINV_SYS) in the first observation scan. In a second observation scan, for handle 1 set the compound field values (SFLOAT) to 110.0) along with a known time stamp. 2. The simulated PHD waits until it receives a confirmation from the PHG under test is able to accept the data and time stamp and data properly as systolic = 110.0, diastolic = 74.0, MAP = 86.0.			SystDiast_17;M		
Applicability C_MAN_OXP_000 AND C_MAN_OXP_020 Other PICS Initial condition The simulated PHD and the PHG under test are in the Operating state using the configuration. 1. The simulated PHD sends a confirmed variable event report for handle 1 blood pressure object) setting MDC_ATTR_ID_PHYSIO_LIST to (MDC_PRESS_BLD_NONINV_DIA, MDC_PRESS_BLD_NONINV_MEAN MDC_PRESS_BLD_NONINV_SYS) in the first observation scan. In a second observation scan, for handle 1 set the compound field values (SFLOAT) to 110.0) along with a known time stamp. 2. The simulated PHD waits until it receives a confirmation from the PHG under test is able to accept the data and time stamp a data properly as systolic = 110.0, diastolic = 74.0, MAP = 86.0.	Test purpose		For [Standard-Configuration] the [Metric-Id-List] attribute shall be present. The value of the [Metric-Id-List] attribute shall be MDC_PRESS_BLD_NONINV_SYS,		
Initial condition The simulated PHD and the PHG under test are in the Operating state using the configuration. 1. The simulated PHD sends a confirmed variable event report for handle 1 blood pressure object) setting MDC_ATTR_ID_PHYSIO_LIST to (MDC_PRESS_BLD_NONINV_DIA, MDC_PRESS_BLD_NONINV_MEAN MDC_PRESS_BLD_NONINV_SYS) in the first observation scan. In a second observation scan, for handle 1 set the compound field values (SFLOAT) to 110.0) along with a known time stamp. 2. The simulated PHD waits until it receives a confirmation from the PHG under test is able to accept the data and time stamp a data properly as systolic = 110.0, diastolic = 74.0, MAP = 86.0.	Applicability				
Test procedure 1. The simulated PHD sends a confirmed variable event report for handle 1 blood pressure object) setting MDC_ATTR_ID_PHYSIO_LIST to (MDC_PRESS_BLD_NONINV_DIA, MDC_PRESS_BLD_NONINV_MEAN MDC_PRESS_BLD_NONINV_SYS) in the first observation scan. In a secons observation scan, for handle 1 set the compound field values (SFLOAT) to 110.0) along with a known time stamp. 2. The simulated PHD waits until it receives a confirmation from the PHG under test is able to accept the data and time stamp a data properly as systolic = 110.0, diastolic = 74.0, MAP = 86.0.	PICS				
blood pressure object) setting MDC_ATTR_ID_PHYSIO_LIST to (MDC_PRESS_BLD_NONINV_DIA, MDC_PRESS_BLD_NONINV_MEAI MDC_PRESS_BLD_NONINV_SYS) in the first observation scan. In a sec observation scan, for handle 1 set the compound field values (SFLOAT) to 110.0) along with a known time stamp. 2. The simulated PHD waits until it receives a confirmation from the PHG under test is able to accept the data and time stamp a data properly as systolic = 110.0, diastolic = 74.0, MAP = 86.0.	Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Pass/Fail criteria • Verify that the PHG under test is able to accept the data and time stamp a data properly as systolic = 110.0, diastolic = 74.0, MAP = 86.0.	Test procedure		blood pressure object) setting MDC_ATTR_ID_PHYSIO_LIST to (MDC_PRESS_BLD_NONINV_DIA, MDC_PRESS_BLD_NONINV_MEAN, then MDC_PRESS_BLD_NONINV_SYS) in the first observation scan. In a second observation scan, for handle 1 set the compound field values (SFLOAT) to (74.0, 86.0,		
data properly as systolic = 110.0, diastolic = 74.0, MAP = 86.0.			2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Notes	Pass/Fail criteria		Tony that the trie and total about a decept the data and time stamp and applies the		
140122	Notes				

TP ld		TP/PLT/PHG/CLASS/BPM/BV-011		
TP label		Metric-id-list. Reduced ids – fixed format		
Coverage	Spec	[ISO/IEEE 11073-10407]		
	Testable items	SystDiast_17;M		
Test purpose		Check that: For [Standard-Configuration] the [Metric-Id-List] attribute shall be MDC_PRESS_BLD_NONINV_I	MDC_PRESS_BLD_NONINV_	SYS,
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_020	
Other PICS				
Initial condition		The simulated PHD and the PH	G under test are in the Operatin	g state using the standard

	configuration.	
Test procedure	 The simulated PHD sends a confirmed variable event report for handle 1 (non-invasive blood pressure object) setting MDC_ATTR_METRIC_STRUCT_SMALL to {ms-struct- compound-fix, 2}, MDC_ATTR_ID_PHYSIO_LIST to (MDC_PRESS_BLD_NONINV_SYS, then MDC_PRESS_BLD_NONINV_DIA) and MDC_ATTR_ATTRIBUTE_VAL_MAP to {MDC_ATTR_NU_CMPD_VAL_OBS_BASIC, 8, MDC_ATTR_TIME_STAMP_ABS, 8}. 	
	2. The simulated PHD sends a confirmed fixed event report for handle 1 containing an observation with the compound field values (SFLOAT) set to (135.5, 86.3) along with a known time stamp.	
	3. The simulated PHD waits until it receives a confirmation from the PHG under test.	
Pass/Fail criteria	Verify that the PHG under test is able to accept the data and time stamp and applies the data properly as systolic = 135.5, diastolic = 86.3.	
Notes		

TP ld		TP/PLT/PHG/CLASS/BPM/BV-012			
TP label		Metric-id-list. Reduced ids – variable format			
Coverage	Spec	[ISO/IEEE 11073-10407]			
	Testable items	SystDiast_17;M			
Test purpose		Check that: For [Standard-Configuration] the [Metric-Id-List] attribute shall be present. The value of the [Metric-Id-List] attribute shall be MDC_PRESS_BLD_NONINV_SYS, MDC_PRESS_BLD_NONINV_DIA, then MDC_PRESS_BLD_NONINV_MEAN.			
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_020			
Other PICS					
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		The simulated PHD sends a confirmed variable event report for handle 1 (non-invasive blood pressure object) setting MDC_ATTR_METRIC_STRUCT_SMALL to {ms-struct-compound-fix, 2} and MDC_ATTR_ID_PHYSIO_LIST to (MDC_PRESS_BLD_NONINV_DIA, then MDC_PRESS_BLD_NONINV_SYS).			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
		The simulated PHD sends a confirmed variable event report for handle 1 containing an observation with the compound field values (SFLOAT) set to (150.0, 95.0) along with a known time stamp.			
		4. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data and time stamp and applies the data properly as systolic = 150.0, diastolic = 95.0. 			
Notes					

TP Id		TP/PLT/PHG/CLASS/BPM/BV-013
TP label		Maximum APDU size: Blood Pressure Meter
Coverage	Spec	[ISO/IEEE 11073-20601-2015A]

	estable tems	CommonCharac 4;M		
Test purpose		Check that:		
		If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.		
		The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitiations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_020		
Other PICS				
Initial condition	า	The PHG under test is in the Operating state.		
Test procedure	•	The simulated PHD sends a Confirmed variable event report:		
		a. ScanReportInfoVar. obs_scan_var:		
		☐ Count = 2		
		<pre>D Length = 856 ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 61441 attribute-value: '00(824 bytes) 00'0 } } ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 2677 (MDC_ATTR_NU_CMPD_VAL_OBS_BASIC)</pre>		
		 Check the response of the PHG under test. The simulated PHD sends a confirmed fixed event report with one measurement. 		
		4. Check the response of the PHG under test.		
Pass/Fail criter	ia	In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".		
		In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".		
Notes				

TP ld		TP/PLT/PHG/CLASS/BPM/BV-014		
TP label		Special values. Not a number – fixed format		
Coverage Spec		[ISO/IEEE 11073-10407]		
	Testable items	SystDiast_23; M	PulsRat_22; M	

Test purpose	Check that:	
	The PHG receives a NaN value (fixed format event report) but it does not use this value.	
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_020	
Other PICS		
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.	
Test procedure	 The simulated PHD sends a confirmed fixed event report for handle 1 (Systolic/Diastolic/MAP Object) and handle 2 (Pulse Rate Object) containing all observation values set to the value for NaN ([exponent 0, mantissa +(2**11 -1) = 0x07FF]) and a time stamp. 	
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.	
Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).	
Notes	This test case has been considered as an implicit test case.	

TP Id		TP/PLT/PHG/CLASS/BPM/BV-015				
TP label		Special values. Not a number – variable format				
Coverage	Spec	[ISO/IEEE 11073-104	07]			
	Testable items	SystDiast_45; C	SystDiast_45; C PulsRat_42; M			
Test purpos	e	Check that: The PHG receives a NaN value (variable format event report) but it does not use this value.				
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_020				
Other PICS						
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.				
Test proced	ure	1. The simulated PHD sends a confirmed variable event report for handle 1 (Systolic/Diastolic/MAP Object) and handle 2 (Pulse Rate Object) containing all observation values set to the value for NaN ([exponent 0, mantissa +(2**11 -1) = 0x07FF]).				
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.				
Pass/Fail criteria		• Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).				
Notes		This test case has been considered as an implicit test case.				

TP ld		TP/PLT/PHG/CLASS/BPM/BV-016
TP label		Special values. Not at this resolution – fixed format
Coverage	Spec	[ISO/IEEE 11073-10407]

	Testable items	SystDiast_23; M	PulsRat_22; M		
Test purpose	•	Check that:			
		The PHG receives NRes	es value (fixed format event	report) but i	t does not use this value.
Applicability		C_MAN_OXP_000 AND	O C_MAN_OXP_020		
Other PICS					
Initial conditi	on	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 1 (Systolic/Diastolic/MAP Object) and handle 2 (Pulse Rate) containing all observation values set to the value for NRes ([exponent 0, mantissa –(2**11) = 0x0800]) and a time stamp. 			
		2. The simulated PHD	o waits until it receives a co	onfirmation fr	om the PHG under test.
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).			
Notes		This test case has been considered as an implicit test case.			

TP ld		TP/PLT/PHG/CLASS/BPM/BV-017			
TP label		Special values. Not at this resolution – variable format			
Coverage	Spec	[ISO/IEEE 11073-1040	07]		
	Testable items	SystDiast_45; C	PulsRat_42; M		
Test purpose		Check that: The PHG receives NRes value (variable format event report) but it does not use this value.			
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_020			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		The simulated PHD sends a confirmed variable event report for handle 1 (Systolic/Diastolic/MAP Object) and handle 2 (Pulse Rate Object) containing all observation values set to the value for NRes ([exponent 0, mantissa –(2**11) = 0x0800]).			
		The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 			
Notes		This test case has been considered as an implicit test case.			

TP Id T		TP/PLT/PHG/CLASS/BPM/BV-018
TP label		Special values. Positive infinity – fixed format
Coverage	Spec	[ISO/IEEE 11073-10407]

	Testable items	SystDiast_23; M	PulsRat_22; M				
Test purpose		Check that: The PHG receives a +INFINITY value (fixed format event report) but it does not use this value.					
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_020				
Other PICS							
Initial conditi	on	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.					
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 1 (Systolic/Diastolic/MAP Object) and handle 2 (Pulse Rate Object) containing all observation values set to the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**11 -2) = 0x07FE]) and a time stamp. The simulated PHD waits until it receives a confirmation from the PHG under test. 					
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 					
Notes		This test case has been considered as an implicit test case.					

TP ld		TP/PLT/PHG/CLASS/BPM/BV-019			
TP label		Special values. Positive infinity – variable format			
Coverage	Spec	[ISO/IEEE 11073-1040	7]		
	Testable items	SystDiast_45; C	PulsRat_42; M		
Test purpos	se	Check that:			
		The PHG receives a +INFINITY value (variable format event report) but it does not use this value.			
Applicability	у	C_MAN_OXP_000 AND C_MAN_OXP_020			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		1. The simulated PHD sends a confirmed variable event report for handle 1 (Systolic/Diastolic/MAP Object) and handle 2 (Pulse Rate Object) containing all observation values set to the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**11 -2) = 0x07FE]).			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 			
Notes		This test case has been	n considered as an implicit test case.		

TP ld TP label		TP/PLT/PHG/CLASS/BPM/BV-020			
		Special values. Negative infinity – fixed format			
Coverage	ge Spec [ISO/IEEE 11073-10407]				
	Testable items	SystDiast_23; M	PulsRat_22; M		
Test purpos	se .	Check that:			
		The PHG receives a –l value.	The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.		
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_020			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 1 (Systolic/Diastolic/MAP Object) and handle 2 (Pulse Rate Object) containing all observation values set to the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**11 –2) = 0x0802]) and a time stamp.			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 			
Notes		This test case has been	n considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/BPM/BV-021				
TP label		Special values. Negative infinity – variable format				
Coverage	Spec	[ISO/IEEE 11073-1040)7]			
	Testable items	SystDiast_45; C	PulsRat_42; M			
Test purpos	se	Check that:				
		The PHG receives a –INFINITY value (variable format event report) but it does not use this value.				
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_020				
Other PICS						
Initial cond	ition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.				
Test procedure		1. The simulated PHD sends a confirmed variable event report for handle 1 (Systolic/Diastolic/MAP Object) and handle 2 (Pulse Rate) containing all observation values set to the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**11 – 2) = 0x0802]).				
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.				

Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/BPM/BV-022			
TP label		Special values. Reserved – fixed format			
Coverage	Spec	[ISO/IEEE 11073-1040	07]		
	Testable items	SystDiast_23; M	PulsRat_22; M		
Test purpos	se	Check that:			
		The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.			
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_020			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 1 (Systolic/Diastolic/MAP Object) and handle 2 (Pulse Rate) containing all observation values set to the value for reserved (Reserved for future use, [exponent 0, mantissa -(2**11 -1) = 0x0801]) and a time stamp.			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 			
Notes		This test case has been considered as an implicit test case.			

TP ld		TP/PLT/PHG/CLASS/BPM/BV-023			
TP label		Special values. Reserved – variable format			
Coverage	Spec	[ISO/IEEE 11073-1040	7]		
	Testable items	SystDiast_45; C	PulsRat_42; M		
Test purpos	se	Check that:			
		The PHG receives a Reserved for future use value (variable format event report) but it does not use this value.			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_020			
Other PICS					
Initial condition		The simulated PHD and configuration.	d the PHG under test are in the C	Operating state using the standard	

Test procedure	 The simulated PHD sends a confirmed variable event report for handle 1 (Systolic/Diastolic/MAP Object) and handle 2 (Pulse Rate Object) containing all observation values set to the value for reserved (Reserved for future use, [exponent 0, mantissa -(2**11 -1) = 0x0801]).
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

A.6 Subgroup 2.3.5: Thermometer (TH)

A.6 Su	ogroup 2.	3.5: Thermometer (TH) TP/PLT/PHG/CLASS/TH/BV-00	าง			
TP label		Association procedure PHG Th	1			
Coverage	Spec	[ISO/IEEE 11073-10408]				
	Testable items	TH_CM_Assoc10 ;M	TH_CM_Assoc14 ;M	TH_CM_Assoc15 ;M		
	items	TH_CM_Assoc16 ;M	TH_CM_Assoc17 ;M	TH_CM_Assoc18 ;M		
		TH_CM_Assoc19 ;M	TH_CM_Assoc20 ;M			
Test purpose	e	Check that:				
			determine the identity of the the mplement a simple access restr			
		[AND]				
		The data-proto-info field shall b	e filled in with a PhdAssociation	Information structure		
		[AND]				
		The version of the data exchange protocol shall be set to protocol-version1 (i.e., protocol-version = 0x80000000)				
		[AND]				
		The PHG shall respond with a single selected encoding rule that is supported by both PHD and PHG. The PHG shall support at least the MDER encoding rules				
		[AND]				
		The version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000)				
		[AND]				
		The field functional-units shall have all bits reset except for those relating to a Test Association.				
		[AND]				
		The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000)				
		[AND]				
		The fields data-req-mode-capab, data-req-init-agent, data-req-init-manager-count shall the PHD supports only the thermometer specialization data-req-init-agent-count shall				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_025				
Other PICS						
Initial condit	ion	The PHG is in the Unassociate	d state.			
Test procedu	ıre	The simulated PHD sends	an association request to the P	HG under test, with the fields:		

		pro	tocol-version = '100000000000000000000000000000000000
		end	coding-rules= '100000000000000'B
		non	nenclature-version = '100000000000000000000000000000000000
		fun	ctional-units = '00000000000000000000000000000000000
		sys	tem-type = '000000010000000000000000000000000000
		dev	r-config-id = 16447
		data	a-rep-mode-capab =
		•	data_req_mode_flags= '000000000000001'B
		•	data_req_init_agent_count = 1
		•	data_req_init_manager_count = 0
		opti	ion-list.length= 0
2.	The	PH	G under test sends an association response. The fields of interest are:
	a.	API	DU Type
			field-length = 2 bytes
			field-value = 0xE3 0x00 (AareApdu)
	b.	Res	sult
			field-type = AssociateResult
			field-length = 2 bytes
			field-value = One of the following:
			If association is accepted, field-value= 0x00 0x00.
			■ If association is rejected-permanent, field-value= 0x00 0x01.
			If association is rejected-transient, field-value= 0x00 0x02.
			■ If association is accepted-unknown-config, field-value= 0x00 0x03.
			■ If association is rejected-no-common-protocol, field-value= 0x00 0x04.
			■ If association is rejected-no-common-parameter, field-value= 0x00 0x05.
			If association is rejected—unknown = 0x00 0x06.
			If association is rejected-unauthorized, field-value= 0x00 0x07.
			 If association is rejected–unsupported-assoc-version, field-value= 0x00 0x08.
	C.		ected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data-to-info(defined by data-proto-id))
	d.	dat	a-proto-id
			field-type = DataProtoId
			field-length = 2 bytes
			field-value= 0x50 0x79 (20601)
	e.	pro	tocol-version
			field-type = Protocol Version
			field-length = 4 bytes (BITS-32)
			field-value= 0x80 0x00 0x00 0x00
	f.	enc	coding-rules
			field-type = EncodingRules
			field-length = 2 bytes (BITS-16)
			field-value= depends on the encoding rules supported/selected, but only one can be supported at a time
	g.	nor	nenclature version

		☐ field-type = NomenclatureVersion
		☐ field-length = 4 bytes (BITS-32)
		☐ field-value= Bit 0 must be set (nom-version1)
	h.	functional units
		☐ field-type = FunctionalUnits
		☐ field-length = 4 bytes (BITS-32)
		☐ field-value =
		■ Bit 0 must be 0
		 Bits 1 and 2 may be set
		 The rest of the bits must not be set
	i.	system type
		☐ field-type = SystemType
		☐ field-length = 4 bytes (BITS-32)
		☐ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
	j.	system-id
		☐ field-type = OCTET STRING
		☐ field-length = 8 bytes
		☐ field-value = (EUI-64 manufacturer and device)
	k.	dev-config-id
		☐ field-type = Configld
		☐ field-length = 2 bytes
		☐ field-value = 0x00 0x00 (manager-config-response)
	I.	data-req-mode-flags (DataReqModeCapab)
		☐ field-type = DataReqModeFlags
		☐ field-length = 2 bytes
		$\Box \text{field-value} = 0x00 \ 0x00$
		☐ PHG response to data-req-mode-flags is always 0.
	m.	data-req-init-agent-count (DataReqModeCapab)
		☐ field-type = INT-U8
		☐ field-length = 1 byte
		☐ field-value = 0x00
	n.	data-req-init-manager-count (DataReqModeCapab)
		☐ field-type = INT-U8
		☐ field-length = 1 byte
		☐ field-value = 0x00
Pass/Fail criteria	All chec	ked values are as specified in the test procedure.
Notes	ا عبراد/\	or protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].
Notes	value id	or protocol-version has been modified according to [IOO/IEEE 11070-20001-2010A].

TP Id		TP/PLT/PHG/CLASS/TH/BV-004
TP label		Configuration Event Report. Thermometer standard configuration
Coverage Spec		[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]

	Testable items	Confl	EventR	ep 18;M			
Test purpose	Chec	k that:					
		A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.					
		enter	Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the Configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_025					
Other PICS		C_M	AN_OX	(P_085			
Initial conditi	on	The s	simulat	ed PHD and the Ph	HG under test are in the Unasso	ciated state.	
Test procedu	re			nulated PHD sends 0 0x03 0x20 (Therm	an association request to the P	HG under test with dev-config-	
		2. 7	Γhe PH	G under test respo	nds with an association respons	se, the field of interest is:	
		a	a. Re	sult			
				field-type = INT-L	J16		
				field-length = 2 by	ytes		
				field-value = 0x00	0 0x00 (accepted) or 0x00 0x03	(accepted-unknown-config)	
		If the	result	of the association r	esponse was "accepted-unknov	vn-config"	
			3. The simulated PHD sends a configuration event report with config-report-id set to 0x03 0x20.				
		4. 7	Γhe PH	G under test must	respond with:		
		a	a. AP	DU Type			
				field-length = 2 by			
				field-value = 0xE7	7 0x00 (PrstApdu)		
		t	o. Inv	oke-id			
				field-type = INT-L			
				field-length = 2 by			
				field-value= it mu message.	st be the same as the invoke-id	of the simulated PHD's	
		c	c. Ob	j-Handle:			
				field-type = HANI	DLE		
				field-length = 2 by	ytes		
				field-value = 0x00	0 0x00		
		C	d. Ev	ent-time:			
				field-type = INT-U	J32		
				field-length = 4 by	ytes		
				field-value: 0xXX	0xXX		
		E	e. Ev	ent-type:			
				field-length = 2 by			
				field-value= MDC	_NOTI_CONFIG		
		f	. The	e following six byte	s indicate:		
				Event-replay-info	length (2 bytes)		
				ConfigReportRsp	.config-report-id: it must be the	same as config-report-id of the	

	simulated PHD's message
	☐ ConfigReportRsp.config-result: One of:
	 accepted-config: 0x00 0x00
	5. IF C_MAN_OXP_085 THEN:
	 The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes.
	b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.
	c. Once in the Operating state the PHG is forced to enable the scanner object.
	Wait until the Operating state is reached in both cases.
	6. The simulated PHD sends a fixed event report with one measurement.
Pass/Fail criteria	The PHG under test must respond either to the association request with an "accepted" message or to the Configuration Event Report with an "accepted-config".
	The measurement is correctly presented.
Notes	

		T				
TP Id		TP/PLT/PHG/CLASS/TH/BV-005				
TP label		Maximum APDU size: Thermometer				
Coverage	Spec	[ISO/IEEE 11073-20601-2015A]				
	Testable items	CommonCharac 4;M				
Test purpose	•	Check that:				
		If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.				
		The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitiations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_025				
Other PICS						
Initial conditi	ion	The PHG under test is in the Operating state.				
Test procedu	ıre	The simulated PHD sends a Confirmed variable event report:				
		a. ScanReportInfoVar. obs_scan_var:				
		☐ Count = 2				
		<pre>Length = 856 ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 61441 attribute-value: '00(832 bytes) 00'0 } } ObservationScan ::= { obj-handle: 1</pre>				

	<pre>attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 2636 (MDC_ATTR_NU_VAL_OBS_BASIC) attribute-value: 36 } }</pre>
	2. Check the response of the PHG under test.
	3. The simulated PHD sends a Confirmed fixed event report with one measurement.
	4. Check the response of the PHG under test.
Pass/Fail criteria	 In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report". In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
Notes	

TP ld		TP/PLT/PHG/CLASS/TH/BV-006					
TP label		Attribute-Value-Map. Order change.					
Coverage	Spec	[ISO/IEEE 11073-10408]					
	Testable items	Num Objec Temp17;M					
Test purpos	е	Check that:					
		For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_ABS					
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_025					
Other PICS							
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.					
Test proced	ure	 The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_ABS. 					
		2. The simulated PHD waits until it receives a confirmation.					
		The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 1 (Body Temperature Object) to reverse the values to: MDC_ATTR_TIME_STAMP_ABS, then MDC_ATTR_NU_VAL_OBS_BASIC.					
		4. The simulated PHD waits until it receives a confirmation.					
		 Send a confirmed fixed format event report with the date first followed by a body temperature value (in Celsius degrees since it is the standard configuration unit code) 					
		6. The simulated PHD waits until it receives a confirmation.					
		7. The simulated PHD sends an association release request (normal).					
		3. The simulated PHD waits until there is an association release response.					
		9. The simulated PHD sends an association request using the same standard configuration that was used previously.					
		If the PHG under test responds with association request response with "accepted-unknown-config", then					
		The simulated PHD sends the confirmed configuration event report with the standard					

	configuration.
	 The simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_ABS). The observation should be a reasonable Celsius degrees body temperature observation.
	12. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	 In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).
	 In steps 2, 6 and 12 verify that the PHG under test uses Celsius degrees as the unit code for the measurement report (or reports the proper value after conversion to another unit code).
	• In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e., the actual observation may have occurred sometime in the past).
	 When automated, it is necessary to be careful about sending these messages back to back since the ability to look at things like an UI may require that there be pauses for operator verification.
Notes	

TP ld		TP/PLT/PHG/CLASS/TH/BV-007				
TP label		Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map				
Coverage	Spec	[ISO/IEEE 11073-10408]				
	Testable items	Num Objec Temp17;M				
Test purpos	е	Check that:				
		For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_ABS				
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_025 AND C_MAN_TH_001				
Other PICS						
Initial condit	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration. (Body Temperature Numeric standard configuration Unit code attribute is set to MDC_DIM_DEGC).				
Test procedure		The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 1 (Body Temperature Object) to set the values to: MDC_ATTR_NU_VAL_OBS_BASIC, MDC_ATTR_UNIT_CODE, then MDC_ATTR_TIME_STAMP_ABS.				
		2. The simulated PHD waits until it receives a confirmation.				
		3. Send a confirmed fixed format event report with the new data layout. For the unit-code attribute, use MDC_DIM_FAHR (4416).				
		4. The simulated PHD waits until it receives a confirmation.				
		5. The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC attribute.				
		6. The simulated PHD waits until it receives a confirmation.				

Pass/Fail criteria	• In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).
	 In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement is displayed properly).
	• In steps 4 and 6, verify that the PHG under test uses Fahrenheit degrees as the unit code for the measurement reports.
Notes	

TP ld		TP/PLT/PHG/CLASS/TH/BV-008					
TP label		Unit-Code. Change from default Celsius degrees to Fahrenheit degrees – fixed format observation.					
Coverage	Spec	[ISO/IEEE 110					
	Testable items	Num Objec Te	mp15;M				
	Spec	[b-ITU-T H.810 (2015)]					
	Testable items	Communication	n 9; M				
Test purpose		Check that:					
		For [Standard-Configuration] the [Unit-Code] attribute shall be present					
		The value of the [Unit-Code] attribute shall be MDC_DIM_DEGC					
		[AND]					
		Continua PAN client components that receive a report of a configuration change shall apply the change to future measurements only					
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_025 AND C_MAN_TH_001					
Other PICS							
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.					
Test procedure		 The simulated PHD sends a confirmed variable event report to change the Unit-Code of handle 1 (Body Temperature Object) to Fahrenheit nomenclature code MDC_DIM_FAHR (4416). 					
		2. The simulated PHD waits until it receives a confirmation.					
		3. Send a confirmed fixed format event report using a measurement in Fahrenheit degrees followed by date and time stamp.					
		4. The simulated PHD waits until it receives a confirmation.					
		5. The simulated PHD sends an association release request (normal).					
		6. The simulated PHD waits until it receives an association release response.					
		7. The simulated PHD sends an association request using the same configuration that was used initially.					
		8. If the PHG under test responds with association request response with "accepted-unknown-config", then					
		 The simulated PHD sends the confirmed configuration event report with the standard configuration. 					
		The simulated PHD waits until it receives a confirmation from the confirmed					

	configuration event report just sent.		
	The simulated PHD sends a fixed event report with an observation in Celsius degrees followed by date and time stamp.		
	10. The simulated PHD waits until it receives a confirmation.		
Pass/Fail criteria	• In step 4, verify that the PHG under test is able to accept the data properly and applies Fahrenheit degrees to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).		
	 In step 10, verify that the PHG under test is able to accept the data properly and applies Celsius degrees to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units). 		
Notes			

TP Id		TP/PLT/PHG/CLASS/TH/BV-008_A		
TP label		Unit-Code. Do not change from default Celsius degrees to Fahrenheit degrees – fixed format observation.		
Coverage	Spec	[ISO/IEEE 11073-10408]		
	Testable items	Num Objec Temp15;M		
Test purpose	•	Check that:		
		For [Standard-Configuration] the [Unit-Code] attribute shall be present		
		The value of the [Unit-Code] attribute shall be MDC_DIM_DEGC		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_025 AND (NOT(C_MAN_TH_001))		
Other PICS				
Initial conditi	on	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedu	re	The simulated PHD sends a confirmed variable event report to change the Unit-Code of handle 1 (Body Temperature Object) to Fahrenheit nomenclature code MDC_DIM_FAHR (4416).		
		2. The simulated PHD waits until it receives a confirmation, roer message, abrt message, release association or rorj message or until TO cer-mds expires.		
		3. If the PHG has sent a confirmation in step 2, send a confirmed fixed format event report using a measurement in Fahrenheit degrees followed by date and time stamp.		
		 The simulated PHD waits until it receives a confirmation, roer message, abrt message, release association or rorj message or TO cer-mds expires. 		
		5. If the PHG has sent a confirmation in step 4, ask to the operator if the measurements have been properly received and displayed.		
Pass/Fail criteria		 In step 2, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message. 		
		In step 4, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message.		
		In step 5, verify that measurements do not appear, or if they do appear, they are somehow designated as 'unsupported' data.		
Notes				

TP ld		TP/PLT/PHG/CLASS/TH/BV-009		
TP label		Unit-Code. Use default Celsius degrees – variable format observation.		
Coverage	Spec	[ISO/IEEE 11073-10408]		_
	Testable items	Num Objec Temp15;M	Communication 9; M	
Test purpose		Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present The value of the [Unit-Code] attribute shall be MDC_DIM_DEGC		
Applicability	,	C_MAN_OXP_000 AND C	_MAN_OXP_025	
Other PICS				
Initial condition The simulated PHD and the PHG under test are in the Operating state using the state configuration.		ating state using the standard		
Test proced	ure	Send a confirmed variable format event report using a measurement in Celsius degrees.		
		2. The simulated PHD waits until it receives a confirmation.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data properly and applies Celsius degrees to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units). 		
Notes				

TP Id		TP/PLT/PHG/CLASS/TH/BV-010		
TP label		Unit-Code. Change from default Celsius degrees to Fahrenheit degrees – variable format observation.		
Coverage Spec [ISO/IEEE 11073-10408]		[ISO/IEEE 11073-10408]		
	Testable items	Num Objec Temp15;M		
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	Communication 9; M		
Test purpos	е	Check that:		
		For [Standard-Configuration] the [Unit-Code] attribute shall be present		
		The value of the [Unit-Code] attribute shall be MDC_DIM_DEGC		
		[AND]		
		Continua PAN client components that receive a report of a configuration change shall apply the change to future measurements only		
Applicability C_MAN_OXP_000 AND C_MAN_OXP_025 AND C_MAN_TH_001		C_MAN_OXP_000 AND C_MAN_OXP_025 AND C_MAN_TH_001		
Other PICS				
Initial condition The simulated PHD and the PHG under test are in the Operating state using configuration.		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		

Test procedure	Send a confirmed variable format event report to set the unit code to Fahrenheit degr MDC_DIM_FAHR (4416) for handle 1 (Body Temperature Object) and a measuremen Fahrenheit degrees.	
	The simulated PHD waits until it receives a confirmation.	
	Send a second confirmed variable format event report with just a measurement in Fahrenheit degrees (i.e., do not transmit the unit-code attribute in the event report).	
	The simulated PHD waits until it receives a confirmation.	
	The simulated PHD sends an association release request (normal).	
	The simulated PHD waits until it receives an association release response.	
	The simulated PHD sends an association request using the same configuration that vused initially.	vas
	If the PHG under test responds with association request response with "accepted-unknown-config", then	
	 The simulated PHD sends the confirmed configuration event report with the stand configuration. 	dard
	 The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent. 	
	The simulated PHD sends a confirmed variable event report with an observation in Celsius degrees followed by date and time stamp (i.e., do not send the unit-code attriit should be set to Celsius degrees by the standard configuration).	bute
	The simulated PHD waits until it receives a confirmation.	
Pass/Fail criteria	In steps 2 and 4, verify that the PHG under test is able to accept the data properly and applies Fahrenheit degrees to the observations (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).	
	In step 10, verify that the PHG under test is able to accept the data properly and applications degrees to the observation (e.g., if there is a UI, verify that the measurement date are displayed properly even if they are converted to a different set of units).	
Notes		

TP Id		TP/PLT/PHG/CLASS/TH/BV-011	
TP label		Special values. Not a number – fixed format	
Coverage	Spec	[ISO/IEEE 11073-10408]	
	Testable items	Num Objec Temp17; M	
Test purpose Check that: The PHG receives a NaN value (fixed format event report) but it does not use the		Check that: The PHG receives a NaN value (fixed format event report) but it does not use this value.	
Applicability C_MAN_OXP_000 AND C_MAN_OXP_025		C_MAN_OXP_000 AND C_MAN_OXP_025	
Other PICS			
Initial condition The simulated PHD and the PHG under test are in the Operating state using the configuration.		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.	
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 1 (Body Temperature Object) containing an observation value with the value for NaN ([exponent 0, mantissa +(2**11 -1) = 0x07FF]) and a time stamp. 	
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.	
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as	

	if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/TH/BV-012	
TP label		Special values. Not a number – variable format	
Coverage Spec		[ISO/IEEE 11073-10408]	
	Testable items	Num Objec Temp21; C	
Test purpos	е	Check that:	
		The PHG receives a NaN value (variable format event report) but it does not use this value.	
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_025	
Other PICS			
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.	
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Body Temperature Object) containing an observation value set to the value for NaN ([exponent 0, mantissa +(2**11 -1) = 0x07FF]). 	
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.	
Pass/Fail criteria		• Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).	
Notes		This test case has been considered as an implicit test case.	

TP ld	TP/PLT/PHG/CLASS/TH/BV-013			
TP label Special values. Not at this resolution – fixed format		Special values. Not at this resolution – fixed format		
Coverage Spec		[ISO/IEEE 11073-10408]		
	Testable items	Num Objec Temp17; M		
Test purpose		Check that:		
		The PHG receives NRes value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_025		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		

1. The simulated PHD sends a confirmed fixed event report for handle 1 (Object) containing an observation value set to the value for NRes ([exp mantissa –(2**11) = 0x0800]) and a time stamp.		
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.	
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 	
Notes	This test case has been considered as an implicit test case.	

TP Id		TP/PLT/PHG/CLASS/TH/BV-014		
TP label		Special values. Not at this resolution – variable format		
Coverage	Spec	[ISO/IEEE 11073-10408]		
	Testable items	Num Objec Temp21; C		
Test purpose	•	Check that:		
		The PHG receives NRes value (variable format event report) but it does not use this value. C_MAN_OXP_000 AND C_MAN_OXP_025		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		The simulated PHD sends a confirmed variable event report for handle 1 (Body Temperature Object) containing an observation value set to the value for NRes ([exponent 0, mantissa –(2**11) = 0x0800]).		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/ TH /BV-015			
TP label Special values. Positive infinity – fixed format					
Coverage	Spec	[ISO/IEEE 11073-10408]			
	Testable items	Num Objec Temp17; M			
Test purpose		Check that:			
		The PHG receives a +INFINITY value.	value (fixed format event repor	t) but it does not use this	
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_025		
Other PICS					
Initial condition The simulated PHD and the PHG under test are in the Operating state using the configuration.		g state using the standard			

Test procedure	1. The simulated PHD sends a confirmed fixed event report for handle 1 (Body Temperature Object) containing an observation value set to the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**11 -2) = 0x07FE]) and a time stamp.
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/TH/BV-016		
TP label		Special values. Positive infinity – variable format		
Coverage	Spec	[ISO/IEEE 11073-10408]		
	Testable items	Num Objec Temp21; C		
Test purpos	е	Check that:		
		The PHG receives a +INFINITY value (variable format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_025		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Body Temperature Object) containing an observation value set to the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**11 -2) = 0x07FE]). 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail cr	iteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).		
Notes		This test case has been considered as an implicit test case.		

TP Id TP/PLT/PHG/CLASS/TH/BV-017 TP label Special values. Negative infinity – fixed format		TP/PLT/PHG/CLASS/TH/BV-017	
Coverage	Spec	[ISO/IEEE 11073-10408]	
	Testable items	Num Objec Temp17; M	
Test purpose		Check that:	
		The PHG receives a –INFINITY value (fixed format event report) but it do value.	es not use this
Applicability C_MAN_OXP_000 AND C_MAN_OXP_025			
Other PICS			
Initial condi	tial condition The simulated PHD and the PHG under test are in the Operating state using the standard		ing the standard

	configuration.
Test procedure	 The simulated PHD sends a confirmed fixed event report for handle 1(Body Temperature Object) containing an observation value set to the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**11 –2) = 0x0802]) and a time stamp.
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/TH/BV-018		
TP label		Special values. Negative infinity – variable format		
Coverage	Spec	[ISO/IEEE 11073-10408]		
	Testable items	Num Objec Temp21; C		
Test Purpos	е	Check that:		
		The PHG receives a –INFINITY value (variable format event report) but it does not use this value.		
Applicability C_MAN_OXP_000 AND C_MAN_OXP_025		C_MAN_OXP_000 AND C_MAN_OXP_025		
Other PICS				
Initial condition The simulated PHD and the PHG under test are in the Operating configuration.		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Body Temperature Object) containing an observation value set to the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**11 –2) = 0x0802]). 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes	This test case has been considered as an implicit test case.			

TP Id TP/PLT/P		TP/PLT/PHG/CLASS/TH/BV-019
TP label Special values. Reserved – fixed format		Special values. Reserved – fixed format
Coverage	Spec	[ISO/IEEE 11073-10408]
	Testable items	Num Objec Temp17; M
Test purpose		Check that: The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_025
Other PICS		

Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure	1. The simulated PHD sends a confirmed fixed event report for handle 1 (Body Temperature Object) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**11 –1) = 0x0801]) and a time stamp.		
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria	Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).		
Notes	This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/TH/BV-020		
TP label		Special values. Reserved – variable format		
Coverage	Spec	[ISO/IEEE 11073-10408]		
	Testable items	Num Objec Temp21; C		
Test purpos	se	Check that:		
		The PHG receives a Reserved for future use value (variable format event report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_025		
Other PICS	other PICS			
Initial condi	The simulated PHD and the PHG under test are in the Operating state using the star configuration.			
Test procedure		The simulated PHD sends a confirmed variable event report for handle 1 (Body Temperature Object) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**11 –1) = 0x0801]). The simulated PHD write wall it requires a confirmation from the PHC window test.		
Pass/Fail criteria		 The simulated PHD waits until it receives a confirmation from the PHG under test. Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes		This test case has been considered as an implicit test case.		

A.7 Subgroup 2.3.6: Cardiovascular (CV)

TP ld		TP/PLT/PHG/CLASS/CV/BV-002			
TP label	label Association procedure PHG CV				
Coverage	Spec	[ISO/IEEE 11073-10441]	ISO/IEEE 11073-10441]		
	Testable items	AssocResp1;M AssocResp2;M AssocRes		AssocResp3;M	
		AssocResp4;M	AssocResp5;M	AssocResp6;M	
		AssocResp7;M	AssocResp8;M	AssocResp9;M	
		AssocResp10;M	AssocResp11;M	AssocResp12;M	

Test purpose	Check that:			
Test purpose	In the association response message sent by the PHG:			
	The result field shall be set to an appropriate response from those defined in ISO/IEEE			
	P11073-20601.			
	[AND]			
	In the DataProtoList structure element, the data protocol identifier shall be set to data-proto-id-20601			
	[AND]			
	The data-proto-info field shall be filled in with a PhdAssociationInformation structure			
	[AND]			
	The version of the data exchange protocol shall be set to protocol-version1 (i.e., protocol-version = 0x80000000)			
	[AND]			
	The PHG shall respond with a single selected encoding rule that is supported by both PHD and PHG. The PHG shall support at least the MDER encoding rules			
	[AND]			
	The version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000)			
	[AND]			
	The field functional-units shall have all bits reset except for those relating to a Test Association.			
	[AND]			
	The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000)			
	AND]			
	The System-Id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier			
	[AND]			
	The field dev-config-id shall be manager-config-response (0)			
	[AND]			
	The field data-req-mode-capab shall be 0			
	[AND]			
	The fields data-req-init-*-count shall be 0			
Applicability	C_MAN_OXP_000 AND (C_MAN_OXP_023)			
Other PICS				
Initial condition	The PHG is in the Unassociated state.			
Test procedure	The simulated PHD sends an association request to the PHG under test, with the fields:			
	□ protocol-version = '100000000000000000000000000000000000			
	□ encoding-rules= '10000000000000'B			
	nomenclature-version = '100000000000000000000000000000000000			
	☐ functional-units = '00000000000000000000000000000000000			
	□ system-type = '000000001000000000000000000000000000			
	☐ dev-config-id = 16438			
	☐ data-rep-mode-capab =			
	data_req_mode_flags= '00000000000001'B			
	data_req_init_agent_count = 1			

		•	data_req_init_manager_count = 0
		opt	ion-list.length= 0
2.	The	e PH	G under test sends an association response. The fields of interest are:
	a.	AP	DU Type
			field-length = 2 bytes
			field-value = 0xE3 0x00 (AareApdu)
	b.	Res	sult
			field-type = AssociateResult
			field-length = 2 bytes
			field-value = One of the following:
			■ If association is accepted, field-value= 0x00 0x00.
			■ If association is rejected-permanent, field-value= 0x00 0x01.
			If association is rejected-transient, field-value= 0x00 0x02.
			■ If association is accepted-unknown-config, field-value= 0x00 0x03.
			■ If association is rejected-no-common-protocol, field-value= 0x00 0x04.
			■ If association is rejected-no-common-parameter, field-value= 0x00 0x05.
			If association is rejected—unknown = 0x00 0x06.
			 If association is rejected-unauthorized, field-value= 0x00 0x07.
			 If association is rejected–unsupported-assoc-version, field-value= 0x00 0x08.
	C.		ected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data-to-info(defined by data-proto-id))
	d.	dat	a-proto-id
			field-type = DataProtoId
			field-length = 2 bytes
			field-value= 0x50 0x79 (20601)
	e.	pro	tocol-version
			field-type = Protocol Version
			field-length = 4 bytes (BITS-32)
			field-value= 0x80 0x00 0x00 0x00
	f.	enc	coding-rules
			field-type = EncodingRules
			field-length = 2 bytes (BITS-16)
			field-value= depends on the encoding rules supported/selected, but only one can be supported at a time
	g.	nor	nenclature version
			field-type = NomenclatureVersion
			field-length = 4 bytes (BITS-32)
			field-value= Bit 0 must be set (nom-version1)
	h.	fun	ctional units
			field-type = FunctionalUnits
			field-length = 4 bytes (BITS-32)
			field-value =
			Bit 0 must be 0
			Bits 1 and 2 may be set

Notes	Value for protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].
Pass/Fail criteria	All checked values are as specified in the test procedure.
	☐ field-value = 0x00
	☐ field-length = 1 byte
	☐ field-type = INT-U8
	n. data-req-init-manager-count (DataReqModeCapab)
	☐ field-value = 0x00
	☐ field-length = 1 byte
	☐ field-type = INT-U8
	m. data-req-init-agent-count (DataReqModeCapab)
	☐ PHG response to data-req-mode-flags is always 0.
	☐ field-value = 0x00 0x00
	☐ field-length = 2 bytes
	☐ field-type = DataReqModeFlags
	I. data-req-mode-flags (DataReqModeCapab)
	☐ field-value = 0x00 0x00 (manager-config-response)
	☐ field-length = 2 bytes
	☐ field-type = Configld
	k. dev-config-id
	☐ field-value = (EUI-64 manufacturer and device)
	itied type = 35121 311(11)
	j. system-id ☐ field-type = OCTET STRING
	i gystam id
	ield-length = 4 bytes (BITS-32)
	ifield-type = SystemType
	i. system type
	 The rest of the bits must not be set

TP ld		TP/PLT/PHG/CLASS/CV/BV-003		
TP label		Maximum APDU size: Cardiovascular		
Coverage	Coverage Spec [ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016		2016C]	
	Testable items	CommonCharac 4;M		
Test purpos	e	Check that:		
		If a PHG receives an APDU that error (roer) code of protocol-vio	at is larger than the PHG's receiv lation.	e buffer, it shall reply with an
		specializations the PHG support	be at least as large as the large rts. The buffer size limitiations in of whether a standard or extende	this bullet and the next on
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_023 AND NOT(C_MAN	I_CV_030)
Other PICS				

```
Initial condition
                      The PHG under test is in the Operating state.
Test procedure
                      1. The simulated PHD sends a Confirmed variable event report:
                          a. ScanReportInfoVar. obs_scan_var:
                              ☐ Count = 2
                              ☐ Length = 64472
                               ObservationScan ::= {
                                  obj-handle: 1
                                  attributes: AttributeList ::= {
                                     AVA-Type ::= {
                                       attribute-id: 61441
                                       attribute-value: '00.....(64448 bytes).....
                      00'0
                                   }
                                 }
                                ObservationScan ::= {
                                  obj-handle: 1
                                   attributes: AttributeList ::= {
                                     AVA-Type ::= {
                                       attribute-id: 2633 (MDC ATTR ENUM OBS VAL SIMP OID)
                                       attribute-value: 1017 (MDC HF ACT WALK)
                                   }
                                }
                      2. Check the response of the PHG under test.
                      3.
                         The simulated PHD sends a Confirmed fixed event report with one measurement.
                          Check the response of the PHG under test.
Pass/Fail criteria
                          In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
                          In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
Notes
```

A.8 Subgroup 2.3.7: Strength (ST)

TP ld		TP/PLT/PHG/CLASS/ST/BV-001			
TP label		Association procedure PHG ST			
Coverage Spec		[ISO/IEEE 11073-10442]			
	Testable	StrenAssocRes 1;M	StrenAssocRes 2;M	StrenAssocRes 3;M	
	items	StrenAssocRes 4;M	StrenAssocRes 5;M	StrenAssocRes 6;M	
		StrenAssocRes 7;M	StrenAssocRes 8;M	StrenAssocRes 9;M	
		StrenAssocRes 10;M	StrenAssocRes 11;M		
Test purpose		Check that:			
		In the DataProtoList structure element, the data protocol identifier shall be set to data-proto-id-20601 (i.e., data-proto-id = 0x5079)			
		[AND]			
		•		ationInformation structure and the col-version1 (i.e., protocol-version =	

	0x80000000).		
	, and the second		
	[AND] The PHG shall respond with a single selected encoding rule that is supported by both PHD and PHG.		
	[AND]		
	The PHG shall support at least the MDER encoding rules.		
	[AND]		
	The version of the nomenclature used shall be set to nom-version1		
	[AND]		
	The data-proto-info field shall be filled in with a PhdAssociationInformation structure which shall contain the field functional-units. It shall have all bits reset except for those relating to a Test Association.		
	[AND]		
	The data-proto-info field shall be filled in with a PhdAssociationInformation structure which shall contain the field system-type. It shall be set to sys-type-manager (i.e., system-type = 0x80000000).		
	[AND]		
	The data-proto-info field shall be filled in with a PhdAssociationInformation structure which contain the System-Id field. It shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier.		
	[AND]		
	The data-proto-info field shall be filled in with a PhdAssociationInformation structure which shall contain the following parameter values: The field dev-config-id shall be manager-configresponse (0).		
	[AND]		
	The data-proto-info field shall be filled in with a PhdAssociationInformation structure and the contain the field data-req-mode-capab. data-req-mode-capab Shall be 0.		
	[AND]		
	The data-proto-info field shall be filled in with a PhdAssociationInformation structure and shall contain the fields data-req-init-* count = 0		
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_022		
Other PICS			
Initial condition	The PHG is in the Unassociated state.		
Test procedure	The simulated PHD sends an association request to the PHG under test, with the fields:		
-	□ protocol-version = '100000000000000000000000000000000000		
	□ encoding-rules= '10000000000000'B		
	nomenclature-version = '100000000000000000000000000000000000		
	☐ functional-units = '00000000000000000000000000000000000		
	□ system-type = '000000001000000000000000000000000000		
	dev-config-id = 16445		
	☐ data-rep-mode-capab =		
	data_req_mode_flags= '00000000000001'B		
	data_req_init_agent_count = 1		
	data_req_init_manager_count = 0		
	□ option-list.length= 0		
	2. The PHG under test sends an association response. The fields of interest are:		
	a. APDU Type		

	☐ field-length = 2 bytes
	☐ field-value = 0xE3 0x00 (AareApdu)
b.	Result
	☐ field-type = AssociateResult
	☐ field-length = 2 bytes
	field-value = One of the following:
	 If association is accepted, field-value= 0x00 0x00.
	 If association is rejected-permanent, field-value= 0x00 0x01.
	 If association is rejected-transient, field-value= 0x00 0x02.
	 If association is accepted-unknown-config, field-value= 0x00 0x03.
	 If association is rejected-no-common-protocol, field-value= 0x00 0x04.
	If association is rejected-no-common-parameter, field-value= 0x00 0x05.
	If association is rejected—unknown = 0x00 0x06.
	 If association is rejected-unauthorized, field-value= 0x00 0x07.
	 If association is rejected–unsupported-assoc-version, field-value= 0x00 0x08.
C.	selected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data-proto-info(defined by data-proto-id))
d.	data-proto-id
	☐ field-type = DataProtoId
	☐ field-length = 2 bytes
	☐ field-value= 0x50 0x79 (20601)
e.	protocol-version
	☐ field-type = Protocol Version
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value= 0x80 0x00 0x00 0x00
f.	encoding-rules
	☐ field-type = EncodingRules
	☐ field-length = 2 bytes (BITS-16)
	field-value= depends on the encoding rules supported/selected, but only one can be supported at a time
g.	nomenclature version
	☐ field-type = NomenclatureVersion
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value= Bit 0 must be set (nom-version1)
h.	functional units
	☐ field-type = FunctionalUnits
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value =
	Bit 0 must be 0
	Bits 1 and 2 may be set
	 The rest of the bits must not be set
i.	system type
	☐ field-type = SystemType
	☐ field-length = 4 bytes (BITS-32)

		☐ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
	j.	system-id
		☐ field-type = OCTET STRING
		☐ field-length = 8 bytes
		☐ field-value = (EUI-64 manufacturer and device)
	k.	dev-config-id
		☐ field-type = Configld
		☐ field-length = 2 bytes
		☐ field-value = 0x00 0x00 (manager-config-response)
	l.	data-req-mode-flags (DataReqModeCapab)
		☐ field-type = DataReqModeFlags
		☐ field-length = 2 bytes
		☐ field-value = 0x00 0x00
		☐ PHG response to data-req-mode-flags is always 0.
	m.	data-req-init-agent-count (DataReqModeCapab)
		☐ field-type = INT-U8
		☐ field-length = 1 byte
		☐ field-value = 0x00
	n.	data-req-init-manager-count (DataReqModeCapab)
		☐ field-type = INT-U8
		☐ field-length = 1 byte
		☐ field-value = 0x00
Pass/Fail criteria	All chec	ked values are as specified in the test procedure.
Notes	Value fo	or protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].

TP Id		TP/PLT/PHG/CLASS/ST/BV-002		
TP label		Maximum APDU size: Strength		
Coverage	Spec [ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
	Testable items	CommonCharac 4;M		
Test purpose		Check that: If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation. The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitiations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.		
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_022		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test procedure		The simulated PHD sends a Confirmed variable event report:		

```
a. ScanReportInfoVar. obs_scan_var:
                             ☐ Count = 2
                             ☐ Length = 64472
                              ObservationScan ::= {
                                 obj-handle: 1
                                 attributes: AttributeList ::= {
                                   AVA-Type ::= {
                                      attribute-id: 61441
                                      attribute-value: '00.....(64448 bytes).....
                     00'0
                                   }
                                 }
                                }
                               ObservationScan ::= {
                                 obj-handle: 1
                                 attributes: AttributeList ::= {
                                    AVA-Type ::= {
                                      attribute-id: 2633 (MDC ATTR ENUM OBS VAL SIMP OID)
                                      attribute-value: 284 (MDC MUSC HEAD FACIAL)
                                  }
                               }
                        Check the response of the PHG under test.
                     3. The simulated PHD sends a Confirmed fixed event report with one measurement.
                     4.
                        Check the response of the PHG under test.
Pass/Fail criteria
                         In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
                         In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
Notes
```

A.9 Subgroup 2.3.8: Activity hub (HUB)

TP ld		TP/PLT/PHG/CLASS/HUB/BV-003			
TP label		Association procedure PHG HUB			
Coverage	Spec	[ISO/IEEE 11073-10471]			
	Testable	AssocResp1;M	AssocResp2;M	AssocResp3;M	
	items	AssocResp4;M	AssocResp5;M	AssocResp6;M	
		AssocResp7;M	AssocResp8;M	AssocResp9;M	
		AssocResp10;M	AssocResp11;M		
Test purpose		Check that:			
		In the DataProtoList structure element, the data protocol identifier shall be set to data-proto-id-20601			
		[AND]			
		The data-proto-info field	d shall be filled in with a PhdAsso	ociationInformation structure	
		[AND]			
		The version of the data version = 0x80000000)	exchange protocol shall be set to	o protocol-version1 (i.e., protocol-	

	[AND]		
	The PHG shall respond with a single selected encoding rule that is supported by both PHD and PHG. The PHG shall support at least the MDER encoding rules		
	[AND]		
	The version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000)		
	[AND]		
	The field functional-units shall have all bits reset except for those relating to a Test Association.		
	[AND]		
	The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000)		
	[AND]		
	The System-Id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier		
	[AND]		
	The field dev-config-id shall be manager-config-response (0)		
	[AND]		
	The field data-req-mode-capab shall be 0		
	[AND]		
	The fields data-req-init-*-count shall be 0		
Applicability	C_MAN_OXP_000 AND (C_MAN_OXP_021)		
Other PICS			
Initial condition	The PHG is in the Unassociated state.		
Test procedure	The simulated PHD sends an association request to the PHG under test, with the fields:		
	□ protocol-version = '100000000000000000000000000000000000		
	□ encoding-rules= '1000000000000000'B		
	□ nomenclature-version = '100000000000000000000000000000000000		
	☐ functional-units = '00000000000000000000000000000000000		
	□ system-type = '000000001000000000000000000000000000		
	dev-config-id = 16441		
	data-rep-mode-capab =		
	data_req_mode_flags= '00000000000001'B		
	data_req_init_agent_count = 1		
	data_req_init_manager_count = 0		
	□ option-list.length= 0		
	2. The PHG under test sends an association response. The fields of interest are:		
	a. APDU Type		
	☐ field-length = 2 bytes		
	☐ field-value = 0xE3 0x00 (AareApdu)		
	b. Result		
	☐ field-type = AssociateResult		
	☐ field-length = 2 bytes		
	☐ field-value = One of the following:		
	 If association is accepted, field-value= 0x00 0x00. 		

	If association is rejected-permanent, field-value= 0x00 0x01.	
	If association is rejected-transient, field-value= 0x00 0x02.	
	 If association is accepted-unknown-config, field-value= 0x00 0x03. 	
	 If association is rejected-no-common-protocol, field-value= 0x00 0x04. 	
	 If association is rejected-no-common-parameter, field-value= 0x00 0x05 	5.
	 If association is rejected—unknown = 0x00 0x06. 	
	If association is rejected-unauthorized, field-value= 0x00 0x07.	
	 If association is rejected—unsupported-assoc-version, field-value= 0x00 0x08.)
C.	selected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data-proto-info(defined by data-proto-id))	ta-
d.	data-proto-id	
۵.	☐ field-type = DataProtold	
	isled-length = 2 bytes	
	☐ field-value= 0x50 0x79 (20601)	
Α.	protocol-version	
e.	☐ field-type = Protocol Version	
	•	
£	in field-value= 0x80 0x00 0x00 0x00	
f.	encoding-rules	
	field-type = EncodingRules	
	in field-length = 2 bytes (BITS-16)	_
	field-value= depends on the encoding rules supported/selected, but only one can be supported at a time	е
g.	nomenclature version	
	☐ field-type = NomenclatureVersion	
	☐ field-length = 4 bytes (BITS-32)	
	☐ field-value= Bit 0 must be set (nom-version1)	
h.	functional units	
	☐ field-type = FunctionalUnits	
	☐ field-length = 4 bytes (BITS-32)	
	☐ field-value =	
	Bit 0 must be 0	
	 Bits 1 and 2 may be set 	
	 The rest of the bits must not be set 	
i.	system type	
	☐ field-type = SystemType	
	ifield-length = 4 bytes (BITS-32)	
	☐ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)	
j.	system-id	
٠,٠	☐ field-type = OCTET STRING	
	islad-length = 8 bytes	
	☐ field-value = (EUI-64 manufacturer and device)	
k.	dev-config-id	
ĸ.		
	☐ field-type = Configld	

	1	
		☐ field-length = 2 bytes
		☐ field-value = 0x00 0x00 (manager-config-response)
	I.	data-req-mode-flags (DataReqModeCapab)
		☐ field-type = DataReqModeFlags
		☐ field-length = 2 bytes
		☐ field-value = 0x00 0x00
		☐ PHG response to data-req-mode-flags is always 0.
	m.	data-req-init-agent-count (DataReqModeCapab)
		☐ field-type = INT-U8
		☐ field-length = 1 byte
		☐ field-value = 0x00
	n.	data-req-init-manager-count (DataReqModeCapab)
		☐ field-type = INT-U8
		☐ field-length = 1 byte
		☐ field-value = 0x00
Pass/Fail criteria	All chec	ked values are as specified in the test procedure.
Notes	Value fo	or protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].

TP ld		TP/PLT/PHG/CLASS/HUB/BV-004			
TP label		Maximum APDU size: Activity Hub			
Coverage	Spec	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
Testable items		CommonCharac 4;M			
Test purpose		Check that: If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation. The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitiations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.			
Applicability	/	C_MAN_OXP_000 AND C_MAN_OXP_021			
Other PICS					
Initial condi	tion	The PHG under test is in the Operating state.			
Test procedure		<pre>1. The simulated PHD sends a Confirmed variable event report: a. ScanReportInfoVar. obs_scan_var: Count = 2 Length = 5080 ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 61441</pre>			

```
attribute-value: '00.....(5054 bytes)..... 00'0
                                     }
                                   }
                                 }
                                ObservationScan ::= {
                                  obj-handle: 1
                                   attributes: AttributeList ::= {
                                     AVA-Type ::= {
                                       attribute-id: 2661 (MDC ATTR ENUM OBS VAL SIMP BIT STR)
                                        attribute-value: 0x80 0x00 0x00 0x00
                                   }
                                }
                      2. Check the response of the PHG under test.
                      3. The simulated PHD sends a Confirmed fixed event report with one measurement.
                         Check the response of the PHG under test.
Pass/Fail criteria
                          In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
                          In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
Notes
```

A.10 Subgroup 2.3.9: Adherence monitor (AM)

TP ld		TP/PLT/PHG/CLASS/AM/BV-000			
TP label		Configuration Event Report. Adherence Monitor standard configuration 7200			
Coverage	Spec	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
	Testable items	ConfEventRep 18;M			
Test purpos	е	Check that:			
		A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.			
		Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the Configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.			
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_016			
Other PICS		C_MAN_OXP_085			
Initial condit	tion	The simulated PHD and the PHG under test are in the Unassociated state.			
Test procedure		The simulated PHD sends an association request to the PHG under test with dev-configid set to 0x1c 0x20 (MedicalMonitor).			
		2. The PHG under test responds with an association response, the field of interest is:			
		a. Result			
		☐ field-type = INT-U16			
		☐ field-length = 2 bytes			
		☐ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)			
		If the result of the association response was "accepted-unknown-config"			

	3.	The		ulated PHD sends a configuration event report with config-report-id set to 0x1c
	4.	The	PHO	G under test must respond with:
		a.	API	DU Type
				field-length = 2 bytes
				field-value = 0xE7 0x00 (PrstApdu)
		b.	Invo	oke-id
				field-type = INT-U16
				field-length = 2 bytes
				field-value= it must be the same as the invoke-id of the simulated PHD's message.
		c.	Obj	-Handle:
				field-type = HANDLE
				field-length = 2 bytes
				field-value = $0x00 0x00$
		d.	Eve	nt-time:
				field-type = INT-U32
				field-length = 4 bytes
				field-value: 0xXX 0xXX
		e.	Eve	nt-type:
				field-length = 2 bytes
				field-value= MDC_NOTI_CONFIG
		f.	The	following six bytes indicate:
				Event-replay-info.length (2 bytes)
				ConfigReportRsp.config-report-id: it must be the same as config-report-id of the simulated PHD's message
				ConfigReportRsp.config-result: One of:
				accepted-config: 0x00 0x00
	5.	IF C	C_MA	AN_OXP_085 THEN:
		a.	roiv	PHG under test moves to Configuring/Sending GetMDS substate and issues -cmip-command with handle set to 0 (request for MDS object) and attribute-id-list to 0 to indicate all attributes.
		b.	attri	simulated PHD responds with a rors-cmip-get service message in which the bute-list contains a list of all implemented attributes of the MDS object and the s-time-mgr-set-time bit is not set.
		c.	Ond	ce in the Operating state the PHG is forced to enable the scanner object.
	Wa	it unt	il the	Operating state is reached in both cases.
	6.	The	sim	ulated PHD sends a fixed event report with one measurement.
Pass/Fail criteria	•			G under test must respond either to the association request with an "accepted" e or to the Configuration Event Report with an "accepted-config".
	•	The	mea	asurement is correctly presented.
Notes	The	PH(G ca	n request Get MDS while they are in the Associated state.

TP ld		TP/PLT/PHG/CLASS/AM/BV-001				
TP label		Configuration Event Report. Adherence Monitor standard configuration 7201				
Coverage	Spec	[IS	ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
	Testable items	Со	nfEv	entRep 18;M		
Test purpos	е	Check that:				
		A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.				
		Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the Configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.				
Applicability	1	C_	MAN	_OXP_000 AND C_MAN_OXP_016		
Other PICS		C_	MAN	_OXP_085		
Initial condit	tion	The	e sim	nulated PHD and the PHG under test are in the Unassociated state.		
Test proced	ure	1.				
		2.	The	e PHG under test responds with an association response, the field of interest is:		
			a.	Result		
				☐ field-type = INT-U16		
				☐ field-length = 2 bytes		
				☐ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)		
		If th	sult of the association response was "accepted-unknown-config"			
		3. The simulated PHD sends a configuration event report with config-report-id set 0x21.				
		4.	The	e PHG under test must respond with:		
			a.	APDU Type		
				☐ field-length = 2 bytes		
				☐ field-value = 0xE7 0x00 (PrstApdu)		
			b.	Invoke-id		
				☐ field-type = INT-U16		
				☐ field-length = 2 bytes		
				☐ field-value= it must be the same as the invoke-id of the simulated PHD's message.		
			c.	Obj-Handle:		
				☐ field-type = HANDLE		
				☐ field-length = 2 bytes		
				$\Box \text{field-value} = 0x00 \ 0x00$		
			d.	Event-time:		
				☐ field-type = INT-U32		
				☐ field-length = 4 bytes		
				☐ field-value: 0xXX 0xXX		
			e.	Event-type:		
				☐ field-length = 2 bytes		

		☐ field-value= MDC_NOTI_CONFIG
	f.	The following six bytes indicate:
		☐ Event-replay-info.length (2 bytes)
		ConfigReportRsp.config-report-id: it must be the same as config-report-id of the simulated PHD's message
		☐ ConfigReportRsp.config-result: One of:
		 accepted-config: 0x00 0x00
	5. IF	F C_MAN_OXP_085 THEN:
	а	The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes.
	b	The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.
	С	c. Once in the Operating state the PHG is forced to enable the scanner object.
	Wait u	until the Operating state is reached in both cases.
	6. T	he simulated PHD sends a fixed event report with one measurement.
Pass/Fail criteria		The PHG under test must respond either to the association request with an "accepted" nessage or to the Configuration Event Report with an "accepted-config".
	• T	he measurement is correctly presented.
Notes	The P	PHG can request Get MDS while they are in the Associated state.

TP ld		TP/PLT/PHG/CLASS/AM/BV-002			
TP label		Configuration Event Report. Adherence Monitor standard configuration 7202			
Coverage	Spec	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
	Testable items	ConfEventRep 18;M			
Test purpos	ie .	Check that:			
		A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.			
		Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the Configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.			
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_016			
Other PICS		C_MAN_OXP_085			
Initial condi	tion	The simulated PHD and the PHG under test are in the Unassociated state.			
Test procedure		The simulated PHD sends an association request to the PHG under test with dev-configid set to 0x1c 0x22 (MedicalMonitor).			
		2. The PHG under test responds with an association response, the field of interest is:			
		a. Result			
		☐ field-type = INT-U16			
		☐ field-length = 2 bytes			
		☐ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)			

	3.	The 0x2	e simulated PHD sends a configuration event report with config-report-id set to 0x1c 22.
	4.	The	e PHG under test must respond with:
		a.	APDU Type
			☐ field-length = 2 bytes
			☐ field-value = 0xE7 0x00 (PrstApdu)
		b.	Invoke-id
			☐ field-type = INT-U16
			☐ field-length = 2 bytes
			ifield-value= it must be the same as the invoke-id of the simulated PHD's message.
		c.	Obj-Handle:
			☐ field-type = HANDLE
			☐ field-length = 2 bytes
			$\Box \text{field-value} = 0x00 \ 0x00$
		d.	Event-time:
			☐ field-type = INT-U32
			☐ field-length = 4 bytes
			☐ field-value: 0xXX 0xXX
		e.	Event-type:
			☐ field-length = 2 bytes
			☐ field-value= MDC_NOTI_CONFIG
		f.	The following six bytes indicate:
			☐ Event-replay-info.length (2 bytes)
			ConfigReportRsp.config-report-id: it must be the same as config-report-id of the simulated PHD's message
			☐ ConfigReportRsp.config-result: One of:
			accepted-config: 0x00 0x00
	5.	IF (C_MAN_OXP_085 THEN:
		a.	The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-lis set to 0 to indicate all attributes.
		b.	The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.
		c.	Once in the Operating state the PHG is forced to enable the scanner object.
	Wa	it un	til the Operating state is reached in both cases.
	6.	The	e simulated PHD sends a fixed event report with one measurement.
Pass/Fail criteria	•		e PHG under test must respond either to the association request with an "accepted" ssage or to the Configuration Event Report with an "accepted-config".
	•	The	e measurement is correctly presented.
Notes			G can request Get MDS while they are in the Associated state.

TP ld		TP/PLT/PHG/CLASS/AM/BV-003				
TP label		Configuration Event Report. Adherence Monitor standard configuration 7203				
Coverage	Spec Testable items	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C] ConfEventRep 18;M				
Test purpose		Check that: A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4. Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the Configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016				
Other PICS		C_MAN_OXP_085				
Initial conditi	ion	The simulated PHD and the PHG under test are in the Unassociated state.				
Test procedu	ıre	The simulated PHD sends an association request to the PHG under test with dev-configid set to 0x1c 0x23 (MedicalMonitor).				
		2. The PHG under test responds with an association response, the field of interest is: a. Result field-type = INT-U16 field-length = 2 bytes field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config) If the result of the association response was "accepted-unknown-config" 3. The simulated PHD sends a configuration event report with config-report-id set to 0x1c 0x23. 4. The PHG under test must respond with: a. APDU Type field-length = 2 bytes field-value = 0xE7 0x00 (PrstApdu) b. Invoke-id field-type = INT-U16 field-length = 2 bytes field-value= it must be the same as the invoke-id of the simulated PHD's message. c. Obj-Handle: field-length = 2 bytes field-value = 0x00 0x00 d. Event-time: field-type = INT-U32 field-length = 4 bytes field-value: 0xXX 0xXX e. Event-type: field-length = 2 bytes				

		field-value= MDC_NOTI_CONFIG
	f.	The following six bytes indicate:
		Event-replay-info.length (2 bytes)
		ConfigReportRsp.config-report-id: it must be the same as config-report-id of the simulated PHD's message
		ConfigReportRsp.config-result: One of:
		 accepted-config: 0x00 0x00
	Wait until the	e Operating state is reached in both cases.
	5. IF C_M	AN_OXP_085:
	roiv	e PHG under test moves to Configuring/Sending GetMDS substate and issues y-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list to 0 to indicate all attributes.
	attı	e simulated PHD responds with a rors-cmip-get service message in which the ribute-list contains a list of all implemented attributes of the MDS object and the s-time-mgr-set-time bit is not set.
	c. On	ce in the Operating state the PHG is forced to enable the scanner object.
	Wait until the	e Operating state is reached in both cases.
	6. The sim	nulated PHD sends a fixed event report with one measurement.
Pass/Fail criteria	The PHG under test must respond either to the association request with an "accepted" message or to the Configuration Event Report with an "accepted-config".	
	The me	asurement is correctly presented.
Notes	The PHG ca	n request Get MDS while they are in the Associated state.

TP ld		TR/PLT/PLIQ/QLAQQ/AM/PV/ QQ4			
TF IU		TP/PLT/PHG/CLASS/AM/BV-004			
TP label		Maximum APDU size: Adherence Monitor			
Coverage	Spec	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
	Testable items	CommonCharac 4;M			
Test purpos	е	Check that:			
		If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.			
		The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016			
Other PICS					
Initial condition		The PHG under test is in the Operating state.			
Test procedure		 The simulated PHD sends a Confirmed variable event report: a. ScanReportInfoVar. obs_scan_var: □ Count = 2 			
		<pre>D Length = 984 ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= {</pre>			

```
AVA-Type ::= {
                                       attribute-id: 61441
                                       attribute-value: '00.....(960 bytes)..... 00'0
                                  }
                                 }
                                ObservationScan ::= {
                                  obj-handle: 1
                                  attributes: AttributeList ::= {
                                    AVA-Type ::= {
                                       attribute-id: 2636 (MDC ATTR NU VAL OBS BASIC)
                                       attribute-value: 3
                                  }
                                }
                         Check the response of the PHG under test.
                      3.
                         The simulated PHD sends a Confirmed fixed event report with one measurement.
                      4.
                         Check the response of the PHG under test.
Pass/Fail criteria
                         In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
                         In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
Notes
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TP ld		TP/PLT/PHG/CLASS/AM/BV-005			
TP label		Attribute-Value-Map. Order change. (0x1c20)			
Coverage	Spec	[ISO/IEEE 11073-10472]			
	Testable items	FixedDosage12; M			
Test purpos	е	Check that:			
		For [Standard-Configuration, Fixed Dosage Medication Object] the [Attribute-Value-Map] attribute shall be present and with value MDC_ATTR_TIME_STAMP_ABS, then MDC_ATTR_NU_VAL_OBS_BASIC			
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_016			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c20).			
Test procedure		The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of MDC_ATTR_TIME_STAMP_ABS, then MDC_ATTR_NU_VAL_OBS_BASIC.			
		2. The simulated PHD waits until it receives a confirmation.			
		3. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 1 (Fixed Dosage Medication Object) to reverse the values to: MDC_ATTR_NU_VAL_OBS_BASIC then MDC_ATTR_TIME_STAMP_ABS.			
		4. The simulated PHD waits until it receives a confirmation.			
		5. Send a confirmed fixed format event report with the measurement followed by the date (absolute-time-stamp).			
		6. The simulated PHD waits until it receives a confirmation.			
		7. The simulated PHD sends an association release request (normal).			

	8.	The simulated PHD waits until there is an association release response.
	9.	The simulated PHD sends an association request using the same standard configuration that was used previously.
	10.	If the PHG under test responds with association request response with "accepted-unknown-config", then
		• The simulated PHD sends the confirmed configuration event report with the standard configuration.
		 The simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	11.	The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_TIME_STAMP_ABS, then MDC_ATTR_NU_VAL_OBS_BASIC). The observation should be a reasonable Fixed Dosage Medication observation.
	12.	The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	•	In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).
	•	In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e., the actual observation may have occurred sometime in the past).
	•	When automated, it is necessary to be careful about sending these messages back to back since the ability to look at things like an UI may require that there be pauses for operator verification.
Notes		

TP Id		TP/PLT/PHG/CLASS/AM/BV-006				
TP label		Attribute-Value-Map. Order change. (0x1c23)				
Coverage	Spec	[ISO/IEEE 11073-10472]	[ISO/IEEE 11073-10472]			
	Testable items	VarDosage12; M	UserFeedback12; M	StatReporter12; M		
Test purpose)	Check that:				
		For [Standard-Configuration, Variable Dosage Medication Object] the [Attribute-Value-Map] attribute shall be present				
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_TIME_STAMP_ABS MDC_ATTR_NU_VAL_OBS_SIMP				
		[AND]				
		For [Standard-Configuration, User Feedback Object] the [Attribute-Value-Map] attribute shall be present				
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_TIME_STAMP_ABS MDC_ATTR_NU_CMPD_VAL_OBS_BASIC				
		[AND]				
		For [Standard-Configuration, Status Reporter Object] the [Attribute-Value-Map] attribute shall be present				
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_TIME_STAM MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016				
Other PICS						

Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).
Test procedure	 The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of:
	 MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_NU_VAL_OBS_BASIC for Variable Dosage Medication Object
	 MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_NU_CMPD_VAL_OBS_BASIC for User Feedback Object
	 MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR for Status Reporter Object
	2. The simulated PHD waits until it receives a confirmation.
	 The simulated PHD sends a confirmed variable event report to change the Attribute- Value-Map configuration of handle 2 (Variable Dosage Medication Object), of handle 4 (User Feedback objec) and of handle 3 (Status Reporter Object) to reverse the values to
	 MDC_ATTR_NU_VAL_OBS_BASIC then MDC_ATTR_TIME_STAMP_ABS for Variable Dosage Medication Object
	 MDC_ATTR_NU_CMPD_VAL_OBS_BASIC then MDC_ATTR_TIME_STAMP_ABS for User Feedback Object
	 MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR then MDC_ATTR_TIME_STAMP_ABS for Status Reporter Object
	4. The simulated PHD waits until it receives a confirmation.
	Send a confirmed fixed format event report with the measurement date (absolute-time- stamp) for every object.
	6. The simulated PHD waits until it receives a confirmation.
	7. The simulated PHD sends an association release request (normal).
	8. The simulated PHD waits until there is an association release response.
	The simulated PHD sends an association request using the same standard configuration that was used previously.
	 If the PHG under test responds with association request response with "accepted- unknown-config", then
	 The simulated PHD sends the confirmed configuration event report with the standar configuration.
	 The simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (Observed value defined for every object, then MDC_ATTR_TIME_STAMP_ABS). The observations should be reasonable Variable Dosage Medication, User Feedback and Status Reporter values.
	12. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	 In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly an applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).
	 In steps 2, 6 and 12 verify that the PHG under test uses ml as the unit code for Variable Dosage Medication report (or reports the proper value after conversion to another unit code).
	 In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG use a time stamp derived from the observation's time stamp (i.e., the actual observation may have occurred sometime in the past).
	 When automated, it is necessary to be careful about sending these messages back to back since the ability to look at things like an UI may require that there be pauses for operator verification.
Notes	

TP ld		TP/PLT/PHG/CLASS/AM/BV-007		
TP label		Metric-id-list. Standard configuration		
Coverage	Spec	[ISO/IEEE 11073-10472]		
	Testable items	UserFeedback9; M		
Test purpose)	Check that:		
		For [Standard-Configuration, User Feedbackl Object]. Metric-Id List attribute shall be present and with value {MDC_AI_MED_UF_LOCATION, MDC_AI_MED_UF_RESPONSE}		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).		
Test procedure		1. The simulated PHD sends a confirmed variable event report for handle 4 (user feedback) containing an observation with the compound field values (SFLOAT) set to (1, 0), for handle 2 containing an observation (FLOAT) of 3 and for handle 3 containing an observation (Enum-Observed-Value-Basic-Bit-Str) with bit 0 set to 1 (<i>A medication dosage was not dispensed within the regimen allowed timing</i>).		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		• Verify that the PHG under test is able to accept the data and applies the data properly as User Feedback: location = 1, response = 0, Variable Dosage Medication= 3 and Status Reporter informing that medication dosage was not dispensed within the regimen allowed timing (bit 0 set to 1).		
Notes				

TP ld		TP/PLT/PHG/CLASS/AM/BV-008		
TP label		Metric-id-list. Id order change – fixed format		
Coverage	Spec	[ISO/IEEE 11073-10472]		
	Testable items	UserFeedback9; M		
Test purpose		Check that: For [Standard-Configuration, User Feedbackl Object]. Metric-Id List attribute shall be present and with value {MDC_AI_MED_UF_LOCATION, MDC_AI_MED_UF_RESPONSE}		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).		
Test procedure		The simulated PHD sends a confirmed variable event report for handle 4 (user feedback) setting MDC_ATTR_ID_PHYSIO_LIST to (MDC_AI_MED_UF_RESPONSE, then MDC_AI_MED_UF_LOCATION).		
		2. The simulated PHD sends a confirmed fixed event report for handle 4 containing a time- stamp and an observation with the compound field values (SFLOAT) set to (2, 3), for handle 2 containing a time-stamp and observation for Variable Dosage Medication of 3ml		

		and for handle 3 containing a time-stamp and observation for Status reporter (Bit 0 set to 1).
	3.	The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	•	Verify that the PHG under test is able to accept the data and time stamp and applies the data (for compound value) properly as Location = 3, Response = 2.
Notes		

TP ld		TP/PLT/PHG/CLASS/AM/BV-009
TP label		Metric-id-list. Id order change – variable format
Coverage Spec [ISO/IEEE 11073-10472]		[ISO/IEEE 11073-10472]
	Testable items	UserFeedback9; M
Test purpose		Check that: For [Standard-Configuration, User Feedbackl Object]. Metric-Id List attribute shall be present and with value {MDC_AI_MED_UF_LOCATION, MDC_AI_MED_UF_RESPONSE}
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).
Test procedure		The simulated PHD sends a confirmed variable event report for handle 4 (user feedback) setting MDC_ATTR_ID_PHYSIO_LIST to (MDC_AI_MED_UF_RESPONSE, then MDC_AI_MED_UF_LOCATION). In a second observation scan, for handle 4 set the compound field values (SFLOAT) to (4, 5) along with a known time stamp.
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria		Verify that the PHG under test is able to accept the data and time stamp and applies the data properly as Location = 5, Response = 4.
Notes		

TP ld		TP/PLT/PHG/CLASS/AM/BV-010		
TP label		Metric-id-list. Reduced ids – fixed format		
Coverage	Spec	[ISO/IEEE 11073-10472]		
	Testable items	UserFeedback9; M		
Test purpose		Check that:		
		For [Standard-Configuration, User Feedbackl Object]. Metric-Id List attribute shall be present and with value {MDC_AI_MED_UF_LOCATION, MDC_AI_MED_UF_RESPONSE}		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).		

Test procedure	1.	The simulated PHD sends a confirmed variable event report for handle 4 (user feedback) setting MDC_ATTR_ID_PHYSIO_LIST to (MDC_AI_MED_UF_LOCATION) and MDC_ATTR_ATTRIBUTE_VAL_MAP to { MDC_ATTR_TIME_STAMP_ABS, 8, MDC_ATTR_NU_CMPD_VAL_OBS_BASIC, 6}.
	2.	The simulated PHD sends a confirmed fixed event report for handle 4 containing an observation with the compound field values (SFLOAT) set to (5) along with a known time stamp.
	3.	The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	•	Verify that the PHG under test is able to accept the data and time stamp and applies the data properly location= 5.
Notes		

TP Id		TP/PLT/PHG/CLASS/AM/BV-011		
TP label		Metric-id-list. Reduced ids – variable format		
Coverage	Spec	[ISO/IEEE 11073-10472]		
	Testable items	UserFeedback9; M		
Test purpose		Check that: For [Standard-Configuration, User Feedbackl Object]. Metric-Id List attribute shall be present and with value {MDC_AI_MED_UF_LOCATION, MDC_AI_MED_UF_RESPONSE}.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).		
Test procedure		The simulated PHD sends a confirmed variable event report for handle 4 (user feedback) setting MDC_ATTR_ID_PHYSIO_LIST to (MDC_AI_MED_UF_LOCATION).		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
		3. The simulated PHD sends a confirmed variable event report for handle 4 containing an observation with the compound field values (SFLOAT) set to (3.0) along with a known time stamp.		
		4. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail crit	eria	Verify that the PHG under test is able to accept the data and time stamp and applies the data properly as location = 3.0.		
Notes				

TP ld		TP/PLT/PHG/CLASS/AM/BV-012	
TP label		Special values. Not a number – fixed forma	t (0x1c20)
Coverage	Spec	[ISO/IEEE 11073-10472]	
	Testable items	FixedDosage12; M	
Test purpose		Check that:	
		The PHG receives a NaN value (fixed formation)	at event report) but it does not use this value.

Applicability	C_MAN_OXP_000 AND C_MAN_OXP_016	
Other PICS		
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c20).	
Test procedure	 The simulated PHD sends a confirmed fixed event report for handle 1 (Fixed Dosage Medication Object) containing an observation with the value for NaN ([exponent 0, mantissa +(2**11 -1) = 0x07FF]) and a time stamp. 	
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.	
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area). 	
Notes	This test case has been considered as an implicit test case.	

TP Id		TP/PLT/PHG/CLASS/AM/BV-013		
TP label		Special values. Not a number – variable format(0x1c20)		
Coverage	Spec	[ISO/IEEE 11073-10472]		
	Testable items	FixedDosage22; C		
Test purpos	е	Check that:		
		The PHG receives a NaN value (variable format event report) but it does not use this value.		
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_016		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c20).		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Fixed Dosage Medication Object) containing an observation with the value for NaN ([exponent 0, mantissa +(2**11 -1) = 0x07FF]). The simulated PHD waits until it receives a confirmation from the PHG under test. 		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area). 		
Notes		This test case has been considered as an implicit test case.		

TP Id		TP/PLT/PHG/CLASS/AM/BV-014	
TP label		Special values. Not at this resolution – fixed format(0x1c20)	
Coverage	Spec	[ISO/IEEE 11073-10472]	
	Testable items	FixedDosage12; M	
Test purpose		Check that:	

	The PHG receives NRes value (fixed format event report) but it does not use this value.
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_016
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c20).
Test procedure	The simulated PHD sends a confirmed fixed event report for handle 1 (Fixed Dosage Medication) containing an observation with the value for NRes ([exponent 0, mantissa –(2**11) = 0x0800]) and a time stamp.
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/AM/BV-015
TP label		Special values. Not at this resolution – variable format (0x1c20)
Coverage	Spec	[ISO/IEEE 11073-10472]
	Testable items	FixedDosage22; C
Test purpose		Check that: The PHG receives NRes value (variable format event report) but it does not use this value.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c20).
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Fixed Dosage Medication) containing an observation with the value for NRes ([exponent 0, mantissa –(2**11) = 0x0800]).
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes		This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/AM/BV-016
TP label		Special values. Positive infinity – fixed format (0x1c20)
Coverage	Spec	[ISO/IEEE 11073-10472]
	Testable items	FixedDosage12; M
Test purpose		Check that:

	The PHG receives a +INFINITY value (fixed format event report) but it does not use this value.
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_016
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c20).
Test procedure	 The simulated PHD sends a confirmed fixed event report for handle 1 containing an observation with the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**11 -2) = 0x07FE]) and a time stamp.
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/AM/BV-017
TP label		Special values. Positive infinity – variable format(0x1c20)
Coverage	Spec	[ISO/IEEE 11073-10472]
	Testable items	FixedDosage22; C
Test purpose		Check that:
		The PHG receives a +INFINITY value (variable format event report) but it does not use this value.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c20).
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Fixed Dosage Medication) containing an observation with the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**11 -2) = 0x07FE]).
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes		This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/AM/BV-018
TP label		Special values. Negative infinity – fixed format (0x1c20)
Coverage	Spec	[ISO/IEEE 11073-10472]
	Testable items	FixedDosage12; M

Test purpose	Check that:
root purpood	The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_016
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c20).
Test procedure	 The simulated PHD sends a confirmed fixed event report for handle 1 (Fixed Dosage Medication) containing an observation with the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**11 –2) = 0x0802]) and a time stamp.
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/AM/BV-019
TP label		Special values. Negative infinity – variable format (0x1c20)
Coverage	Spec	[ISO/IEEE 11073-10472]
	Testable items	FixedDosage22; C
Test purpose		Check that:
		The PHG receives a –INFINITY value (variable format event report) but it does not use this value.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Fixed Dosage Medication) containing an observation with the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**11 –2) = 0x0802]).
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes		This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/AM/BV-020
TP label		Special values. Reserved – fixed format (0x1c20)
Coverage	Spec	[ISO/IEEE 11073-10472]

	Testable items	FixedDosage12; M			
Test purpose		Check that: The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c20).			
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 1 (Fixed Dosage Medication) containing an observation with the value that is reserved (Reserved for future use, [exponent 0, mantissa –(2**11–1) = 0x0801]) and a time stamp. 			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 			
Notes		This test case has been considered as an implicit test case.			

TP ld		TP/PLT/PHG/CLASS/AM/BV-021			
TP label		Special values. Reserved – variable format (0x1c20)			
Coverage Spec		[ISO/IEEE 11073-10472]			
	Testable items	FixedDosage22; C			
Test purpose		Check that: The PHG receives a Reserved for future use value (variable format event report) but it does not use this value.			
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_016			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c20).			
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Fixed Dosage Medication) containing an observation with the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**11–1) = 0x0801]). The simulated PHD waits until it receives a confirmation from the PHG under test. 			
Pass/Fail criteria		Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).			
Notes		This test case has been considered as an implicit test case.			

TP ld		TP/PLT/PHG/CLASS/AM/BV-022			
TP label		Special values. Not a number – fixed format (0x1c23)			
Coverage	Spec	[ISO/IEEE 11073-1047	2]		
	Testable items	VarDosage12; M	UserFeedback12; M		
Test purpos	se	Check that: The PHG receives a NaN value (fixed format event report) but it does not use this value.			
Applicability	у	C_MAN_OXP_000 AND C_MAN_OXP_016			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).			
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 2 (Variable Dosage Medication) and handle 4 (User Feedback) containing an observation value set to the value for NaN ([exponent 0, mantissa +(2**23 -1) = 0x007FFFFF] for Variable Dosage Medication, and [exponent 0, mantissa +(2**11 -1) = 0x07FF] for User Feedback). The simulated PHD waits until it receives a confirmation from the PHG under test. 			
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).			
Notes		This test case has been considered as an implicit test case.			

TP Id		TP/PLT/PHG/CLASS/AM/BV-023			
TP label		Special values. Not a number – variable format (0x1c23)			
Coverage	Spec	[ISO/IEEE 11073-10472]			
	Testable items	VarDosage20; C	UserFeedback23; C		
Test purpose	9	Check that:			
		The PHG receives a NaN value (variable format event report) but it does not use this value.			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016			
Other PICS					
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).			
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 2 (Variable Dosage Medication) and handle 4 (User Feedback) containing an observation value set to the value for NaN ([exponent 0, mantissa +(2**23 -1) = 0x007FFFFF] for Variable Dosage Medication and [exponent 0, mantissa +(2**11 -1) = 0x07FF] for User Feedback). 			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).			

Notes	This test case has been considered as an implicit test case.	

TP ld		TP/PLT/PHG/CLASS/AM/BV-024			
TP label		Special values. Not at this resolution – fixed format (0x1c23)			
Coverage Spec		[ISO/IEEE 11073-10472]		
	Testable items	VarDosage12; M	UserFeedback12; M		
Test purpos	se	Check that:			
		The PHG receives NRes value (fixed format event report) but it does not use this value.			
Applicability	у	C_MAN_OXP_000 AND C_MAN_OXP_016			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).			
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 2 (Variable Dosage Medication) and handle 4 (User Feedback) containing an observation value set to the value for NRes ([exponent 0, mantissa +(2**23) = 0x00800000] for Variable Dosage Medication and [exponent 0, mantissa -(2**11) = 0x0800] for User Feedback).			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 			
Notes		This test case has been considered as an implicit test case.			

TP Id		TP/PLT/PHG/CLASS/AM/BV-025			
TP label		Special values. Not at this resolution – variable format (0x1c23)			
Coverage Spec		[ISO/IEEE 11073-10472]			
	Testable items	VarDosage20; C	UserFeedback23; C		
Test purpos	se	Check that:			
		The PHG receives NRes value (variable format event report) but it does not use this value.			
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_016			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).			
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 2 (Variable Dosage Medication) and handle 4 (User Feedback) containing an observation value set to the value for NRes ([exponent 0, mantissa +(2**23) = 0x00800000] for Variable Dosage Medication and [exponent 0, mantissa -(2**11) = 0x0800] for User Feedback). 			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is			

	displayed in some form that indicates it is not a measurement).	
Notes	This test case has been considered as an implicit test case.	

TP Id		TP/PLT/PHG/CLASS/AM/BV-026			
TP label		Special values. Positive infinity – fixed format (0x1c23)			
Coverage Spec		[ISO/IEEE 11073-1047	72]		
	Testable items	VarDosage12; M	UserFeedback12; M		
Test purpose		Check that: The PHG receives a +INFINITY value (fixed format event report) but it does not use this value.			
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_016			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).			
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 2 (Variable Dosage Medication) and handle 4 (User Feedback) containing an observation value set to the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**23 - 2) = 0x007FFFE] for Variable Dosage Medication and [exponent 0, mantissa +(2**11 -2) = 0x07FE] for User Feedback).			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 			
Notes		This test case has been considered as an implicit test case.			

TP ld		TP/PLT/PHG/CLASS/AM/BV-027			
TP label		Special values. Positive infinity – variable format (0x1c23)			
Coverage	Spec	[ISO/IEEE 11073-10472]			
	Testable items	VarDosage20; C	UserFeedback23; C		
Test purpose		Check that: The PHG receives a +INFINITY value (variable format event report) but it does not use this value.			
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_016			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).			
Test procedure		Dosage Medication) and he to the value for positive info	a confirmed variable event repo andle 4 (User Feedback) contain inity (+INFINITY, [exponent 0, m Dosage Medication and [expone	ning an observation value set nantissa $+(2^{**}23 - 2) =$	

	0x07FE] for User Feedback).
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/AM/BV-028		
TP label		Special values. Negative infinity – fixed format (0x1c23)		
Coverage	Spec	[ISO/IEEE 11073-10472]		
	Testable items	VarDosage12; M	UserFeedback12; M	
Test purpose	•	Check that:		
		The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016		
Other PICS				
Initial conditi	on	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).		
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 2 (Variable Dosage Medication) and handle 4 (User Feedback) containing an observation value set to the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**23 – 2) = 0x00800002] for Variable Dosage Medication and [exponent 0, mantissa –(2**11 -2) = 0x0802] for User Feedback). 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/AM/BV-029			
TP label		Special values. Negative infinity – variable format (0x1c23)			
		[ISO/IEEE 11073-10472]			
		VarDosage20; C	UserFeedback23; C		
Test purpose		Check that: The PHG receives a –INFINITY value (variable format event report) but it does not use this value.			
Applicability		C_MAN_OXP_000 AND	O C_MAN_OXP_016		
Other PICS					
Initial condition		The simulated PHD and	the PHG under test are in the Ope	rating state using the standard	

	configuration (0x1c23).	
Test procedure	1. The simulated PHD sends a confirmed variable event report for handle 2 (Variable Dosage Medication) and handle 4 (User Feedback) containing an observation value set to the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**23 – 2) = 0x00800002] for Variable Dosage Medication and [exponent 0, mantissa –(2**11 –2) = 0x0802] for User Feedback).	
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.	
Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).	
Notes	This test case has been considered as an implicit test case.	

TP Id		TP/PLT/PHG/CLASS/AM/BV-030			
TP label		Special values. Reserved – fixed format (0x1c23)			
Coverage	Spec	[ISO/IEEE 11073-10472]			
Testable items		VarDosage12; M	UserFeedback12; M		
Test purpose		Check that: The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).			
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 2 (Variable Dosage Medication) and handle 4 (User Feedback) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**23 – 1) = 0x00800001] for Variable Dosage Medication and [exponent 0, mantissa –(2**11 –1) = 0x0801] for User Feedback). 			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 			
Notes		This test case has been considered as an implicit test case.			

TP ld		TP/PLT/PHG/CLASS/AM/BV-031		
TP label		Special values. Reserved – variable format (0x1c23)		
Coverage Spec		[ISO/IEEE 11073-10472]		
	Testable items	VarDosage20; C	UserFeedback23; C	
Test purpose		Check that: The PHG receives a Reserv	ed for future use value (variable	format event report) but it does

	not use this value.		
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_016		
Other PICS			
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).		
Test procedure	 The simulated PHD sends a confirmed variable event report for handle 2 (Variable Dosage Medication) and handle 4 (User Feedback) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**23 – 1) = 0x00800001] for Variable Dosage Medication and [exponent 0, mantissa –(2**11 –1) = 0x0801] for User Feedback). 		
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria	 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes	This test case has been considered as an implicit test case.		

TP ld TP label		TP/PLT/PHG/CLASS/AM/BV-032 Association procedure PHG AM				
	Testable	MM_AssocReq9; M	MM_AssocResp1; M	MM_AssocResp2; M		
	items	MM_AssocResp3; M	MM_AssocResp4; M	MM_AssocResp5; M		
		MM_AssocResp6; M	MM_AssocResp7; M	MM_AssocResp8; M		
		MM_AssocResp9; M	MM_AssocResp10; M	MM_AssocResp11; M		
		MM_AssocResp12; M				
Test purpose		Check that:				
		In the association response message sent by the PHG:				
		The result field shall be set to an appropriate response from those defined in ISO/IEEE P11073-20601.				
		[AND]				
		In the DataProtoList structure element, the data protocol identifier shall be set to data-proto-id-20601				
		[AND]				
		The data-proto-info field shall be filled in with a PhdAssociationInformation structure				
		[AND]				
		The version of the data exchange protocol shall be set to protocol-version1 (i.e., protocol-version = 0x80000000)				
		[AND]				
		The PHG shall respond with a single selected encoding rule that is supported by both PHD and PHG. The PHG shall support at least the MDER encoding rules				
		[AND]				
		The version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000)				

	[AND]		
	The field functional-units shall have all bits reset except for those relating to a Test Association.		
	[AND]		
	The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000)		
	[AND]		
	The System-Id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier		
	[AND]		
	The field dev-config-id shall be manager-config-response (0)		
	[AND]		
	The field data-req-mode-capab shall be 0		
	[AND]		
	The fields data-req-init-*-count shall be 0		
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_016		
Other PICS			
Initial condition	The PHG is in the Unassociated state.		
Test procedure	1. The simulated PHD sends an association request to the PHG under test, with the fields:		
	□ protocol-version = '100000000000000000000000000000000000		
	☐ encoding-rules= '10000000000000'B		
	□ nomenclature-version = '100000000000000000000000000000000000		
	☐ functional-units = '00000000000000000000000000000000000		
	□ system-type = '000000010000000000000000000000000000		
	dev-config-id = 16481		
	□ data-rep-mode-capab =		
	data_req_mode_flags= '00000000000001'B		
	data_req_init_agent_count = 1		
	data_req_init_manager_count = 0		
	□ option-list.length= 0		
	2. The PHG under test sends an association response. The fields of interest are:		
	a. APDU Type		
	☐ field-length = 2 bytes		
	☐ field-value = 0xE3 0x00 (AareApdu)		
	b. Result		
	☐ field-type = AssociateResult		
	☐ field-length = 2 bytes		
	☐ field-value = One of the following:		
	 If association is accepted, field-value= 0x00 0x00. 		
	 If association is rejected-permanent, field-value= 0x00 0x01. 		
	 If association is rejected-transient, field-value= 0x00 0x02. 		
	 If association is accepted-unknown-config, field-value= 0x00 0x03. 		
	 If association is rejected-no-common-protocol, field-value= 0x00 0x04. 		
	 If association is rejected-no-common-parameter, field-value= 0x00 0x05. 		

	If association is rejected–unknown = 0x00 0x06.
	If association is rejected-unauthorized, field-value= 0x00 0x07.
	 If association is rejected–unsupported-assoc-version, field-value= 0x00 0x08.
C.	selected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data-proto-info(defined by data-proto-id))
d.	data-proto-id
	☐ field-type = DataProtold
	☐ field-length = 2 bytes
	☐ field-value= 0x50 0x79 (20601)
e.	protocol-version
	☐ field-type = Protocol Version
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value= 0x80 0x00 0x00 0x00
f.	encoding-rules
	☐ field-type = EncodingRules
	☐ field-length = 2 bytes (BITS-16)
	☐ field-value= depends on the encoding rules supported/selected, but only one can be supported at a time
g.	nomenclature version
	☐ field-type = NomenclatureVersion
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value= Bit 0 must be set (nom-version1)
h.	functional units
	☐ field-type = FunctionalUnits
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value =
	■ Bit 0 must be 0
	Bits 1 and 2 may be set
	 The rest of the bits must not be set
i.	system type
	☐ field-type = SystemType
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
j.	system-id
	ifield-type = OCTET STRING
	ifield-length = 8 bytes
	ifield-value = (EUI-64 manufacturer and device)
k.	dev-config-id
	ifield-type = Configld
	ifield-length = 2 bytes
	field-value = 0x00 0x00 (manager-config-response)
I.	data-req-mode-flags (DataReqModeCapab)
	ifield langth 2 butos
	☐ field-length = 2 bytes

		☐ field-value = 0x00 0x00
		☐ PHG response to data-req-mode-flags is always 0.
	m. data-req-init-agent-count (DataReqModeCapab)	
		☐ field-type = INT-U8
		☐ field-length = 1 byte
		☐ field-value = 0x00
	n. data-req-init-manager-count (DataReqModeCapab)	
		☐ field-type = INT-U8
		☐ field-length = 1 byte
		☐ field-value = 0x00
Pass/Fail criteria	All checked values are as specified in the test procedure.	
Notes	Value for protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].	
	data-req-init-agent-count verification has been updated according to IEEE PHD errata. See http://continua.plugfests.com/show_bug.cgi?id=786 for further details.	

A.11 Subgroup 2.3.10: Insulin pump (IP)

A.11 Su	ngroup 2.	oup 2.3.10: Insulin pump (IP)				
TP ld		TP/PLT/PHG/CLASS/IP/BV-000				
TP label		Association procedure PHG In	sulin Pump			
Coverage	Spec	[ISO/IEEE 11073-10419]				
	Testable items	ManProcAsIP 1;M	ManProcAsIP 2;M	ManProcAsIP 3;M		
	items	ManProcAsIP 4;M	ManProcAsIP 5;M	ManProcAsIP 6;M		
		ManProcAsIP 7;M	ManProcAsIP 8;M	ManProcAsIP 9;M		
		ManProcAsIP 10;M	ManProcAsIP 11;M	ManProcAsIP 12;M		
Test purpos	e	Check that:				
		The result field shall be set to an appropriate response from those defined in [ISO/IEEE 11073-20601-2016C].				
		[AND]				
		In the DataProtoList structure element, the data protocol identifier shall be set to data-proto-id-20601				
		[AND]				
		The data-proto-info field shall be filled in with a PhdAssociationInformation structure				
		[AND]				
		The version of the data exchange protocol shall be set to protocol-version 2				
		[AND]				
		The PHG shall respond with a single selected encoding rule that is supported by both PHD and PHG. The PHG shall support at least the MDER encoding rules				
		[AND]				
		The version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000)				
		[AND]				
		The field functional-units shall have all bits reset except for those relating to a Test Association.				

	[AND]		
	The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000)		
	[AND]		
	The System-Id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier		
	[AND]		
	The field dev-config-id shall be manager-config-response (0)		
	[AND]		
	The field data-req-mode-capab shall be 0		
	[AND]		
	If the PHD supports only the insulin pump specialization, data-req-init-agent-count shall be 1 and data-req-init-manager-count shall be 0		
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_071		
Other PICS			
Initial condition	The PHG is in the Unassociated state.		
Test procedure	The simulated PHD sends an Association Request to the PHG under test, with the fields:		
	□ protocol-version = '001000000000000000000000000000000000		
	☐ encoding-rules= '100000000000000'B		
	□ nomenclature-version = '100000000000000000000000000000000000		
	☐ functional-units = '00000000000000000000000000000000000		
	□ system-type = '000000001000000000000000000000000000		
	dev-config-id = 16440		
	☐ data-rep-mode-capab =		
	data_req_mode_flags= '00000000000001'B		
	data_req_init_agent_count = 1		
	data_req_init_manager_count = 0		
	□ option-list.length= 0		
	2. PHG under test sends an Association Response. The fields of interest are:		
	a. APDU Type		
	☐ field-length = 2 bytes		
	☐ field-value = 0xE3 0x00 (AareApdu)		
	b. Result		
	☐ field-type = AssociateResult		
	☐ field-length = 2 bytes		
	ifield-value = One of the following:		
	If association is accepted, field-value= 0x00 0x00.		
	If association is rejected-permanent, field-value= 0x00 0x01.		
	If association is rejected-transient, field-value= 0x00 0x02.		
	 If association is accepted-unknown-config, field-value= 0x00 0x03. 		
	 If association is rejected-no-common-protocol, field-value= 0x00 0x04. 		
	 If association is rejected -no-common-parameter, field-value= 0x00 0x05. 		
	 If association is rejected –unknown = 0x00 0x06. 		
	 If association is rejected -unauthorized, field-value= 0x00 0x07. 		
	, , , , , , , , , , , , , , , , , , , ,		

	 If association is rejected –unsupported-assoc-version, field-value= 0x00 0x08.
	selected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data- proto-info(defined by data-proto-id))
	data-proto-id
	☐ field-type = DataProtoId
	☐ field-length = 2 bytes
	☐ field-value= 0x50 0x79 (20601)
	protocol-version
	☐ field-type = Protocol Version
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value= 0x80 0x00 0x00 0x00
f.	encoding-rules
	☐ field-type = EncodingRules
	☐ field-length = 2 bytes (BITS-16)
	field-value= depends on the encoding rules supported/selected, but only one can be supported at a time
g.	nomenclature version
	☐ field-type = NomenclatureVersion
	ifield-length = 4 bytes (BITS-32)
	☐ field-value= Bit 0 must be set (nom-version1)
h.	unctional units
	☐ field-type = FunctionalUnits
	ifield-length = 4 bytes (BITS-32)
	ifield-value =
	■ Bit 0 must be 0
	 Bits 1 and 2 may be set
	 The rest of the bits must not be set
i. :	system type
	ield-type = SystemType
	ield-length = 4 bytes (BITS-32)
	field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
j. :	system-id
	ield-type = OCTET STRING
	ield-length = 8 bytes
	ield-value = (EUI-64 manufacturer and device)
k. (dev-config-id
	ield-type = Configld
	ield-length = 2 bytes
	field-value = 0x00 0x00 (manager-config-response)
I.	data-req-mode-flags (DataReqModeCapab)
	ield-type = DataReqModeFlags
	ield-length = 2 bytes
	field-value = 0x00 0x00
	□ PHG response to data-req-mode-flags is always 0.

	m.	data-req-init-agent-count (DataReqModeCapab)
		☐ field-type = INT-U8
		☐ field-length = 1 byte
		☐ field-value = 0x00
	n.	data-req-init-manager-count (DataReqModeCapab)
		☐ field-type = INT-U8
		☐ field-length = 1 byte
		☐ field-value = 0x00
Pass/Fail criteria	All chec	ked values are as specified in the test procedure.
Notes		

TP ld		TP/PLT/PHG/CLASS/IP/E	3V-001					
TP label		Configuration Event Report. Insulin Pump standard configuration						
Coverage	Spec	[ISO/IEEE 11073-10419]						
	Testable items	ConfProcIP 4;M	MDSEventsIP 2;M	ObjAccServIP 5;M				
	Spec	[ISO/IEEE 11073-20601-	[ISO/IEEE 11073-20601-2016C]					
	Testable items	ConfEventRep 18;M						
Test purpos	se	Check that:						
		Response Confirmed Ev		essage using a "Remote Operation n an MDC_NOTI_CONFIG event eld				
		[AND]						
		A PHG shall support both single-person and multi-person event reports.						
		[AND]						
		An Insulin pump PHG sha event report response.	all respond to an [MDS-Configu	rration-Event] using a [Confirmed]				
		The Response shall inclu	de the event-reply-info [Configl	ReportRsp]				
		[AND]						
		standards shall be able to		73-104xx device specialization configurations specified for the				
		[AND]						
				e standard configuration in order to e MDS object prior to final acceptance				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_071						
Other PICS		C_MAN_OXP_085						
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state. The simulated PHD implements an Insulin Pump device specialization with Standard Configuration (1900)						
Test procedure			sends an Association Request Insulin Pump PHD – Std Config	to the PHG under test with dev-config-				

a. Result field-type = INT-U16 field-length = 2 bytes field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unkown-config) If the result of the Association Response was "accepted-unkown-config" 3. The simulated PHD sends a configuration event report with config-report-id set to 0x07 0x08 4. The PHG under test must respond with: a. APDU Type		2.	The	PH(G under test responds an Association Response, the field of interest is:
field-length = 2 bytes field-value = 0.00 0.00 (accepted) or 0.00 0.03 (accepted-unkown-config)			a.	Res	sult
field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unkown-config) IF the result of the Association Response was "accepted-unkown-config" 3. The simulated PHD sends a configuration event report with config-report-id set to 0x07 0x08 4. The PHG under test must respond with: a. APDU Type					field-type = INT-U16
IF the result of the Association Response was "accepted-unkown-config" 3. The simulated PHD sends a configuration event report with config-report-id set to 0x07 0x08 4. The PHG under test must respond with: a. APDU Type					field-length = 2 bytes
3. The simulated PHD sends a configuration event report with config-report-id set to 0x07 0x08 4. The PHG under test must respond with: a. APDU Type field-length = 2 bytes field-value = 0xE7 0x00 (PrstApdu) b. Invoke-id field-value = 1x must be the same that the invoke-id of the simulated PHD's message. c. Obj-Handle: field-value = 1x must be the same that the invoke-id of the simulated PHD's message. c. Obj-Handle: field-value = 2 bytes field-value = 0x00 0x00 field-value = 0x00 0x00 field-value = 0x00 0x00 field-value = 0x00 0x00 field-value = 0x0X 0xXX 0xXX field-value = 0xXX 0xXX 0xXX field-value = MDC_NOTI_CONFIG field-value = MDC_NOTI_CONFIG The following six bytes indicate: Event-replay-info.length (2 bytes) ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD config-report-id: it must be the same that config-report-id of the simulated PHD config-report-id: it must be the same that config-report-id of the simulated PHD config-report-id: it must be the same that config-report-id of the simulated PHD config-report-id: it must be the same that config-repor					field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unkown-config)
4. The PHG under test must respond with: a. APDU Type field-length = 2 bytes field-value = 0xE7 0x00 (PrstApdu) field-lype = INT-U16 field-lype = HANDLE field-lype = HANDLE field-length = 2 bytes field-value = 0x00 0x00 field-lype = INT-U32 field-lype = I		IF t	he re	sult	of the Association Response was "accepted-unkown-config"
a. APDU Type field-length = 2 bytes field-value = 0XE7 0X00 (PrstApdu) b. Invoke-id field-type = INT-U16 field-length = 2 bytes field-value= it must be the same that the invoke-id of the simulated PHD's message. c. Obj-Handle: field-type = HANDLE field-length = 2 bytes field-value = 0X00 0X00 d. Event-time: field-type = INT-U32 field-length = 4 bytes field-value: 0XXX 0XXX e. Event-type: field-length = 2 bytes field-value: 0XXX 0XXX e. Event-type: field-length = 2 bytes field-value: 0XXX 0XXX e. Event-type: field-length = 2 bytes field-value: 0XXX 0XXX field-value: 0XXX 0XXX field-value: 0XXX 0XXX field-sylue: 0XXX 0XX field-sy		3.			ulated PHD sends a configuration event report with config-report-id set to 0x07
field-length = 2 bytes field-value = 0xE7 0x00 (PrstApdu)		4.	The	PH	G under test must respond with:
field-value = 0xE7 0x00 (PrstApdu) b. Invoke-id			a.	API	DU Type
b. Invoke-id field-type = INT-U16 field-type = INT-U16 field-length = 2 bytes field-walue = it must be the same that the invoke-id of the simulated PHD's message. c. Obj-Handle: field-type = HANDLE field-length = 2 bytes field-length = 2 bytes field-walue = 0x00 0x00 d. Event-time: field-length = 4 bytes field-length = 4 bytes field-value: 0xXX 0xXX e. Event-type: field-length = 2 bytes field-length = 2 bytes field-value = MDC_NOTI_CONFIG f. The following six bytes indicate: Event-replay-info.length (2 bytes) ConfigReportRsp.config-report-id it must be the same that config-report-id of the simulated PHD's message ConfigReportRsp.config-result: One of: accepted-config: 0x00 0x00 5. IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in the Operating state the PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a fixed event report with one Insulin Pump measurement					field-length = 2 bytes
field-type = INT-U16 field-length = 2 bytes field-value= it must be the same that the invoke-id of the simulated PHD's message. c. Obj-Handle:					field-value = 0xE7 0x00 (PrstApdu)
field-length = 2 bytes field-value= it must be the same that the invoke-id of the simulated PHD's message. c. Obj-Handle: field-type = HANDLE field-length = 2 bytes field-value = 0x00 0x00 d. Event-time: field-type = INT-U32 field-length = 4 bytes field-value: 0xXX 0xXX field-length = 4 bytes field-length = 2 bytes field-value: 0xXX 0xXX field-value: 0xXX 0xXX field-value = MDC_NOTI_CONFIG f. The following six bytes indicate: Event-replay-info.length (2 bytes) ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message ConfigReportRsp.config-result: One of: accepted-config: 0x00 0x00 5. IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in the Operating state the PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a fixed event report with one Insulin Pump measurement Pass/Fail criteria The PHG under test must respond either to the Association Request with an "accepted" The PHG under test must respond either to the Association Request with an "accepted" Pass/Fail criteria The PHG under test must respond either to the Association Request with an "accepted" Pass/Fail criteria The PHG under test must respond either to the Association Request with an "accepted" Pass/Fail criteria The PHG under test must respond either to the Association Request with an "accepted" Pass/Fail criteria The PHG under test must respond either to the Association Request with an "accepted" Pass/Fail criteria The PHG under test must respond either to the Association Request w			b.	Invo	oke-id
field-value= it must be the same that the invoke-id of the simulated PHD's message. c. Obj-Handle:					field-type = INT-U16
message. c. Obj-Handle: field-type = HANDLE					field-length = 2 bytes
field-type = HANDLE field-length = 2 bytes field-value = 0x00 0x00 d. Event-time: field-type = INT-U32 field-length = 4 bytes field-value: 0xXX 0xXX d. Event-type: field-length = 2 bytes field-value: 0xXX 0xXX e. Event-type: field-length = 2 bytes field-value= MDC_NOTI_CONFIG The following six bytes indicate: Event-replay-info.length (2 bytes) ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message ConfigReportRsp.config-result: One of: accepted-config: 0x00 0x00 The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-comip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. The PHG under test moves to the original field of the MDS object and the mds-time-mgr-set-time bit is not set.					
□ field-length = 2 bytes □ field-value = 0x00 0x00 d. Event-time: □ field-type = INT-U32 □ field-length = 4 bytes □ field-value: 0xXX 0xXX e. Event-type: □ field-length = 2 bytes □ field-value= MDC_NOTI_CONFIG f. The following six bytes indicate: □ Event-replay-info.length (2 bytes) □ ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message □ ConfigReportRsp.config-result: One of: ■ accepted-config: 0x00 0x00 5. IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in the Operating state the PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a fixed event report with one Insulin Pump measurement • The PHG under test must respond either to the Association Request with an "accepted"			c.	Obj	-Handle:
field-value = 0x00 0x00 d. Event-time:					field-type = HANDLE
d. Event-time:					field-length = 2 bytes
☐ field-type = INT-U32 ☐ field-length = 4 bytes ☐ field-value: 0xXX 0xXX ☐ Event-type: ☐ field-length = 2 bytes ☐ field-value= MDC_NOTI_CONFIG ☐ f. The following six bytes indicate: ☐ Event-replay-info.length (2 bytes) ☐ ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message ☐ ConfigReportRsp.config-result: One of: ☐ accepted-config: 0x00 0x00 ☐ IF C_MAN_OXP_085 THEN: ☐ The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. ☐ The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. ☐ Once in the Operating state the PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases ☐ Simulated PHD sends a fixed event report with one Insulin Pump measurement Pass/Fail criteria • The PHG under test must respond either to the Association Request with an "accepted"					field-value = $0x00 0x00$
field-length = 4 bytes field-value: 0xXX 0xXX e. Event-type: field-length = 2 bytes field-value= MDC_NOTI_CONFIG f. The following six bytes indicate: Event-replay-info.length (2 bytes) ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message ConfigReportRsp.config-result: One of: accepted-config: 0x00 0x00 5. IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in the Operating state the PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a fixed event report with one Insulin Pump measurement			d.	Eve	ent-time:
□ field-value: 0xXX 0xXX e. Event-type: □ field-length = 2 bytes □ field-value= MDC_NOTI_CONFIG f. The following six bytes indicate: □ Event-replay-info.length (2 bytes) □ ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message □ ConfigReportRsp.config-result: One of: □ accepted-config: 0x00 0x00 5. IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in the Operating state the PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a fixed event report with one Insulin Pump measurement Pass/Fail criteria • The PHG under test must respond either to the Association Request with an "accepted"					field-type = INT-U32
e. Event-type:					field-length = 4 bytes
☐ field-length = 2 bytes ☐ field-value= MDC_NOTI_CONFIG f. The following six bytes indicate: ☐ Event-replay-info.length (2 bytes) ☐ ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message ☐ ConfigReportRsp.config-result: One of:					field-value: 0xXX 0xXX
field-value= MDC_NOTI_CONFIG f. The following six bytes indicate: Event-replay-info.length (2 bytes) ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message ConfigReportRsp.config-result: One of: accepted-config: 0x00 0x00 5. IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in the Operating state the PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a fixed event report with one Insulin Pump measurement Pass/Fail criteria • The PHG under test must respond either to the Association Request with an "accepted"			e.	Eve	ent-type:
f. The following six bytes indicate: Event-replay-info.length (2 bytes) ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message ConfigReportRsp.config-result: One of: accepted-config: 0x00 0x00 S. IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in the Operating state the PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a fixed event report with one Insulin Pump measurement Pass/Fail criteria The PHG under test must respond either to the Association Request with an "accepted"					field-length = 2 bytes
□ Event-replay-info.length (2 bytes) □ ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message □ ConfigReportRsp.config-result: One of: ■ accepted-config: 0x00 0x00 5. IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in the Operating state the PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a fixed event report with one Insulin Pump measurement Pass/Fail criteria • The PHG under test must respond either to the Association Request with an "accepted"					field-value= MDC_NOTI_CONFIG
ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message ConfigReportRsp.config-result: One of: accepted-config: 0x00 0x00 IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in the Operating state the PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a fixed event report with one Insulin Pump measurement Pass/Fail criteria The PHG under test must respond either to the Association Request with an "accepted"			f.	The	following six bytes indicate:
the simulated PHD's message ConfigReportRsp.config-result: One of: accepted-config: 0x00 0x00 IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in the Operating state the PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases Simulated PHD sends a fixed event report with one Insulin Pump measurement Pass/Fail criteria The PHG under test must respond either to the Association Request with an "accepted"					Event-replay-info.length (2 bytes)
 accepted-config: 0x00 0x00 IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in the Operating state the PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a fixed event report with one Insulin Pump measurement Pass/Fail criteria The PHG under test must respond either to the Association Request with an "accepted"					
5. IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in the Operating state the PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a fixed event report with one Insulin Pump measurement Pass/Fail criteria • The PHG under test must respond either to the Association Request with an "accepted"					ConfigReportRsp.config-result: One of:
 a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in the Operating state the PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a fixed event report with one Insulin Pump measurement Pass/Fail criteria • The PHG under test must respond either to the Association Request with an "accepted" 					accepted-config: 0x00 0x00
roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in the Operating state the PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a fixed event report with one Insulin Pump measurement Pass/Fail criteria • The PHG under test must respond either to the Association Request with an "accepted"		5.	IF C	C_MA	AN_OXP_085 THEN:
attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in the Operating state the PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a fixed event report with one Insulin Pump measurement Pass/Fail criteria • The PHG under test must respond either to the Association Request with an "accepted"			a.	roiv	-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list
Wait until Operating state is reached in both cases 6. Simulated PHD sends a fixed event report with one Insulin Pump measurement • The PHG under test must respond either to the Association Request with an "accepted"			b.	attri	bute-list contains a list of all implemented attributes of the MDS object and the
6. Simulated PHD sends a fixed event report with one Insulin Pump measurement • The PHG under test must respond either to the Association Request with an "accepted"			c.	Ond	ce in the Operating state the PHG is forced to enable the scanner object.
Pass/Fail criteria • The PHG under test must respond either to the Association Request with an "accepted"		Wa	it unt	til Op	perating state is reached in both cases
		6.	Sim	nulate	ed PHD sends a fixed event report with one Insulin Pump measurement
	Pass/Fail criteria	•			

	The measurement is correctly presented
Notes	

TP ld		TP/PLT/PHG/CLASS/IP/BV-002_A					
TP label		Maximum APDU size: Insulin Pump without PM-Store					
Coverage	Spec	·					
Coverage	Testable items	[ISO/IEEE 11073-20601-2016C] CommonCharac 4; M					
	Spec	[ISO/IEEE 11073-10419]					
	Testable items	ComCharIP 2; M					
Test purpos	e	Check that: If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation. The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.					
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_071					
Other PICS							
Initial condit	ion	The PHG under test is in the Operating state.					
Test procedure		1. The simulated PHD sends a Confirmed variable event report: a. ScanReportInfoVar. obs_scan_var: Count = 2 Length = 7128 ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-value: '00(7104) bytes) 00'0 } ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 2636 (MDC_ATTR_NU_VAL_OBS_BASIC) attribute-value: 3 } } }					
		2. Check the response of the PHG under test. 3. The simulated PHD conds a Confirmed fixed event report with one measurement.					
		The simulated PHD sends a Confirmed fixed event report with one measurement.					

	4.	Check the response of the PHG under test.
Pass/Fail criteria	•	In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report"
Natao	•	In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report"
Notes		

TP ld		TP/PLT/PHG/CLASS/IP/BV-002_B				
TP label		Maximum APDU size: Insulin Pump with PM-Store				
Coverage	Spec	[ISO/IEEE 11073-20601-2016C]				
	Testable items	CommonCharac 4; M				
	Spec	[ISO/IEEE 11073-10419]				
	Testable items	ComCharIP 3; M				
Test purpos	ee	Check that: If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation. The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.				
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_071 AND C_MAN_OXP_003				
Other PICS						
Initial condi	tion	The PHG under test is in the Operating state.				
Test proced	ure	The simulated PHD sends a Confirmed variable event report:				
		a. ScanReportInfoVar. obs_scan_var:				
		☐ Count = 2				
		☐ Length = 5080				
		<pre>ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 61441 attribute-value: '00(5056 bytes) 00'0 } } ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 2636 (MDC_ATTR_NU_VAL_OBS_BASIC) attribute-value: 3 } }</pre>				

	2.	Check the response of the PHG under test.
	3.	The simulated PHD sends a Confirmed fixed event report with one measurement.
	4.	Check the response of the PHG under test.
Pass/Fail criteria	•	In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report"
	•	In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report"
Notes		

TP ld		TP/PL	T/PHG/CLASS/IP/BV-00	3		
TP label		Bolus Delivered Attribute-Value-Map. Order change				
Coverage	Spec	[ISO/IEEE 11073-10419]				
	Testable items	Bolusi	Der 22; M			
Test purpose	e	Check	that:			
		For [S	tandard-Configuration] th	e [Attribute-Value-Map] attribute	e shall be present	
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC MDC_ATTR_TIME_STAMP_BO				
Applicability		C_MA	N_OXP_000 AND C_MA	N_OXP_071		
Other PICS						
Initial condit	ion		mulated PHD and the PH uration.	G under test are in the Operatir	ng state using the standard	
Test procedu	ıre	The simulated PHD sends a confirmed fixed format event report with that matches the Attribute-Value-Map order of MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_BO				
		2. TI	he simulated PHD waits ι	until it receives a confirmation		
		V	alue-Map configuration of	a confirmed variable event repo handle 1 (Bolus Delivered Objo P_BO, then MDC_ATTR_NU_V	ect) to reverse the values to:	
		4. TI	he simulated PHD waits ι	until it receives a confirmation		
			end a confirmed fixed for elivered value.	mat event report with the date fi	rst followed by an Bolus	
		6. TI	he simulated PHD waits ι	ıntil it receives a confirmation		
		7. TI	he simulated PHD sends	an Association Release Reques	st (normal)	
		8. TI	he simulated PHD waits ι	until there is a Association Relea	ase Response	
			he simulated PHD sends onfiguration that was used	an Association Request using to previously	he same standard	
			the PHG under test responknown-config", then	onds with association request re	esponse with "accepted-	
		•	The simulated PHD seconfiguration	ends the confirmed configuration	n event report with the standard	
		•	The simulated PHD wareport that was sent.	aits until there is a confirmation	to the configuration event	
		at	tribute-value-format (MD	a fixed event report following th C_ATTR_NU_VAL_OBS_BASION P_BO). The observation should	C, then	

	Delivered observation.
	12. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	 In Step 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).
	 In Step 2, 6 and 12 verify the PHG under test uses MDC_DIM_INTL_UNIT as the unit- code for the measurement report (or reports the proper value after convert to another unit-code)
	• In Step 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e., the actual observation may have occurred sometime in the past).
	When automated, need to be careful about just sending these messages back to back since the ability to look at things like a UI may need there to be pauses for operator verification.
Notes	

TP Id		TP/PLT/PHG/CLASS/IP/BV-004				
TP label		Bolus Delivered Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map				
Coverage	Spec	[ISO/IEEE 11073-10419]				
	Testable items	BolusDer 22; M				
Test purpose	•	Check that:				
		For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present				
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC MDC_ATTR_TIME_STAMP_BO				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_071				
Other PICS						
Initial conditi	on	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (1900). (Bolus Delivered Numeric standard configuration Unit code attribute is set to MDC_DIM_INTL_UNIT)				
Test procedure		The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 1 (Bolus Delivered Numeric Object) to set the values to: MDC_ATTR_NU_VAL_OBS_BASIC, MDC_ATTR_UNIT_CODE, then MDC_ATTR_TIME_STAMP_BO.				
		2. The simulated PHD waits until it receives a confirmation				
		3. Send a confirmed fixed format event report with the new data layout. For unit-code Attribute, use MDC_DIM_INTL_UNIT (5472).				
		4. The simulated PHD waits until it receives a confirmation				
		5. The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC Attribute.				
		6. The simulated PHD waits until it receives a confirmation.				
Pass/Fail criteria		• In Step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).				
		In Step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement is displayed properly)				

	In Step 4 and 6, verify the PHG under test uses MDC_DIM_INTL_UNIT as the unit-code for the measurement reports
Notes	

TP ld		TP/PLT/PHG/CLASS/IP/BV-005		
TP label		Bolus Delivered Unit-Code. Use default Bolus Delivered units - variable format observation		
Coverage Spec		[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 20; M		
Test purpos	е	Check that:		
		For [Standard-Configuration] the [Unit-Code] attribute shall be present		
		The value of the [Unit-Code] attribute shall be MDC_DIM_INTL_UNIT		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_071		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (1900).		
Test procedure		Send a confirmed variable format event report using a measurement in using MDC_DIM_INTL_UNIT units.		
		2. The simulated PHD waits until it receives a confirmation		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data properly and applies MDC_DIM_INTL_UNIT unit to the observation (e.g., if there is a UI verify the measurement and date are displayed properly even if they are converted to a difference set of units). 	nt	
Notes				

TP ld		TP/PLT/PHG/CLASS/IP/BV-006		
TP label		Bolus Delivered Special values. Not a number - fixed format (Std Config)		
Coverage	Spec	[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 22; M		
Test purpose	9	Check that:		
		The PHG receives a NaN value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_071		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1900.		
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 1 (Bolus Delivered Object) containing an observation value with the value for not a number (NaN (not a number) [exponent 0, mantissa +(2**11 -1) = 0x07FF]) and a time stamp		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test		

Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).
Notes	This test case has been considered as an implicit test case.

TP ld		TD/DLT/DLO/CLASS/ID/DV 007		
IF IU		TP/PLT/PHG/CLASS/IP/BV-007		
TP label		Bolus Delivered Special values. Not a number - variable format (Std Config)		
Coverage Spec [ISO/IEEE 11073-10419]		[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 44; M		
Test purpos	e	Check that:		
		The PHG receives a NaN value (variable format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_071		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1900.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Bolus Delivered Object) containing an observation value set to the value for not a number (NaN (not a number) [exponent 0, mantissa +(2**11 -1) = 0x07FF]) 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area). 		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/IP/BV-008		
TP label		Bolus Delivered Special values. Not at this resolution - fixed format (Std Config)		
Coverage	Spec	[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 22; M		
Test purpose		Check that: The PHG receives NRes value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_071	
Other PICS				
Initial condition		The simulated PHD and the PH configuration 1900.	IG under test are in the Operatir	ng state using the standard
Test procedure		Object) containing an obse	a confirmed fixed event report fervation value set to the value for onent 0, mantissa –(2**11) = 0x	r not at this resolution (NRes

	2. The simulated PHD waits until it receives a confirmation from the PHG under test
Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/IP/BV-009		
TP label		Bolus Delivered Special values. Not at this resolution - variable format (Std Config)		
Coverage	Coverage Spec [ISO/IEEE 11073-10419]			
	Testable items	BolusDer 44; M		
Test purpos	s e	Check that: The PHG receives NRes value (variable format event report) but it does not use this value.		
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_071		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1900.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Bolus Delivered Object) containing an observation value set to the value for not at this resolution (NRes (not at this resolution) [exponent 0, mantissa –(2**11) = 0x0800]) 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement). 		
Notes		This test case has been considered as an implicit test case.		

TP Id		TP/PLT/PHG/CLASS/IP/BV-010		
TP label		Bolus Delivered Special values. Positive infinity - fixed format (Std Config)		
Coverage	Spec	[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 22; M		
Test purpose		Check that: The PHG receives a +INFINITY value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_071	
Other PICS				
Initial condition		The simulated PHD and the Ph configuration 1900.	HG under test are in the Operatir	ng state using the standard
Test procedure			a confirmed fixed event report for ervation value set to the value for	`

	[exponent 0, mantissa $+(2^{**}11 - 2) = 0x07FE$]) and a time stamp
	2. The simulated PHD waits until it receives a confirmation from the PHG under test
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/IP/BV-011		
TP label		Bolus Delivered Special values. Positive infinity - variable format (Std Config)		
Coverage	Spec	[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 44; M		
Test purpos	e	Check that: PHG receives a +INFINITY value (variable format event report) but it does not use this value.		
Applicability	/	C_MAN_OXP_000 AND C_MAN_OXP_071		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1900.		
Test procedure		The simulated PHD sends a confirmed variable event report for handle 1 (Bolus Delivered Object) containing an observation value set to the value for positive infinity (+INFINITY [exponent 0, mantissa +(2**11 –2) = 0x07FE]) The simulated PHD sends a confirmed variable event report for handle 1 (Bolus (Bolus PHD)) and the simulated PHD sends a confirmed variable event report for handle 1 (Bolus PHD).		
		The simulated PHD waits until it receives a confirmation from the PHG under test		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement). 		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/IP/BV-012		
TP label		Bolus Delivered Special values. Negative infinity - fixed format (Std Config)		
Coverage	Spec	[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 22; M		
Test purpose		Check that:		
		The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_071	
Other PICS				
Initial condition		The simulated PHD and the PH configuration 1900.	IG under test are in the Operatir	ng state using the standard
Test procedure		The simulated PHD sends	a confirmed fixed event report for	or handle 1 (Bolus Delivered

	Object) containing an observation value set to the value for negative infinity ($-$ INFINITY [exponent 0, mantissa $-(2^{**}11 - 2) = 0x0802$]) and a time stamp
	2. The simulated PHD waits until it receives a confirmation from the PHG under test
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/IP/BV-013		
TP label		Bolus Delivered Special values. Negative infinity - variable format (Std Config)		
Coverage Spec		[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 44; M		
Test purpos	se .	Check that:		
		PHG receives a –INFINITY value (variable format event report) but it does not use this value.		
Applicability	у	C_MAN_OXP_000 AND C_MAN_OXP_071		
Other PICS				
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1900.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Bolus Delivered Object) containing an observation value set to the value for negative infinity (– INFINITY [exponent 0, mantissa –(2**11 –2) = 0x0802]) 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement). 		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/IP/BV-014		
TP label		Bolus Delivered Special values. Reserved - fixed format (Std Config)		
Coverage Spec		[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 22; M		
Test purpose	9	Check that:		
		The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.		
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_071		
Other PICS				
Initial condition		The simulated PHD and the PH configuration 1900.	IG under test are in the Operatin	ng state using the standard

Test procedure	1. The simulated PHD sends a confirmed fixed event report for handle 1 (Bolus Delivered Object) containing an observation value set to the value for reserved (Reserved for future use [exponent 0, mantissa –(2**11 –1) = 0x0801]) and a time stamp	
	2. The simulated PHD waits until it receives a confirmation from the PHG under test	
Pass/Fail criteria	Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).	
Notes	This test case has been considered as an implicit test case.	

TP ld		TP/PLT/PHG/CLASS/IP/BV-015		
TP label		Bolus Delivered Special values. Reserved - variable format (Std Config)		
Coverage Spec		[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 44; M		
Test purpos	е	Check that:		
		The PHG receives a Reserved for future use value (variable format event report) but it does not use this value.		
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_071		
Other PICS				
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1900.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Bolus Delivered Object) containing an observation value set to the value for reserved (Reserved for future use [exponent 0, mantissa –(2**11 –1) = 0x0801]) 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test		
Pass/Fail criteria		 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement). 		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/IP/BV-016		
TP label		Current Basal Rate Setting Attribute-Value-Map. Order change		
Coverage Spec		[ISO/IEEE 11073-10419]		
	Testable items	CurrBasRate 22;M		
Test purpos	se .	Check that:		
		For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present		
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC MDC_ATTR_TIME_STAMP_BO		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_071		
Other PICS				

Test procedure	The simulated PHD sends a Current Basal Rate Setting confirmed fixed format event report with that matches the Attribute-Value-Map order of MDC ATTRIBUTION ORS BASIC than MDC ATTRIBUTE STAMP BO
	MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_BO
	2. The simulated PHD waits until it receives a confirmation
	 The simulated PHD sends a confirmed variable event report to change the Attribute- Value-Map configuration of handle 2 (Current Basal Rate Setting Numeric Object) to reverse the values to: MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_NU_VAL_OBS_BASIC.
	4. The simulated PHD waits until it receives a confirmation
	 Send a confirmed fixed format event report with the date first followed by a Current Basal Rate Setting value (in MDC_DIM_INTL_UNIT_PER_HR units since it is the standard configuration unit-code).
	6. The simulated PHD waits until it receives a confirmation
	7. The simulated PHD sends an Association Release Request (normal)
	8. The simulated PHD waits until there is a Association Release Response
	The simulated PHD sends an Association Request using the same standard configuration that was used previously
	 If the PHG under test responds with association request response with "accepted- unknown-config", then
	 The simulated PHD sends the confirmed configuration event report with the standard configuration
	 The simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_BO). The observation should be a reasonable Current Basal Rate Setting observation.
	12. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	 In Step 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).
	 In Step 2, 6 and 12 verify the PHG under test uses MDC_DIM_INTL_UNIT_PER_HR units as the unit-code for the measurement report (or reports the proper value after convert to another unit-code)
	 In Step 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e., the actual observation may have occurred sometime in the past).
	 When automated, need to be careful about just sending these messages back to back since the ability to look at things like a UI may need there to be pauses for operator verification.
Notes	

TP Id		TP/PLT/PHG/CLASS/IP/BV-017		
TP label		Current Basal Rate Setting Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map		
Coverage Spec		[ISO/IEEE 11073-10419]		
Testable items		CurrBasRate 22;M		

Check that:		
For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present		
The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC MDC_ATTR_TIME_STAMP_BO		
C_MAN_OXP_000 AND C_MAN_OXP_071		
The simulated PHD and the PHG under test are in the Operating state using the standard configuration (Current Basal Rate Setting Numeric standard configuration Unit code attribute is set to MDC_DIM_INTL_UNIT_PER_HR)		
 The simulated PHD sends a confirmed variable event report to change the Attribute- Value-Map configuration of handle 2 (Current Basal Rate Setting Object) to set the values to: MDC_ATTR_NU_VAL_OBS_BASIC, MDC_ATTR_UNIT_CODE, then MDC_ATTR_TIME_STAMP_BO. 		
2. The simulated PHD waits until it receives a confirmation		
Send a confirmed fixed format event report with the new data layout. For unit-code Attribute, use MDC_DIM_INTL_UNIT_PER_HR (5696).		
4. The simulated PHD waits until it receives a confirmation		
 The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC Attribute. 		
6. The simulated PHD waits until it receives a confirmation.		
• In Step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).		
 In Step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement is displayed properly) 		
In Step 4 and 6, verify the PHG under test uses MDC_DIM_INTL_UNIT_PER_HR as the unit-code for the measurement reports		

TP Id		TP/PLT/PHG/CLASS/IP/BV-018		
TP label		Current Basal Rate Setting Unit-Code. Use default Current Basal Rate Setting units - variable format observation		
Coverage	Coverage Spec [ISO/IEEE 11073-10419]			
	Testable items	CurrBasRate 20; M		
Test purpose		Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present The value of the [Unit-Code] attribute shall be MDC_DIM_INTL_UNIT_PER_HR		
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_071		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		Send a confirmed variable format event report using a measurement using		

		MDC_DIM_INTL_UNIT_PER_HR unit code
	2.	The simulated PHD waits until it receives a confirmation
Pass/Fail criteria	•	Verify that the PHG under test is able to accept the data properly and applies the appropriate units to the observation (e.g., if there is a UI verify the measurement and date are displayed properly even if they are converted to a different set of units).
Notes		

TP ld		TP/PLT/PHG/CLASS/IP/BV-019			
TP label		Current Basal Rate Setting Special values. Not a number - fixed format (Std Config)			
Coverage	Spec	[ISO/IEEE 11073-10419]			
	Testable items	CurrBasRate 22;M			
Test purpose	•	Check that:			
		PHG receives a NaN value (fixed format event report) but it does not use this value.			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_071			
Other PICS					
Initial conditi	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 2 (Current Basal Rate Setting Object) containing an observation value with the value for not a number (NaN (not a number) [exponent 0, mantissa +(2**11 -1) = 0x07FF]) and a time stamp The simulated PHD waits until it receives a confirmation from the PHG under test 			
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area). 			
Notes		This test case has been considered as an implicit test case.			

TP ld		TP/PLT/PHG/CLASS/IP/BV-020			
TP label		Current Basal Rate Setting Special values. Not at this resolution - fixed format (Std Config)			
Coverage Spec		[ISO/IEEE 11073-10419]			
	Testable items	CurrBasRate 22;M			
Test purpose		Check that: The PHG receives NRes value (fixed format event report) but it does not use this value.			
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_071			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		The simulated PHD sends a confirmed fixed event report for handle 2 (Current Basal)			

	Rate Setting Object) containing an observation value set to the value for not at this resolution (NRes (not at this resolution) [exponent 0, mantissa –(2**11) = 0x0800]) and a time stamp
	2. The simulated PHD waits until it receives a confirmation from the PHG under test
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/IP/BV-021		
TP label		Current Basal Rate Setting Special values. Positive infinity - fixed format (Std Config)		
Coverage Spec		[ISO/IEEE 11073-10419]		
	Testable items	CurrBasRate 22;M		
Test purpos	se	Check that:		
		PHG receives a +INFINITY value (fixed format event report) but it does not use this value.		
Applicability C_MAN_OXP_000 AND C_MAN_OXP_071		C_MAN_OXP_000 AND C_MAN_OXP_071		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 2 (Current Basal Rate Setting Object) containing an observation value set to the value for positive infinity (+INFINITY [exponent 0, mantissa +(2**11 -2) = 0x07FE]) and a time stamp 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement). 		
Notes This test case has been considered as an implicit test case.		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/IP/BV-02	2	
TP label Current Basal Rate Setting Special values. Negative infinity - fixed format (St		ked format (Std Config)		
Coverage Spec		[ISO/IEEE 11073-10419]		
	Testable items	CurrBasRate 22;M		
Test purpose		Check that:		
		The PHG receives a –INFINITY value.	value (fixed format event repor	t) but it does not use this
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_071	
Other PICS				
Initial condition		The simulated PHD and the PH configuration.	IG under test are in the Operatir	ng state using the standard

Test procedure	The simulated PHD sends a confirmed fixed event report for handle 2 (Current Basal Rate Setting Object) containing an observation value set to the value for negative infinity (– INFINITY [exponent 0, mantissa –(2**11 –2) = 0x0802]) and a time stamp
	2. The simulated PHD waits until it receives a confirmation from the PHG under test
Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/IP/BV-023	
TP label		Current Basal Rate Setting Special values. Reserved - fixed format (Std Config)	
Coverage Spec		[ISO/IEEE 11073-10419]	
	Testable items	CurrBasRate 22;M	
Test purpos	se .	Check that:	
		The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.	
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_071	
Other PICS			
Initial condition The simulated PHD and the PHG under test are in the Operating state using the configuration.		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.	
Test procedure		The simulated PHD sends a confirmed fixed event report for handle 2 (Current Basal Rate Setting Object) containing an observation value set to the value for reserved (Reserved for future use [exponent 0, mantissa –(2**11 –1) = 0x0801]) and a time stamp	
		2. The simulated PHD waits until it receives a confirmation from the PHG under test	
Pass/Fail criteria		Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).	
Notes This test case has been considered as an implicit test case.		This test case has been considered as an implicit test case.	

TP ld		TP/PLT/PHG/CLASS/IP/BV-024		
TP label		Current Basal Rate Setting Spec	cial values. Not a number - varia	able format (Std Config)
Coverage Spec [ISO/IEEE 11073-10419]				
	Testable items	CurrBasRate 44; M		
Test purpose		Check that:		
		The PHG receives a NaN value (variable format event report) but it does not use this value.		
Applicability C_MAN_OXP_000 AND C_MAN_OXP_071				
Other PICS				
Initial condition		The simulated PHD and the PHC configuration.	G under test are in the Operatin	g state using the standard

Test procedure	 The simulated PHD sends a confirmed variable event report for handle 2 (Current Basal Rate Setting Object) containing an observation value set to the value for not a number (NaN (not a number) [exponent 0, mantissa +(2**11 -1) = 0x07FF])
	2. The simulated PHD waits until it receives a confirmation from the PHG under test
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).
Notes	This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/IP/BV-025
TP label		Current Basal Rate Setting Special values. Not at this resolution - variable format (Std Config)
Coverage	Spec	[ISO/IEEE 11073-10419]
	Testable items	CurrBasRate 44; M
Test purpos	se	Check that:
		The PHG receives NRes value (variable format event report) but it does not use this value.
Applicability C_MAN_OXP_000 AND C_MAN_OXP_071		C_MAN_OXP_000 AND C_MAN_OXP_071
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure		The simulated PHD sends a confirmed variable event report for handle 2 (Current Basal Rate Setting Object) containing an observation value set to the value for not at this resolution (NRes (not at this resolution) [exponent 0, mantissa –(2**11) = 0x0800])
		2. The simulated PHD waits until it receives a confirmation from the PHG under test
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).
Notes This test case has been considered as an implicit test case.		This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/IP/BV-026		
TP label		Current Basal Rate Setting Special v	alues. Positive infinity - va	riable format (Std Config)
Coverage	Coverage Spec [ISO/IEEE 11073-10419]			
	Testable items	CurrBasRate 44; M		
Test purpose		Check that:		
		The PHG receives a +INFINITY valu value.	e (variable format event re	port) but it does not use this
Applicability C_MAN_OXP_000 AND C_MAN_OXP_071				
Other PICS				
Initial condition The simulated PHD and the PHG under test are in the Operating state using the		ng state using the standard		

	configuration.
1. The simulated PHD sends a confirmed variable event report for handle 2 (Cu Rate Setting Object) containing an observation value set to the value for posi (+INFINITY [exponent 0, mantissa +(2**11 -2) = 0x07FE])	
	2. The simulated PHD waits until it receives a confirmation from the PHG under test
Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/IP/BV-027		
TP label		Current Basal Rate Setting Special values. Negative infinity - variable format (Std Config)		
Coverage	Spec	[ISO/IEEE 11073-10419]		
	Testable items	CurrBasRate 44; M		
Test purpos	е	Check that:		
		The PHG receives a –INFINITY value (variable format event report) but it does not use this value.		
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_071		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 2 (Current Basal Rate Setting Object) containing an observation value set to the value for negative infinity (– INFINITY [exponent 0, mantissa –(2**11 –2) = 0x0802]) 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test		
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).		
Notes		This test case has been considered as an implicit test case.		

TP Id TP/PLT/PHG/CLASS/IP/BV-028			
TP label Current Basal Rate Setting Special values. Reserved - variable format (Std Config)		Current Basal Rate Setting Special values. Reserved - variable format (Std Config)	
Coverage Spec [ISO		[ISO/IEEE 11073-10419]	
	Testable items	CurrBasRate 44; M	
Test purpose		Check that: The PHG receives a Reserved for future use value (variable format event report) but it doe not use this value.	S
Applicability C_MAN_OXP_000 AND C_MAN_OXP_071		C_MAN_OXP_000 AND C_MAN_OXP_071	
Other PICS			

Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure	The simulated PHD sends a confirmed variable event report for handle 2 (Current Basal Rate Setting Object) containing an observation value set to the value for reserved (Reserved for future use [exponent 0, mantissa –(2**11 –1) = 0x0801])			
	2. The simulated PHD waits until it receives a confirmation from the PHG under test			
Pass/Fail Criteria	Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).			
Notes	This test case has been considered as an implicit test case.			

TP ld		TP/PLT/PHG/CLASS/IP/BV-029_A							
TP label		Schedule-Store Class methods. Get-Schedule-Segment-Info method 1							
Coverage	Spec	[ISO	[ISO/IEEE 11073-10419]						
	Testable items	Sch	StoreMe	th 2; M	SchStoreMeth 5; M	SchStoreMeth 8; M			
Test purpose		Che	ck that:						
		If a PHG invokes the [Get-Schedule-Segment-Info] method it shall use the operation type roiv-cmip-confirmed-action, the Action-type MDC_ACT_SCHED_SEG_GET_INFO and the action-info-args SchedSegmSelection.							
		[ANI	D]						
		Info]				ort of the [Get-Schedule-Segment- -Segment-Data-Xfer] methods is			
		[ANI	D]						
		The PHG shall support at least the choice all-sched-segments in the SegmSelection action-info-args of the Get-Schedule-Segment-Info method.							
Applicability	y	C_N	1AN_OX	P_000 AND C_MA	N_IP_001				
Other PICS									
Initial condition The simulated PHD and the PHG under test are in the Operating state. The shas at least one schedule segment with data stored and the Schedule-Store indicates that it supports all the possible actions.									
Test procedure		Make the PHG under test perform a [Get-Schedule-Segment-Info] action to recover the information of all the schedule-segments.							
		2. The simulated PHD receives the message:							
			a. APDU Type						
				field-length = 2 by	rtes				
				field-value = 0xE7	0x00 (PrstApdu)				
			b. invo	oke-id					
				field-type = Invok					
				field-length = 2 by					
					value identifies the message nulated PHD shall have the :	e; the confirmed response that will same invoke-id.			
			c. obj	-handle					
				field-type = HANE	DLE				

			field-length = 2 bytes
			field-value = <handle an="" existing="" of="" schedule-store=""></handle>
	d.	act	ion-type (roiv-cmip-confirmed-action)
			field-type = OID-Type
			field-length = 2 bytes
			field-value = 0x0C 0x24 (MDC_ACT_SCHED_SEG_GET_INFO)
	e.	act	ion-info-args
			SchedSegmSelection = all-sched-segments (0)
Pass/Fail criteria			all perform Get-Schedule-Segment-Info with all-sched-segments choice and the received message must be the one specified
Notes			

TP ld		TP/PLT/PHG/CLASS/IP/BV-029_B					
TP label		Schedule-Store Class methods. Get-Schedule-Segment-Info method 2					
Coverage	Spec	[ISO/IEEE 1	1073-10419]				
	Testable items	SchStoreMe	eth 2; M	SchStoreMeth 5; M	SchStoreMeth 9; O		
Test purpose	;	Check that:					
		If a PHG invokes the [Get-Schedule-Segment-Info] method it shall use the operation type roiv-cmip-confirmed-action, the Action-type MDC_ACT_SCHED_SEG_GET_INFO and the action-info-args SchedSegmSelection.					
		[AND]					
				edule-Store class the support of d-List] and [Trig-Schedule-Se			
		[AND]					
		The PHG may support the choice sched-segm-id-list in the SegmSelection action-info-args of the Get-Schedule-Segment-Info method.					
Applicability		C_MAN_OXP_000 AND C_MAN_IP_001					
Other PICS							
Initial conditi	on	The simulated PHD and the PHG under test are in the Operating state. The simulated PHD has at least one schedule segment with data stored and the Schedule-Store-Capab attribute indicates that it supports all the possible actions.					
Test procedure		Make the PHG under test perform a [Get-Schedule-Segment-Info] action to recover the information of specific schedule-segments.					
		2. The simulated PHD receives the message:					
		a. APDU Type					
			field-length = 2 by	rtes			
			field-value = 0xE7	' 0x00 (PrstApdu)			
		b. inv	oke-id				
			field-type = Invok	• •			
			field-length = 2 by	rtes			
				value identifies the message; th nulated PHD shall have the san			

	C.	obj-handle
		☐ field-type = HANDLE
		☐ field-length = 2 bytes
		☐ field-value = <handle an="" existing="" of="" schedule-store=""></handle>
	d.	action-type (roiv-cmip-confirmed-action)
		☐ field-type = OID-Type
		☐ field-length = 2 bytes
		☐ field-value = 0x0C 0x24 (MDC_ACT_SCHED_SEG_GET_INFO)
	e.	action-info-args
		☐ SchedSegmSelection = sched-segm-id-list
		 SchedSegmldList = <list instance<br="" of="" schedule-segments'="" selected="" the="">numbers></list>
Pass/Fail criteria		HG supports Get-Schedule-Segment-Info action with sched-segm-id-list choice, the fifther received message must be the one specified.
Notes		

TP Id		TP/PLT/PHG/CLASS/IP/BV-030					
TP label		Schedule-Store Class methods. Get-Schedule-Segment-Id-List					
Coverage	Spec	[ISO/IEEE 11073-10419]					
	Testable items	SchStoreMo	SchStoreMeth 2; M SchStoreMeth 13; M				
Test purpose	•	Check that:					
		If a PHG invokes the [Get-Schedule-Segment-Id-List] method it shall use the operation type roiv-cmip-confirmed-action, the Action-type MDC_ACT_SCHED_SEG_GET_ID_LIST and the action-info-args set to empty [AND]					
				edule-Store class the support of Id-List] and [Trig-Schedule-Seg			
Applicability		C_MAN_O	(P_000 AND C_M	AN_IP_001			
Other PICS							
Initial condition The simulated PHD and the PHG under test are in the Operating state has at least one schedule segment with data stored and the Schedule indicates that it supports all the possible actions.							
Test procedu	ıre	Make the PHG under test perform a [Get-Schedule-Segment-Id-List] action to recover a list of schedule-segments' instance numbers.					
		2. The simulated PHD receives the message:					
		a. APDU Type					
			field-length = 2 b	ytes			
			field-value = 0xE	7 0x00 (PrstApdu)			
		b. invoke-id					
			field-type = Invok				
			field-length = 2 b				
				value identifies the message; the mulated PHD shall have the sam			

	c.	obj-handle
		☐ field-type = HANDLE
		☐ field-length = 2 bytes
		☐ field-value = <handle an="" existing="" of="" schedule-store=""></handle>
	d.	action-type (roiv-cmip-confirmed-action)
		☐ field-type = OID-Type
		☐ field-length = 2 bytes
		☐ field-value = 0x0C 0x25 (MDC_ACT_SCHED_SEG_GET_ID_LIST)
	e.	action-info-args
		□ <empty></empty>
Pass/Fail criteria		G shall perform Get-Schedule-Segment-Id-List action, and the format of the received permust be the one specified.
Notes		

TP ld		TP/PLT/PHG/CLASS/IP/BV-031					
TP label		Schedule-Store Class methods. Trig-Schedule-Segment-Data-Xfer					
Coverage	Spec	[ISO/IEE	[ISO/IEEE 11073-10419]				
	Testable items	SchStore	SchStoreMeth 2; M SchStoreMeth 15; M SchedStoreTX 10; M				
Test purpose	•	Check tha	at:				
		If a PHG invokes the [Trig-Schedule-Segment-Data-Xfer] method it shall use operation type roiv-cmip-confirmed-action, the Action-type MDC_ACT_SCHED_SEG_TRIG_XFER and the action-info-args TrigSchedSegmDataXferReq					
		[AND]					
		For an PHG supporting the schedule-store class the support of the [Get-Schedule-Segment-Info], [Get-Schedule-Segment-Id-List] and [Trig-Schedule-Segment-Data-Xfer] methods is mandatory					
		[AND]					
		Xfer ACT	The PHG retrieves specific schedule-segments by using the Trig-Schedule-Segment-Data- Xfer ACTION method with the handle of the schedule-store object to access. The argument to this ACTION method is the instance number of the segment to transfer.				
Applicability		C_MAN_OXP_000 AND C_MAN_IP_001					
Other PICS							
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state. The simulated PHD has at least one schedule segment with data stored and the Schedule-Store-Capab attribute indicates that it supports all the possible actions.					
Test Procedure		Make the PHG under test perform a [Trig-Schedule-Segment-Data-Xfer] action.					
		2. The	simulated PHD receiv	es the message:			
		a	APDU Type				
			☐ field-length = 2 by	ytes			
			☐ field-value = 0xE	7 0x00 (PrstApdu)			
		b. invoke-id					
			field-type = Invok	elDType			

			field-length = 2 bytes
			field-value= This value identifies the message; the confirmed response that will be sent by the simulated PHD shall have the same invoke-id.
	c.	obj-l	handle
			field-type = HANDLE
			field-length = 2 bytes
			field-value = <handle an="" existing="" of="" schedule-store=""></handle>
	d.	actio	on-type (roiv-cmip-confirmed-action)
			field-type = OID-Type
			field-length = 2 bytes
			field-value = 0x0C 0x26 (MDC_ACT_SCHED_SEG_TRIG_XFER)
	e.	actio	on-info-args
			TrigSchedSegmDataXferReq.seg-inst-no = <one existing="" instance="" number="" of="" schedule-segments'="" the=""></one>
Pass/Fail criteria			all perform Trig-Schedule-Segment-Data-Xfer Action and the format of the sage must be the one specified.
Notes			

TP ld		TP/PLT/PHG/CLASS/IP/BV-032_A					
TP label		Schedule-Store Class methods. Segment-Data-Event 1					
Coverage	Spec	[ISO/IEEE 11073-10419]					
	Testable items	SchedStoreEvent 3; M					
Test purpos	e	Check that:					
		The PHGs must respond to [Schedule-Segment-Data-Event] events when received.					
		When responding to a [Schedule-Segment-Data-Event] event the event-reply-info parameter shall be ScheduleSegmentDataResult.					
Applicability	/	C_MAN_OXP_000 AND C_MAN_IP_001					
Other PICS							
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state. The simulated PHD has at least one schedule segment with data stored and the Schedule-Store-Capab attribute indicates that it supports all the possible actions.					
Test procedure		Make the PHG under test perform a Trig-Schedule-Segment-Data-Xfer					
		2. The simulated PHD responds to the message with a "TrigSchedSegmDataXferRsp"					
		3. The simulated PHD sends a Confirmed event report:					
		a. Data APDU					
		☐ Type = Invoke Confirmed Event Report					
		☐ Action = 0x0C 0x27 (MDC_NOTI_SCHED_SEGMENT_DATA)					
		□ ScheduleSegmentDataEvent. SchedSegmDataEventDescr = SEQUENCE:					
		 sched-segm-instance 					
		 sched-segm-evt-entry-index 					
		 sched-segm-evt-entry-count 					

			sched-segm-evt-status = Bit 0 must be set (first entry)
	4. T	he PHO	G under test sends a response to the previous message
	a	. Dat	a APDU
			Type = Response Confirmed Event Report
			Action = 0x0C 0x27 (MDC_NOTI_SCHED_SEGMENT_DATA)
			ScheduleSegmentDataResult SchedSegmDataEventDescr = SEQUENCE:
			sched-segm-instance = <the by="" one="" phd="" previously="" sent="" simulated="" the=""></the>
			sched-segm-evt-entry-index = <the by="" one="" phd="" previously="" sent="" simulated="" the=""></the>
			sched-segm-evt-entry-count = <the by="" one="" previously="" sent="" simulated<br="" the="">PHD></the>
			 sched-segm-evt-status = Bits 0, 1 must be the same as the previously recorded. Bit and 4 must NOT be set. One of bits 8 or 12 must be set
Pass/Fail criteria	The fo	ormat o	f the received message must be the one specified.
Notes			

TP Id	TP ld		TP/PLT/PHG/CLASS/IP/BV-032_B			
TP label	TP label		Schedule-Store Class methods. Segment-Data-Event 2			
Coverage	Spec	[ISO	ISO/IEEE 11073-10419]			
	Testable items	Sch	nedStoreEvent 3; M			
Test purpos	е	Check that:				
		A PHG must respond to [Schedule-Segment-Data-Event] events when received.				
			en responding to a [Schedule-Segment-Data-Event] event the event-reply-info parameter all be ScheduleSegmentDataResult.			
Applicability	,	C_I	MAN_OXP_000 AND C_MAN_IP_001			
Other PICS						
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state. The simulated has at least one schedule segment with data stored and the Schedule-Store-Capab a indicates that it supports all the possible actions.				
Test proced	ure	1.	Make the PHG under test perform a Trig-Schedule-Segment-Data-Xfer			
		2.	The simulated PHD responds to the message with a "TrigSchedSegmDataXferRsp"			
		3.	The simulated PHD sends a Confirmed event report:			
			a. Data APDU			
			☐ Type = Invoke Confirmed Event Report			
			☐ Action = 0x0C 0x27 (MDC_NOTI_SCHED_SEGMENT_DATA)			
			□ ScheduleSegmentDataEvent. SchedSegmDataEventDescr = SEQUENCE:			
			sched-segm-instance			
			 sched-segm-evt-entry-index 			
			 sched-segm-evt-entry-count 			
			sched-segm-evt-status = Bit 4 (schsevtsta-agent-abort) must be set			
		4.	PHG under test sends a response to the previous message			

	a.	Data APDU
		☐ Type = Response Confirmed Event Report
		☐ Action = 0x0C 0x27 (MDC_NOTI_SCHED_SEGMENT_DATA)
		☐ ScheduleSegmentDataResult SchedSegmDataEventDescr = SEQUENCE:
		sched-segm-instance = <the by="" one="" phd="" previously="" sent="" simulated="" the=""></the>
		 sched-segm-evt-entry-index = <the by="" one="" previously="" sent="" simulated<br="" the="">PHD></the>
		 sched-segm-evt-entry-count = <the by="" one="" previously="" sent="" simulated<br="" the="">PHD></the>
		sched-segm-evt-status = Bits 4 and 8 must be set
Pass/Fail criteria	The for	mat of the received message must be the one specified.
Notes		

TP ld		TP/PLT/PHG/CLASS/IP/BV-033_A				
TP label		Schedule-Store Class. Metric data transfer 1				
Coverage	Spec	[ISC	[ISO/IEEE 11073-10419]			
	Testable items	Sch	edSt	oreTX 1; O	SchedStoreTX 3_A; M	
Test purpose)	Che	ck th	nat:		
		The PHG may query each schedule-store to determine the number of schedule-segments that exist within the schedule-store.				
		[AN	D]			
		The	attri	bute-id-list shall be left em	npty to query for all attributes	of the schedule-store object.
Applicability		C_N	/AN_	OXP_000 AND C_MAN_	IP_001	
Other PICS						
Initial condit	ion	The obje		G under test is in the Oper	rating state. The simulated Pl	HD has one Schedule-Store
Test procedu	ıre	Make the PHG under test perform a GET service to the Schedule-Store object.				
		2.	Rec	eived message by the sim	nulated PHD must be:	·
			a.	APDU Type		
				☐ field-length = 2 bytes	3	
				$\Box \text{field-value} = 0 \times E7 \ 0 \times E7 $	k00 (PrstApdu)	
			b.	invoke-id		
				☐ field-type = InvokeID	Туре	
				☐ field-length= 2 bytes		
				☐ field-value= <not rele<="" th=""><th>evant for this test></th><th></th></not>	evant for this test>	
			C.	CHOICE:		
				☐ field-value= 0x01 0x0	03 (roiv-cmip-get)	
			d.	obj-Handle:		
				ifield-type = HANDLE		
				☐ field-length = 2 bytes	3	

	☐ field-value = <the handle="" of="" schedule-store="" the=""> e. attribute-Id-List:</the>
	☐ field-type = AttributeIdList
	☐ field-count = 0x00 0x00
	☐ field-length = 0x00 0x00
Pass/Fail criteria	The format of the received message in step 2 must be the one specified.
Notes	

TP ld	P ld			TP/PLT/PHG/CLASS/IP/BV-033_B				
TP label	TP label			Schedule-Store Class. Metric data transfer 2				
Coverage	rage Spec		O/IEI	EE 11073-10419]				
	Testable items	Sch	nedS	toreTX 23;M	SchedStoreTX 24;M			
Test purpos	e	Ch	eck t	hat:				
		res sch	When the PHG receives an event report, it shall reply with a ScheduleSegmentDataResult response that shall contain the same schedule-store-handle, sched-segm-instance number, sched-segm-evt-entry-index, and sched-segm-evt-entry-count.					
		[AN	_	-11	the DLIC shall set the section state.			
		In t	ne so	ched-segm-evt-status,	the PHG shall set the schsevtsta-	manager-confirm bit.		
Applicability	/	C_	MAN	_OXP_000 AND C_M	AN_IP_001			
Other PICS								
Initial condi	tion	The PHG under test is in the Operating state. The simulated PHD has one Schedule-Store with at least one Schedule-Segment that contains data.			D has one Schedule-Store			
Test proced	ure	1.	Ма	ke the PHG under test	retrieve the information stored in	a Schedule-Segment		
		2.		e simulated PHD respo gSchedSegmDataXfer	onds to the TrigSchedSegmDataXf Rsp message	ferReq with an appropriate		
		3.	The	e simulated PHD send	s a ScheduleSegmentDataEvent to	o the PHG		
		4.		e PHG under test musids of interest are:	t respond with a ScheduleSegmen	tDataResult message, the		
			a.	APDU Type				
				☐ field-length = 2 k	pytes			
				☐ field-value = 0xE	E7 0x00 (PrstApdu)			
			b.	invoke-id				
				☐ field-type = Invo	21			
				☐ field-length= 2 b				
					e same of the sent ScheduleSegm	ientDataEvent>		
			c.	CHOICE:	2.0v04 (roro omin santimus d second	t rapart)		
			٦		2 0x01 (rors-cmip-confirmed-event	-героп)		
			d.	Obj-Handle: ☐ field-type = HAN	IDI E			
				☐ field-length				
				•	- 2 bytes - <the of="" p="" same="" schedules<="" sent="" the=""></the>	SeamentDataEvent>		

	e.	CurrentTime
		☐ field-type = RelativeTime
		☐ field-length = 4 bytes
		☐ field-value = <not for="" relevant="" test="" this=""></not>
	f.	Event-type
		☐ field-type = OID-Type
		☐ field-length = 2 bytes
		☐ field-value = 0x0C 0x27 (MDC_NOTI_SCHED_SEGMENT_DATA)
	g.	ScheduleSegmentDataResult SchedSegmDataEventDescr = SEQUENCE:
		☐ field-length = 12 bytes
		☐ field-value =
		 sched-segm-instance = <the of="" same="" sent<br="" the="">ScheduleSegmentDataEvent></the>
		 sched-segm-evt-entry-index = <the of="" same="" sent<br="" the="">ScheduleSegmentDataEvent></the>
		 sched-segm-evt-entry-count = <the of="" same="" sent<br="" the="">ScheduleSegmentDataEvent></the>
		 sched-segm-evt-status = Bit 8 (schsevtsta-manager-confirm)
Pass/Fail criteria	The for	mat of the received message in step 4 must be the one specified.
Notes		

TP ld	ΓP ld		TP/PLT/PHG/CLASS/IP/BV-034			
TP label		Schedule-Store Class. Specific attributes query				
Coverage	Spec	[ISO/IEI	EE 11073-10419]			
	Testable items	SchedS	StoreTX 3_B; O			
Test purpose	•	Check t	hat:			
			attributes of a Schedule-Store object may be queried by listing the desired attribute and in Table E.1.			
Applicability		C_MAN	I_OXP_000 AND C_MAN_IP_001			
Other PICS						
Initial condit	ion	The PHG under test is in the Operating state. The simulated PHD has one Schedule-Store object.				
Test procedu	ıre		ke the PHG under test perform a GET request to a specific list of Schedule-Store ibutes			
		2. Re	ceived message by the simulated PHD must be:			
		a.	APDU Type			
			☐ field-length = 2 bytes			
			☐ field-value = 0xE7 0x00 (PrstApdu)			
		b.	invoke-id			
			☐ field-type = InvokeIDType			
			☐ field-length= 2 bytes			

Notes	
Pass/Fail criteria	The format of the received message in step 2 must be the one specified.
	☐ field-value = <attribute-id (table="" attribute-id="" attributes="" defined="" e.1)="" for="" match="" schedule-store=""></attribute-id>
	☐ field-count = <it attribute="" contains="" more="" one="" or=""></it>
	☐ field-type = AttributeIdList
	e. Attribute-Id-List:
	☐ field-value = <the handle="" of="" schedule-store="" the=""></the>
	☐ field-length = 2 bytes
	☐ field-type = HANDLE
	d. Obj-Handle:
	☐ field-value= 0x01 0x03 (roiv-cmip-get)
	c. CHOICE:
	☐ field-value= <not for="" relevant="" test="" this=""></not>

TP Id		TP/PLT/PHG/CLASS/IP/BV-035			
TP label		Schedule-Store Class. Transfer Timeout			
Coverage	Spec	[ISO/IEEE 11073-10419]			
	Testable items	SchedSegmAttr 20; M			
Test purpose	9	Check that:			
		If the [Schedule-Segment-Transfer-Timeout] expires prior to the reception of the complete schedule segment, the PHG shall transition to the Unassociated state as described in subclause 8.9.5.6 in [ISO/IEEE 11073-20601-2016C].			
Applicability		C_MAN_OXP_000 AND C_MAN_IP_001			
Other PICS					
Initial condit	ion	The PHG under test is in the Operating state and the simulated PHD has at least one Schedule-Segment with data.			
Test procedu	ıre	Make the PHG under test perform a [Trig-Schedule-Segment-Data-Xfer] action to retrieve data from a Schedule-Segment.			
		The simulated PHD sends a response including TrigSchedSegmXferRsp = tschsxr-successful(0) (the request can be honored)			
		The PHD does no send any ScheduleSegmentDataEvent for at least a period of time equal to [Schedule-Segment-Transfer-Timeout]			
Pass/Fail criteria		PHG under test must wait for the last ScheduleSegmentDataEvent message for a period equal to the value of [Schedule-Segment-Transfer-Timeout]. When the time expires, PHG under test must send an abort to the simulated PHD			
Notes		Due to the delay introduced by transport layer and decoder for received APDU, Test Tool accuracy maybe is not enough to measure this time-out. To get a better accuracy, it is necessary to run this test case using a hardware sniffer.			

A.12 Subgroup 2.3.11: Peak flow (PF)

A.12 Sub	ogroup 2.	3.11: Peak flow (PF)				
TP ld		TP/PLT/PHG/CLASS/PF/BV-000				
TP label		Configuration Event Report. Peak Flow standard configuration 2100				
Coverage	Spec	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]				
	Testable items	ConfEventRep 18;M				
Test purpose		Check that:				
		A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.				
		Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the Configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_018				
Other PICS		C_MAN_OXP_085				
Initial condition	on	The simulated PHD and the PHG under test are in the Unassociated state.				
Test procedu		The simulated PHD sends an association request to the PHG under test with dev-configid set to 0x08 0x34 (Peak Flow)				
		2. The PHG under test responds with an association response, the field of interest is:				
		a. Result				
		☐ field-type = INT-U16				
		☐ field-length = 2 bytes				
		field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)				
		If the result of the association response was "accepted-unknown-config"				
		3. The simulated PHD sends a configuration event report with config-report-id set to 0x08 0x34.				
		4. The PHG under test must respond with:				
		a. APDU Type				
		☐ field-length = 2 bytes				
		☐ field-value = 0xE7 0x00 (PrstApdu)				
		b. Invoke-id				
		☐ field-type = INT-U16				
		☐ field-length = 2 bytes				
		field-value = it must be the same as the invoke-id of the simulated PHD's message.				
		c. Obj-Handle:				
		☐ field-type = HANDLE				
		☐ field-length = 2 bytes				
		☐ field-value = 0x00 0x00				
		d. Event-time:				
		☐ field-type = INT-U32				
		field-length = 4 bytes				
		field-value: 0xXX 0xXX				
		e. Event-type:				

	1	
		☐ field-length = 2 bytes
		☐ field-value = MDC_NOTI_CONFIG
	f.	The following six bytes indicate:
		☐ Event-replay-info.length (2 bytes)
		☐ ConfigReportRsp.config-report-id: it must be the same as config-report-id of the simulated PHD's message
		☐ ConfigReportRsp.config-result: One of:
		 accepted-config: 0x00 0x00
	5. IF (C_MAN_OXP_085 THEN:
	a.	The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes.
	b.	The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.
	C.	Once in the Operating state the PHG is forced to enable the scanner object.
	Wait un	til the Operating state is reached in both cases.
	6. The	e simulated PHD sends a fixed event report with one measurement.
Pass/Fail criteria		e PHG under test must respond either to the association request with an "accepted" ssage or to the Configuration Event Report with an "accepted-config".
	• The	e measurement is correctly presented.
Notes	The PH	G can request Get MDS while they are in the Associated state.

TP Id		TP/PLT/PHG/CLASS/PF/BV-001			
TP label		Maximum APDU size: Peak Flow			
Coverage Spec [ISO/IEEE 11073-20601:		[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
	Testable items	CommonCharac 4;M			
Test purpos	е	Check that:			
		If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.			
		The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.			
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_018			
Other PICS					
Initial condit	ion	The PHG under test is in the Operating state.			
Test procedure		<pre>1. The simulated PHD sends a Confirmed variable event report: a. ScanReportInfoVar. obs_scan_var: Count = 2 Length = 1996 ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= {</pre>			

```
AVA-Type ::= {
                                      attribute-id: 61441
                                       attribute-value: '00.....(1970 bytes)..... 00'0
                                  }
                                 }
                                ObservationScan ::= {
                                  obj-handle: 1
                                  attributes: AttributeList ::= {
                                    AVA-Type ::= {
                                       attribute-id: 2646 (MDC ATTR NU VAL OBS SIMP)
                                       attribute-value: 500
                                  }
                                }
                      2. Check the response of the PHG under test.
                      3.
                         The simulated PHD sends a Confirmed fixed event report with one measurement.
                      4.
                         Check the response of the PHG under test.
Pass/Fail criteria
                         In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
                         In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
Notes
```

TP ld		TP/PLT/PHG/CLASS/PF/BV-002				
TP label		Attribute-Value-Map. Order change. (0x0834)				
Coverage	Spec	[ISO/IEEE 11073-10421]				
	Testable	PEF12; M	PersBest12; M	FEV1S12; M		
	items	ReadStatus12; M				
Test purpose	•	Check that:				
		For [Standard-Configuration, PEF object the [Attribute-Value-Map] attribute shall be present. The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_SIMP, then MDC_ATTR_TIME_STAMP_ABS				
		[AND]				
		For [Standard-Configuration, Personal Best object] the [Attribute-Value-Map] attribute shall be present. The value of the [Attribute-Value-Map] attribute shall be value MDC_ATTR_NU_VAL_OBS_SIMP, then MDC_ATTR_TIME_STAMP_ABS				
		[AND]				
		For [Standard-Configuration, FEV1] the [Attribute-Value-Map] attribute shall be present. The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_SIMP, then MDC_ATTR_TIME_STAMP_ABS				
		[AND]				
		For [Standard-Configuration, Reading status] the [Attribute-Value-Map] attribute shall be present. The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC_BIT_STRING, then MDC_ATTR_TIME_STAMP_ABS				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_018				
Other PICS						

Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x0834).
Test procedure	The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of:
	MDC_ATTR_NU_VAL_OBS_SIMP then MDC_ATTR_TIME_STAMP_ABS for PEF Object
	 MDC_ATTR_NU_VAL_OBS_SIMP then MDC_ATTR_TIME_STAMP_ABS for Personal Best Object
	 MDC_ATTR_NU_VAL_OBS_SIMP then MDC_ATTR_TIME_STAMP_ABS for FEV1 Object
	 MDC_ATTR_NU_VAL_OBS_BASIC_BIT_STRING then MDC_ATTR_TIME_STAMP_ABS for Reading status Object
	2. The simulated PHD waits until it receives a confirmation.
	3. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 1 (PEF Object), of handle 2 (Personal Best object), of handle 3 (FEV1 Object) and of handle 5 (Reading status Object) to reverse the values to
	MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_NU_VAL_OBS_SIMP for PEF Object
	 MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_NU_VAL_OBS_SIMP for Personal Best Object
	 MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_NU_VAL_OBS_SIMP for FEV1 Object
	 MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_NU_VAL_OBS_BASIC_BIT_STRING for Reading status Object
	4. The simulated PHD waits until it receives a confirmation.
	Send a confirmed fixed format event report with the date (absolute-time-stamp) by a measurement data for every object.
	6. The simulated PHD waits until it receives a confirmation.
	7. The simulated PHD sends an association release request (normal).
	8. The simulated PHD waits until there is an association release response.
	The simulated PHD sends an association request using the same standard configuration that was used previously.
	10. If the PHG under test responds with association request response with "accepted-unknown-config", then
	 The simulated PHD sends the confirmed configuration event report with the standard configuration.
	 The simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (Observed value defined for every object, then MDC_ATTR_TIME_STAMP_ABS). The observations should be reasonable PEF, Personal Best, FEV1 and Reading status values.
	12. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	 In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).
	 In steps 2, 6 and 12 verify that the PHG under test uses I/min as the unit code for PEF and Personal best report, and it uses I as the unit code for FEV1 report (or reports the proper value after conversion to another unit code).
	 In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e., the actual observation may have occurred sometime in the past).

	When automated, it is necessary to be careful about sending these messages back to back since the ability to look at things like an UI may require that there be pauses for operator verification.
Notes	

TP Id		TP/PLT/PHG/CLASS/PF/BV-003			
TP label		Special values. Not a number – fixed format			
Coverage Spec		[ISO/IEEE 11073-10	0421]		
	Testable items	PEF12; M	PersBest12; M	FEV1S12; M	
Test purpose		Check that: The PHG receives a NaN value (fixed format event report) but it does not use this value.			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_018			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x0834).			
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 1(PEF), handle 2 (Personal Best) and handle 3 (FEV1) containing an observation value set to the value for NaN ([exponent 0, mantissa +(2**23 -1) = 0x007FFFFF]).			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		• Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).			
Notes		This test case has been considered as an implicit test case.			

TP Id		TP/PLT/PHG/CLASS/PF/BV-004			
TP label		Special values. Not a number – variable format			
Coverage	Spec	[ISO/IEEE 11073-10421]			
	Testable items	PEF20; C	PersBest20; C	FEV1S20; C	
Test purpose		Check that: The PHG receives a NaN value (variable format event report) but it does not use this value.			
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_018			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x0834).			
Test procedure		1. The simulated PHD sends a confirmed variable event report for handle 1(PEF), handle 2 (Personal Best) and handle 3 (FEV1) containing an observation value set to the value for NaN ([exponent 0, mantissa +(2**23 –1) = 0x007FFFFF]).			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			

Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurements are displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/PF/BV-005				
TP label		Special values. Not at this resolution – fixed format				
Coverage Spec		[ISO/IEEE 11073-10421]				
	Testable items	PEF12; M		PersBest12; M		FEV1S12; M
Test purpos	e	Check that:				
		The PHG receives NRes value (fixed format event report) but it does not use this value.				
Applicability	/	C_MAN_OXP_000 AND C_MAN_OXP_018				
Other PICS						
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x0834).				
Test procedure		The simulated PHD sends a confirmed fixed event report for handle 1(PEF), handle 2 (Personal Best) and handle 3 (FEV1)containing an observation value set to the value for NRes ([exponent 0, mantissa +(2**23) = 0x00800000]).				
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.				
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurements are displayed in some form that indicates it is not a measurement). 				
Notes		This test case has been considered as an implicit test case.				

TP Id		TP/PLT/PHG/CLASS/PF/BV-006			
TP label		Special values. Not at this resolution – variable format			
Coverage	Spec	[ISO/IEEE 11073-10421]			
	Testable items	PEF20; C PersBest20; C FEV1S20; C			
Test purpose		Check that: The PHG receives NRes value (variable format event report) bu it does not use this value.			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_018			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x0834).			
Test procedure		The simulated PHD sends a confirmed variable event report for handle 1(PEF), handle 2 (Personal Best) and handle 3 (FEV1) containing an observation value set to the value for NRes ([exponent 0, mantissa +(2**23) = 0x00800000]).			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			

Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/PF/BV-007			
TP label		Special values. Positive infinity – fixed format			
Coverage	Spec [ISO/IEEE 11073-10421]				
	Testable items	PEF12; M	PersBest12; M	FEV1S12; M	
Test purpose		Check that: The PHG receives a +INFINITY value (fixed format event report) bu it does not use this value.			
Applicability	/	C_MAN_OXP_000 AND C_MAN_OXP_018			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x0834).			
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 1(PEF), handle 2 (Personal Best) and handle 3 (FEV1) containing an observation value set to the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**23 - 2) = 0x007FFFFE]). 			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 			
Notes		This test case has been considered as an implicit test case.			

TP Id		TP/PLT/PHG/CLASS/PF/BV-008			
TP label		Special values. Positive infinity – variable format			
Coverage	Spec	[ISO/IEEE 11073-10421]			
	Testable items	PEF20; C	PersBest20; C	FEV1S20; C	
Test purpose		Check that: The PHG receives a +INFINITY value (variable format event report) but it does not use this value.			
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_018			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x0834).			
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1(PEF), handle 2 (Personal Best) and handle 3 (FEV1) containing an observation value set to the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**23 - 2) = 0x007FFFFE]). 			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			

Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/PF/BV-009			
TP label		Special values. Negative infinity – fixed format			
Coverage	Spec	[ISO/IEEE 11073-1			
	Testable items	PEF12; M	PersBest12; M	FEV1S12; M	
Test purpos	se	Check that:			
		The PHG receives value.	a –INFINITY value (fixed format ev	vent report) but it does not use this	
Applicability	у	C_MAN_OXP_000) AND C_MAN_OXP_018		
Other PICS					
Initial condition The simulated PHD and the PHG under test are in the Operating state configuration (0x0834).		e Operating state using the standard			
Test procedure		The simulated PHD sends a confirmed fixed event report for handle 1(PEF), handle 2 (Personal Best) and handle 3 (FEV1) containing an observation value set to the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**23 – 2) = 0x00800002]).			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as it they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 			
Notes This test case has been considered as an implicit test case.			case.		

TP ld		TP/PLT/PHG/CLASS/PF/BV-010			
TP label	Special values. Negative infinity – variable format				
Coverage	Spec	[ISO/IEEE 11073-10421]	[ISO/IEEE 11073-10421]		
	Testable items	PEF20; C PersBest20; C FEV1S20; C			
Test purpos	se	Check that:			
		The PHG receives a –INFINITY value (variable format event report) but it does not use this value.			
Applicabilit	y	C_MAN_OXP_000 AND C_MA	AN_OXP_018		
Other PICS					
Initial condition The simulated PHD and the PHG under test are in the configuration (0x0834).		HG under test are in the Operation	ng state using the standard		
Test procedure		(Personal Best) and handl	a confirmed variable event repo e 3 (FEV1) containing an observ Y, [exponent 0, mantissa –(2**2	vation value set to the value for	

	The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/PF/BV-011			
TP label		Special values. Reserved – fixed format			
Coverage	Spec	[ISO/IEEE 11073-10421]			
	Testable items	PEF12; M	PersBest12; M	FEV1S12; M	
Test purpos	e	Check that:			
		The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.			
Applicability	,	C_MAN_OXP_000 AND C_M	AN_OXP_018		
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x0834).			
		 The simulated PHD sends a confirmed fixed event report for handle 1(PEF), handle 2 (Personal Best) and handle 3 (FEV1) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**23 – 1) = 0x00800001]). The simulated PHD waits until it receives a confirmation from the PHG under test. 			
Pass/Fail criteria		 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 			
Notes This test case has been considered as an implicit test case.					

TP Id		TP/PLT/PHG/CLASS/PF/BV-012				
TP label Spe		Special values. Reserved – variable format				
Coverage	Spec	[ISO/IEEE 11073-104	[ISO/IEEE 11073-10421]			
	Testable items	PEF20; C	PEF20; C PersBest20; C FEV1S20; C			
Test purpos	e	Check that:				
		The PHG receives a Reserved for future use value (variable format event report) but it does not use this value.				
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_018				
Other PICS						
Initial condition		The simulated PHD a configuration (0x0834		HG under test are in the	Operatir	ng state using the standard

Test procedure	1. The simulated PHD sends a confirmed variable event report for handle 1(PEF), handle 2 (Personal Best) and handle 3 (FEV1) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**23 – 1) = 0x00800001]).
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/PF/BV-013				
TP label		Association procedure PHG PF	=			
Coverage	Spec	[ISO/IEEE 11073-10421]				
	Testable	PF_AssocResp1; M	PF_AssocResp2; M	PF_AssocResp3; M		
	items	PF_AssocResp4; M	PF_AssocResp5; M	PF_AssocResp6; M		
		PF_AssocResp7; M	PF_AssocResp8; M	PF_AssocResp9; M		
		PF_AssocResp10; M	PF_AssocResp11; M	PF_AssocResp12; M		
Test purpos	е	Check that:				
		In the association response me	essage sent by the PHG:			
		The result field shall be set to a P11073-20601.	an appropriate response from the	ose defined in ISO/IEEE		
		[AND]				
		In the DataProtoList structure element, the data protocol identifier shall be set to data-proto-id-20601				
		[AND]				
		The data-proto-info field shall b	e filled in with a PhdAssociation	Information structure		
		[AND]				
		The version of the data exchange protocol shall be set to protocol-version1 (i.e., protocol-version = 0x80000000)				
		[AND]				
		The PHG shall respond with a single selected encoding rule that is supported by both PHD and PHG. The PHG shall support at least the MDER encoding rules				
		[AND]				
		The version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000)				
		[AND]				
		The field functional-units shall have all bits reset except for those relating to a Test Association.				
		[AND]				
		The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000)				
		[AND]				
		The System-Id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier				
		[AND]				

	The field dev-config-id shall be manager-config-response (0)				
	[AND]				
	The field data-req-mode-capab shall be 0				
	[AND]				
	The fields data-req-init-*-count shall be 0				
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_016				
Other PICS					
Initial condition	The PHG is in the Unassociated state.				
Test procedure	The simulated PHD sends an association request to the PHG under test, with the fields:				
	□ protocol-version = '100000000000000000000000000000000000				
	□ encoding-rules= '100000000000000'B				
	□ nomenclature-version = '100000000000000000000000000000000000				
	☐ functional-units = '00000000000000000000000000000000000				
	□ system-type = '000000010000000000000000000000000000				
	☐ dev-config-id = 16481				
	☐ data-rep-mode-capab =				
	data_req_mode_flags= '0000000000001'B				
	data_req_init_agent_count = 1				
	data_req_init_manager_count = 0				
	□ option-list.length= 0				
	The PHG under test sends an association response. The fields of interest are:				
	a. APDU Type				
	in field-length = 2 bytes				
	field-value = 0xE3 0x00 (AareApdu)				
	b. Result				
	☐ field-type = AssociateResult				
	ield-length = 2 bytes				
	field-value = One of the following:				
	 If association is accepted, field-value= 0x00 0x00. 				
	 If association is rejected-permanent, field-value= 0x00 0x01. 				
	 If association is rejected-transient, field-value= 0x00 0x02. 				
	 If association is accepted-unknown-config, field-value= 0x00 0x03. 				
	 If association is rejected-no-common-protocol, field-value= 0x00 0x04. 				
	 If association is rejected-no-common-parameter, field-value= 0x00 0x05. 				
	If association is rejected—unknown = 0x00 0x06.				
	If association is rejected-unauthorized, field-value= 0x00 0x07.				
	 If association is rejected–unsupported-assoc-version, field-value= 0x00 0x08. 				
	 selected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data-proto-info(defined by data-proto-id)) 				
	d. data-proto-id				
	☐ field-type = DataProtold				
	☐ field-length = 2 bytes				

	☐ field-value= 0x50 0x79 (20601)
e.	protocol-version
	☐ field-type = Protocol Version
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value= 0x80 0x00 0x00 0x00
f.	encoding-rules
	☐ field-type = EncodingRules
	ield-length = 2 bytes (BITS-16)
	ifield-value= depends on the encoding rules supported/selected, but only one can be supported at a time
g.	nomenclature version
	☐ field-type = NomenclatureVersion
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value= Bit 0 must be set (nom-version1)
h.	functional units
	☐ field-type = FunctionalUnits
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value =
	■ Bit 0 must be 0
	 Bits 1 and 2 may be set
	 The rest of the bits must not be set
i.	system type
	☐ field-type = SystemType
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
j.	system-id
	☐ field-type = OCTET STRING
	☐ field-length = 8 bytes
	☐ field-value = (EUI-64 manufacturer and device)
k.	dev-config-id
	☐ field-type = Configld
	☐ field-length = 2 bytes
	☐ field-value = 0x00 0x00 (manager-config-response)
l.	data-req-mode-flags (DataReqModeCapab)
	☐ field-type = DataReqModeFlags
	☐ field-length = 2 bytes
	$\Box \text{field-value} = 0x00 \ 0x00$
	☐ PHG response to data-req-mode-flags is always 0.
m.	data-req-init-agent-count (DataReqModeCapab)
	☐ field-type = INT-U8
	☐ field-length = 1 byte
	☐ field-value = 0x00
n.	data-req-init-manager-count (DataReqModeCapab)
	☐ field-type = INT-U8

	☐ field-length = 1 byte ☐ field-value = 0x00		
Pass/Fail criteria	All checked values are as specified in the test procedure.		
Notes	Value for protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].		
	data-req-init-agent-count verification has been updated according to IEEE PHD errata. See http://continua.plugfests.com/show_bug.cgi?id=787 for further details.		

A.13 Subgroup 2.3.12: Body composition analyser (BCA)

A.15 Su	<i>.</i>			uy composition a		
TP ld		TP/	PLT/F	PHG/CLASS/BCA/BV-	000	
TP label			Configuration Event Report. Body Composition Analyser standard configuration 2000			
Coverage	coverage Spec [ISO/IEE			E 11073-20601-2015 <i>A</i>	and [ISO/IEEE 11073-20601-2	2016C]
	Testable items	Cor	nfEver	ntRep 18;M		
Test purpose	•	Che	eck th	at:		
		A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.				
		ente	er the		uest the PHD to send the standa check attributes from the MDS	
Applicability		C_N	MAN_	OXP_000 AND C_MA	.N_OXP_027	
Other PICS		C_N	MAN_	OXP_085		
Initial conditi	on	The	e simu	lated PHD and the PH	IG under test are in the Unassoc	ciated state.
Test procedu	ıre	The simulated PHD sends an association request to the PHG under test with dev-configid set to 0x07D0 (BCA).				
		2.	The	PHG under test respo	nds with an association respons	e, the field of interest is:
			a.	Result		
				☐ field-type = INT-U	116	
				☐ field-length = 2 by	rtes	
				$\Box \text{field-value} = 0 \times 00$	0x00 (accepted) or 0x00 0x03 ((accepted-unknown-config)
		If the result of the association response was "accepted-unknown-config"				
		3. The simulated PHD sends a configuration event report with config-report-id set to 0x07D0.				
		4.	The	PHG under test must	respond with:	
			a.	APDU Type		
				☐ field-length = 2 by	rtes	
				$\Box \text{field-value} = 0 \times E7$	7 0x00 (PrstApdu)	
			b.	Invoke-id		
				☐ field-type = INT-U	116	
				☐ field-length = 2 by	rtes	
				field-value = it mu message.	ist be the same as the invoke-id	of the simulated PHD's

	c. Obj-Handle:
	☐ field-type = HANDLE
	☐ field-length = 2 bytes
	☐ field-value = 0x00 0x00
	d. Event-time:
	☐ field-type = INT-U32
	☐ field-length = 4 bytes
	☐ field-value: 0xXX 0xXX
	e. Event-type:
	☐ field-length = 2 bytes
	☐ field-value= MDC_NOTI_CONFIG
	f. The following six bytes indicate:
	☐ Event-replay-info.length (2 bytes)
	 ConfigReportRsp.config-report-id: it must be the same as config-report-id of the simulated PHD's message
	☐ ConfigReportRsp.config-result: One of:
	accepted-config: 0x00 0x00
	5. IF C_MAN_OXP_085 THEN:
	 The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-lisset to 0 to indicate all attributes.
	b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.
	c. Once in the Operating state the PHG is forced to enable the scanner object.
	Wait until the Operating state is reached in both cases.
	6. The simulated PHD sends a fixed event report with one measurement.
Pass/Fail criteria	The PHG under test must respond either to the association request with an "accepted" message or to the Configuration Event Report with an "accepted-config".
	The measurement is correctly presented.
Notes	The PHG can request Get MDS while they are in the Associated state.

TP ld		TP/PLT/PHG/CLASS/BCA/BV-001	
TP label Maximum APDU size: Body Composition Analyser		Maximum APDU size: Body Composition Analyser	
Coverage Spec [ISO/IE		[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]	
	Testable items	CommonCharac 4; M	
	Spec	[ISO/IEEE 11073-10420]	
	Testable items	CommChar1; M	
Test purpose		Check that:	
		If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with error (roer) code of protocol-violation.	an
		The PHG's receive buffer shall be at least as large as the largest buffer specified in the	

	specializations the PHG supports. The buffer size limitations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_027
Other PICS	
Initial condition	The PHG under test is in the Operating state.
Test procedure	The simulated PHD sends a Confirmed variable event report:
	a. ScanReportInfoVar. obs_scan_var:
	☐ Count = 2
	☐ Length = 7696
	<pre>ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 61441 attribute-value: '00(7670 bytes) 00'0 } } ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 2636 (MDC_ATTR_NU_VAL_OBS_BASIC) attribute-value: 70 } } }</pre>
	2. Check the response of the PHG under test.
	3. The simulated PHD sends a Confirmed fixed event report with one measurement.
	4. Check the response of the PHG under test.
Pass/Fail criteria	In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
	In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
Notes	

TP Id		TP/PLT/PHG/CLASS/BCA/BV-002		
TP label		Attribute-Value-Map. Order change		
Coverage	Spec	[ISO/IEEE 11073-10420]		
	Testable items	WeightNumClass 21; M	BodyHeight22; M	BodyFat23; M
Test purpose			Body Weight] the [Attribute-Value ATTR_NU_VAL_OBS_SIMP, then	
		[AND] For [Standard-Configuration,	Body Height] the [Attribute-Value	

	MDC_ATTR_TIME_STAMP_ABS.		
	[AND]		
	For [Standard-Configuration, Body Fat object] the [Attribute-Value-Map] attribute shall be present and its value shall be MDC_ATTR_NU_VAL_OBS_SIMP,		
	then MDC_ATTR_TIME_STAMP_ABS.		
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_027		
Other PICS			
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure	The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of:		
	MDC_ATTR_NU_VAL_OBS_SIMP then MDC_ATTR_TIME_STAMP_ABS for Body Weight Object		
	MDC_ATTR_NU_VAL_OBS_SIMP then MDC_ATTR_TIME_STAMP_ABS for Body Height Object		
	MDC_ATTR_NU_VAL_OBS_SIMP then MDC_ATTR_TIME_STAMP_ABS for Body Fat Object		
	2. The simulated PHD waits until it receives a confirmation.		
	3. The simulated PHD sends a confirmed variable event report to change the Attribute- Value-Map configuration of handle 1 (Body Weight Object), of handle 2 (Body Height object) and of handle 3 (Body Fat Object) to reverse the values to:		
	MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_NU_VAL_OBS_SIMP for Body Weight Object		
	MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_NU_VAL_OBS_SIMP for Body Height Object		
	MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_NU_VAL_OBS_SIMP for Body Fat Object		
	4. The simulated PHD waits until it receives a confirmation.		
	Send a confirmed fixed format event report with the date (absolute-time-stamp) by a measurement data for every object.		
	6. The simulated PHD waits until it receives a confirmation.		
	7. The simulated PHD sends an association release request (normal).		
	8. The simulated PHD waits until there is an association release response.		
	9. The simulated PHD sends an association request using the same standard configuration that was used previously.		
	 If the PHG under test responds with association request response with "accepted- unknown-config", then 		
	 The simulated PHD sends the confirmed configuration event report with the standard configuration. 		
	 The simulated PHD waits until there is a confirmation to the configuration event report that was sent. 		
	11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (Observed value defined for every object, then MDC_ATTR_TIME_STAMP_ABS). The observations should be reasonable Body Weight Body Height and Body Fat.		
	12. The simulated PHD waits until it receives a confirmation.		

Pass/Fail criteria	• In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).
	• In steps 2, 6 and 12 verify that the PHG under test uses kg as the unit code for Body Weight, it uses cm as the unit code for Body Height, and it uses % as the unit code for Body Fat report (or reports the proper value after conversion to another unit code).
	• In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e., the actual observation may have occurred sometime in the past).
	When automated, it is necessary to be careful about sending these messages back to back since the ability to look at things like an UI may require that there be pauses for operator verification.
Notes	

TP ld		TP/PLT/PHG/CLASS/BCA/BV-003		
TP label		Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map		
Coverage	Spec	[ISO/IEEE 11073-10420]		
	Testable items	WeightNumClass 21;M		
Test purpose	•	Check that:		
		For [Standard-Configuration, Body Weight] the [Attribute-Value-Map] attribute shall be present and its value shall be MDC_ATTR_NU_VAL_OBS_SIMP, then MDC_ATTR_TIME_STAMP_ABS		
		PHG accepts the measurements (fixed format event report) and shows them correctly when the unit-code is changed.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_027 AND C_MAN_BCA_001		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration. (Body Weight Numeric standard configuration Unit code attribute is set to MDC_DIM_KILO_G)		
Test procedure		The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 1 (Body Weight Object) to set the values to: MDC_ATTR_NU_VAL_OBS_SIMP, MDC_ATTR_UNIT_CODE, then MDC_ATTR_TIME_STAMP_ABS.		
		2. The simulated PHD waits until it receives a confirmation.		
		3. Send a confirmed fixed format event report with the new data layout. For the unit-code attribute, use pounds MDC_DIM_LB (1760).		
		4. The simulated PHD waits until it receives a confirmation.		
		5. The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_SIMP attribute.		
		6. The simulated PHD waits until it receives a confirmation.		

Pass/Fail criteria	•	In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).
	•	In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement is displayed properly).
	•	In steps 4 and 6, verify that the PHG under test uses pounds as the unit code for the measurement reports.
Notes		

TP ld		TP/PLT/PHG/CLASS/BCA/BV-004		
TP label		Unit-Code Body Weight. Change from default kilograms to pounds – fixed format observation.		
Coverage	Spec	[ISO/IEEE 11073-10420]		
_	Testable items	WeightNumClass 19; M		
Test purpose)	Check that:		
		For [Standard-Configuration] the [Unit-Code] attribute shall be present		
		The value of the [Unit-Code] attribute shall be MDC_DIM_KILO_G.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_027 AND C_MAN_BCA_001		
Other PICS				
Initial conditi	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedu	ıre	The simulated PHD sends a confirmed variable event report to change the Unit-Code of handle 1 (Body Weight Object) to pounds nomenclature code MDC_DIM_LB (1760).		
		2. The simulated PHD waits until it receives a confirmation.		
		3. Send a confirmed fixed format event report using a measurement in pounds followed by date and time stamp.		
		4. The simulated PHD waits until it receives a confirmation.		
		5. The simulated PHD sends an association release request (normal).		
		6. The simulated PHD waits until it receives an association release response.		
		7. The simulated PHD sends an association request using the same configuration that was used initially.		
		8. If the PHG under test responds with association request response with "accepted-unknown-config", then		
		 The simulated PHD sends the confirmed configuration event report with the standard configuration. 		
		 The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent. 		
		9. The simulated PHD sends a fixed event report with an observation in kilograms followed by date and time stamp.		
		10. The simulated PHD waits until it receives a confirmation.		

Pass/Fail criteria	 In step 4, verify that the PHG under test is able to accept the data properly and applies pounds to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units). In step 10, verify that the PHG under test is able to accept the data properly and applies kilograms to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
Notes	

TP ld		TP/PLT/PHG/CLASS/BCA/BV-005
TP label		Unit-Code Body Weight. Do not change from default kilograms to pounds – fixed format observation
Coverage	Spec	[ISO/IEEE 11073-10420]
	Testable items	WeightNumClass 19; M
Test purpose	•	Check that:
		For [Standard-Configuration] the [Unit-Code] attribute shall be present
		The value of the [Unit-Code] attribute shall be MDC_DIM_KILO_G.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_027 AND (NOT(C_MAN_BCA_001))
Other PICS		
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedu	ıre	The simulated PHD sends a confirmed variable event report to change the Unit-Code of handle 1 (Body Weight Object) to pounds nomenclature code MDC_DIM_LB (1760).
		2. The simulated PHD waits until it receives a confirmation, roer message, abrt message, release association or rorj message or until TO cer-mds expires.
		3. If the PHG has sent a confirmation in step 2, send a confirmed fixed format event report using a measurement in pounds followed by date and time stamp.
		4. The simulated PHD waits until it receives a confirmation, roer message, abrt message, release association or rorj message or TO cer-mds expires.
		5. If the PHG has sent a confirmation in step 4, ask to the operator if the measurements have been properly received and displayed.
Pass/Fail criteria		In step 2, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message.
		• In step 4, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message.
		In step 5, verify that measurements do not appear, or if they do appear, they are somehow designated as 'unsupported' data.
Notes		

TP Id		TP/PLT/PHG/CLASS/BCA/BV-006	
TP label		Unit-Code Body Weight. Use default kilograms – variable format observation	
Coverage	Spec	[ISO/IEEE 11073-10420]	
	Testable items	WeightNumClass 19; M	
Test purpose		Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present The value of the [Unit-Code] attribute shall be MDC_DIM_KILO_G	
Applicability	•	C_MAN_OXP_000 AND C_MAN_OXP_027	
Other PICS			
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.	
Test procedure		 Send a confirmed variable format event report using a measurement in kilograms. The simulated PHD waits until it receives a confirmation. 	
Pass/Fail criteria		Verify that the PHG under test is able to accept the data properly and applies kilograms to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).	
Notes			

TP ld		TP/PLT/PHG/CLASS/BCA/BV-007		
TP label		Unit-Code Body Weight. Change from default kilograms to pounds – variable format observation		
Coverage	Spec	[ISO/IEEE 11073-10420]		
	Testable items	WeightNumClass 19; M		
Test purpose	e	Check that:		
		For [Standard-Configuration] the [Unit-Code] attribute shall be present		
		The value of the [Unit-Code] attribute shall be MDC_DIM_KILO_G		
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_027 AND C_MAN_BCA_001		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		Send a confirmed variable format event report to set the unit code to pounds MDC_DIM_LB (1760) for handle 1 (Body Weight Object) and a measurement in pounds.		
		2. The simulated PHD waits until it receives a confirmation.		
		3. Send a second confirmed variable format event report with just a measurement in pounds (i.e., do not transmit the unit-code attribute in the event report).		
		4. The simulated PHD waits until it receives a confirmation.		
		5. The simulated PHD sends an association release request (normal).		
		6. The simulated PHD waits until it receives an association release response.		

Notes			
	•	In step 10, verify that the PHG under test is able to accept the data properly and applies kilograms to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).	
Pass/Fail criteria	•	In steps 2 and 4, verify that the PHG under test is able to accept the data properly and applies pounds to the observations (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).	
	10.	The simulated PHD waits until it receives a confirmation.	
	9.	The simulated PHD sends a confirmed variable event report with an observation in kilograms followed by date and time stamp (i.e., do not send the unit-code attribute it should be set to kilograms by the standard configuration).	
		 The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent. 	
		 The simulated PHD sends the confirmed configuration event report with the standard configuration. 	
	8.	If the PHG under test responds with association request response with "accepted-unknown-config", then	
	7.	The simulated PHD sends an association request using the same configuration that was used initially.	

TP ld		TP/PLT/PHG/CLASS/BCA/BV-008			
TP label		Unit-Code Body Height. Change from default centimetres to inches – fixed format observation			
Coverage	Spec	[ISO/IEEE 11073-10420]			
	Testable items	BodyHeight20; M			
Test purpos	е	Check that:			
		For [Standard-Configuration] the [Unit-Code] attribute shall be present			
		The value of the [Unit-Code] attribute shall be MDC_DIM_CENTI_M.			
Applicability	/	C_MAN_OXP_000 AND C_MAN_OXP_027 AND C_MAN_BCA_002			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test proced	ure	The simulated PHD sends a confirmed variable event report to change the Unit-Code of handle 2 (Body Height Object) to inches nomenclature code MDC_DIM_INCH (1376).			
		2. The simulated PHD waits until it receives a confirmation.			
		3. Send a confirmed fixed format event report using a measurement in inches followed by date and time stamp.			
		4. The simulated PHD waits until it receives a confirmation.			
		5. The simulated PHD sends an association release request (normal).			
		6. The simulated PHD waits until it receives an association release response.			
		The simulated PHD sends an association request using the same configuration that was used initially.			
		 If the PHG under test responds with association request response with "accepted- unknown-config", then 			
		 The simulated PHD sends the confirmed configuration event report with the standard configuration. 			

	The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.	
	The simulated PHD sends a fixed event report with an observation in centimetres followed by date and time stamp.	
	10. The simulated PHD waits until it receives a confirmation.	
Pass/Fail criteria	• In step 4, verify that the PHG under test is able to accept the data properly and applies inches to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).	
	 In step 10, verify that the PHG under test is able to accept the data properly and applies centimetres to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units). 	
Notes		

TP ld		TP/PLT/PHG/CLASS/BCA/BV-009			
TP label		Unit-Code Body Height. Do not change from default centimetres to inches – fixed format observation			
Coverage	Spec	[ISO/IEEE 11073-10420]			
	Testable items	BodyHeight20; M			
Test purpose		Check that:			
		For [Standard-Configuration] the [Unit-Code] attribute shall be present			
		The value of the [Unit-Code] attribute shall be MDC_DIM_CENTI_M			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_027 AND (NOT(C_MAN_BCA_002))			
Other PICS					
Initial conditi	on	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedu	re	The simulated PHD sends a confirmed variable event report to change the Unit-Code of handle 2 (Body Height Object) to inches nomenclature code MDC_DIM_INCH (1376).			
		2. The simulated PHD waits until it receives a confirmation, roer message, abrt message, release association or rorj message or until TO cer-mds expires.			
		3. If the PHG has sent a confirmation in step 2, send a confirmed fixed format event report using a measurement in inches followed by date and time stamp.			
		4. The simulated PHD waits until it receives a confirmation, roer message, abrt message, release association or rorj message or TO cer-mds expires.			
		5. If the PHG has sent a confirmation in step 4, ask to the operator if the measurements have been properly received and displayed.			
Pass/Fail criteria		In step 2, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message.			
		In step 4, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message.			
		In step 5, verify that measurements do not appear, or if they do appear, they are somehow designated as 'unsupported' data.			
Notes					

TP Id		TP/PLT/PHG/CLASS/BCA/BV-010		
TP label		Unit-Code Body Height. Use default centimetres – variable format observation		
Coverage Spec [ISO/IEEE 11073-10420]		[ISO/IEEE 11073-10420]		
	Testable items	BodyHeight20; M		
Test purpose		Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present The value of the [Unit-Code] attribute shall be MDC_DIM_CENTI_M		
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_027		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		 Send a confirmed variable format event report using a measurement in centimetres. The simulated PHD waits until it receives a confirmation. 		
Pass/Fail criteria		Verify that the PHG under test is able to accept the data properly and applies centimetres to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).		
Notes				

TP Id		TP/PLT/PHG/CLASS/BCA/BV-011		
TP label		Unit-Code Body Height. Change from default centimetres to inches – variable format observation		
Coverage	Spec	[ISO/IEEE 11073-10420]		
	Testable items	BodyHeight20; M		
Test purpos	е	Check that:		
		For [Standard-Configuration] the [Unit-Code] attribute shall be present		
		The value of the [Unit-Code] attribute shall be MDC_DIM_CENTI_M		
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_027 AND C_MAN_BCA_002		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		 Send a confirmed variable format event report to set the unit code to inches MDC_DIM_INCH (1376) for handle 2 (Body Height Object) and a measurement in inches. 		
		2. The simulated PHD waits until it receives a confirmation.		
		3. Send a second confirmed variable format event report with just a measurement in inches (i.e., do not transmit the unit-code attribute in the event report).		
		4. The simulated PHD waits until it receives a confirmation.		
		5. The simulated PHD sends an association release request (normal).		

	6.	The simulated PHD waits until it receives an association release response.	
	7.	The simulated PHD sends an association request using the same configuration that was used initially.	
	8.	If the PHG under test responds with association request response with "accepted-unknown-config", then	
		 The simulated PHD sends the confirmed configuration event report with the standard configuration. 	
		 The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent. 	
	9.	The simulated PHD sends a confirmed variable event report with an observation in centimetres followed by date and time stamp (i.e., do not send the unit-code attribute it should be set to kilograms by the standard configuration).	
	10.	The simulated PHD waits until it receives a confirmation.	
Pass/Fail criteria	•	In steps 2 and 4, verify that the PHG under test is able to accept the data properly and applies inches to the observations (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).	
	•	In step 10, verify that the PHG under test is able to accept the data properly and applies centimetres to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).	
Notes			

TP Id		TP/PLT/PHG/CLASS/BCA/BV-012			
TP label		Unit-Code Body Fat. Change from default % to kilograms/pounds – fixed format observation			
Coverage	Spec	[ISO/IEEE 11073-10420]			
	Testable items	BodyFat21; M			
Test purpose		Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present The value of the [Unit-Code] attribute shall be MDC_DIM_PERCENT			
Applicability		C MAN OXP 000 AND C MAN OXP 027 AND C MAN BCA 003			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		 The simulated PHD sends a confirmed variable event report to change the Unit-Code of handle 3 (Body fat Object) to kilograms nomenclature code MDC_DIM_KILO_G (1731). 			
		2. The simulated PHD waits until it receives a confirmation.			
		 Send a confirmed fixed format event report using a measurement in kilograms followed by date and time stamp. 			
		4. The simulated PHD waits until it receives a confirmation.			
		5. The simulated PHD sends a confirmed variable event report to change the Unit-Code of handle 3 (Body fat Object) to pounds nomenclature code MDC_DIM_LB (1760).			
		6. The simulated PHD waits until it receives a confirmation.			
		 Send a confirmed fixed format event report using a measurement in kilograms followed by date and time stamp. 			
		8. The simulated PHD waits until it receives a confirmation.			

	9. The simulated PHD sends an association release request (normal).
	10. The simulated PHD waits until it receives an association release response.
	11. The simulated PHD sends an association request using the same configuration that was used initially.
	12. If the PHG under test responds with association request response with "accepted-unknown-config", then
	 The simulated PHD sends the confirmed configuration event report with the standard configuration.
	 The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.
	13. The simulated PHD sends a fixed event report with an observation in % followed by date and time stamp.
	14. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	 In step 4, verify that the PHG under test is able to accept the data properly and applies kilograms to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
	• In step 8, verify that the PHG under test is able to accept the data properly and applies pounds to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
	• In step 14, verify that the PHG under test is able to accept the data properly and applies % to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
Notes	

TP Id		TP/PLT/PHG/CLASS/BCA/BV-013		
TP label		Unit-Code Body Fat. Do not change from default % to kilograms/pounds – fixed format observation		
Coverage	Spec	[ISO/IEEE 11073-10420]	[ISO/IEEE 11073-10420]	
	Testable items	BodyFat21; M		
Test purpos	е	Check that:		
		For [Standard-Configuration] the [Unit-Code] attribute shall be present		
		The value of the [Unit-Code] attribute shall be MDC_DIM_PERCENT		
Applicability		C_MAN_OXP_000 AND C_MA	AN_OXP_027 AND (NOT(C_MAI	N_BCA_003))
Other PICS				
Initial condition		The simulated PHD and the Ph configuration.	HG under test are in the Operatir	ng state using the standard

Test procedure		The simulated PHD sends a confirmed variable event report to change the Unit-Code of handle 3 (Body Fat Object) to kilograms nomenclature code MDC_DIM_KILO_G (1731).
	2. The simulated PHD waits until it receives a confirmation, roer message, abrt message release association or rorj message or until TO cer-mds expires.	
	3.	If the PHG has sent a confirmation in step 2, send a confirmed fixed format event report using a measurement in inches followed by date and time stamp.
	4.	The simulated PHD waits until it receives a confirmation, roer message, abrt message, release association or rorj message or TO cer-mds expires.
	5.	If the PHG has sent a confirmation in step 4, ask to the operator if the measurements have been properly received and displayed.
Pass/Fail criteria	•	In step 2, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message.
	•	In step 4, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message.
	•	In step 5, verify that measurements do not appear, or if they do appear, they are somehow designated as 'unsupported' data.
Notes		

TP Id		TP/PLT/PHG/CLASS/BCA/BV-014		
TP label		Unit-Code Body Fat. Use default % – variable format observation		
Coverage	Spec	[ISO/IEEE 11073-10420]		
	Testable items	BodyFat21; M		
Test purpose		Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present The value of the [Unit-Code] attribute shall be MDC_DIM_PERCENT		
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_027		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		 Send a confirmed variable format event report using a measurement in centimetres. The simulated PHD waits until it receives a confirmation. 		
Pass/Fail criteria		Verify that the PHG under test is able to accept the data properly and applies centimetres to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).		
Notes				

TP Id	TP/PLT/PHG/CLASS/BCA/BV-015
TP label	Unit-Code Body Fat. Change from default % to kilograms/pounds – variable format observation

Coverage	Spec	[ISO/IEEE 11073-10420]	
	Testable items	BodyFat21; M	
Test purpose		Check that:	
		For [Standard-Configuration] the [Unit-Code] attribute shall be present	
		The value of the [Unit-Code] attribute shall be MDC_DIM_PERCENT	
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_027 AND C_MAN_BCA_003	
Other PICS			
Initial conditi	on	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.	
Test procedu	re	 Send a confirmed variable format event report to set the unit code to kilograms MDC_DIM_KILO_G (1731) for handle 3 (Body Fat Object) and a measurement in kilograms. 	
		2. The simulated PHD waits until it receives a confirmation.	
		3. Send a second confirmed variable format event report with just a measurement in kilograms (i.e., do not transmit the unit-code attribute in the event report).	
		4. The simulated PHD waits until it receives a confirmation.	
		5. Send a confirmed variable format event report to set the unit code to pounds MDC_DIM_LB (1760) for handle 3 (Body Fat Object) and a measurement in pounds.	
		6. The simulated PHD waits until it receives a confirmation.	
		7. Send a second confirmed variable format event report with just a measurement in pounds (i.e., do not transmit the unit-code attribute in the event report).	
		8. The simulated PHD waits until it receives a confirmation.	
		9. The simulated PHD sends an association release request (normal).	
		10. The simulated PHD waits until it receives an association release response.	
		11. The simulated PHD sends an association request using the same configuration that was used initially.	
		12. If the PHG under test responds with association request response with "accepted-unknown-config", then	
		 The simulated PHD sends the confirmed configuration event report with the standard configuration. 	
		 The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent. 	
		13. The simulated PHD sends a confirmed variable event report with an observation in % followed by date and time stamp (i.e., do not send the unit-code attribute it should be set to kilograms by the standard configuration).	
		14. The simulated PHD waits until it receives a confirmation.	
Pass/Fail crit	eria	• In steps 2 and 4, verify that the PHG under test is able to accept the data properly and applies kilograms to the observations (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).	
		• In steps 6 and 8, verify that the PHG under test is able to accept the data properly and applies pounds to the observations (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).	
		• In step 14, verify that the PHG under test is able to accept the data properly and applies centimetres to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).	
Notes			

TP Id		TP/PLT/PHG/CLASS/BCA/BV-016			
TP label		Special values. Not a number – fixed format			
Coverage	Spec	[ISO/IEEE 11073-10420]	[ISO/IEEE 11073-10420]		
	Testable items	WeightNumClass 21; M	BodyHeight22; M	BodyFat23; M	
Test purpose	е	Check that: The PHG receives a NaN va	alue (fixed format event report) but	it does not use this value.	
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_027			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 1 (Body Weight), handle 2 (Body Height) and handle 3 (Body Fat) containing an observation with the value for NaN ([exponent 0, mantissa +(2**23 -1) = 0x007FFFFF]) and a time stamp. The simulated PHD waits until it receives a confirmation from the PHG under test. 			
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).			
Notes		This test case has been considered as an implicit test case.			

TP ld		TP/PLT/PHG/CLASS/BCA/BV-017			
TP label		Special values. Not a number – variable format			
Coverage	Spec	[ISO/IEEE 11073-10420]			
	Testable items	WeightNumClass 26; M	BodyHeight38; M	BodyFat39; M	
Test purpos	se .	Check that:			
		The PHG receives a NaN value (variable format event report) but it does not use this value.			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_027			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		1. The simulated PHD sends a confirmed variable event report for handle 1 (Body Weight), handle 2 (Body Height) and handle 3 (Body Fat) containing an observation with the value for NaN ([exponent 0, mantissa +(2**23 -1) = 0x007FFFFF]).			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		if they were an actual r	der test is able to accept the data, be neasurement (e.g., if there is a UI, on that indicates it is not a measurement.	verify that the measurement is	

Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/BCA/BV-018			
TP label		Special values. Not at this resolution – fixed format			
Coverage	Spec	[ISO/IEEE 11073-10420]	[ISO/IEEE 11073-10420]		
	Testable items	WeightNumClass 21; M	BodyHeight22; M	BodyFat23; M	
Test purpos	se	Check that:			
		The PHG receives NRes value (fixed format event report) but it does not use this value.			
Applicability	у	C_MAN_OXP_000 AND C_MAN_OXP_027			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 1 (Body Weight), handle 2 (Body Height) and handle 3 (Body Fat) containing an observation with the value for NRes ([exponent 0, mantissa +(2**23) = 0x00800000]) and a time stamp.			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 			
Notes		This test case has been considered as an implicit test case.			

TP ld		TP/PLT/PHG/CLASS/BCA/BV-019			
TP label		Special values. Not at this resolution – variable format			
Coverage	Spec	[ISO/IEEE 11073-10420]			
	Testable items	WeightNumClass 26; M	BodyHeight38; M	BodyFat39; M	
Test purpose	е	Check that:			
		The PHG receives NRes value (variable format event report) but it does not use this value.			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_027			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Body Weight), handle 2 (Body Height) and handle 3 (Body Fat) containing an observation with the value for NRes ([exponent 0, mantissa +(2**23) = 0x00800000]). 			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		verify that the measurement is	

Notes	This test case has been considered as an implicit test case.	

TP ld		TP/PLT/PHG/CLASS/BCA/BV-020			
TP label		Special values. Positive infinity – fixed format			
Coverage	Spec	[ISO/IEEE 11073-10420]	ISO/IEEE 11073-10420]		
	Testable items	WeightNumClass 21; M	BodyHeight22; M	BodyFat23; M	
Test purpos	e	Check that:			
		The PHG receives a +INFINITY value (fixed format event report) but it does not use this value.			
Applicability	/	C_MAN_OXP_000 AND C_MAN_OXP_027			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 1 (Body Weight), handle 2 (Body Height) and handle 3 (Body Fat) containing an observation with the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**23 –2) = 0x007FFFFE]) and a time stamp.			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 			
Notes		This test case has been considered as an implicit test case.			

TP ld		TP/PLT/PHG/CLASS/BCA/BV-021			
TP label		Special values. Positive in	Special values. Positive infinity – variable format		
Coverage	Spec	[ISO/IEEE 11073-10420]			
	Testable items	WeightNumClass 26; M	BodyHeight38; M	BodyFat39; M	
Test purpos	se	Check that:			
		The PHG receives a +INFINITY value (variable format event report) but it does not use this value.			
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_027			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		1. The simulated PHD sends a confirmed variable event report for handle 1 (Body Weight), handle 2 (Body Height) and handle 3 (Body Fat) containing an observation with the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**23 -2) = 0x007FFFFE]).			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		Verify that the PHG ur	nder test is able to accept the data,	but does not use the values as if	

	they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/BCA/BV-022				
TP label		Special values. Negative infinity – fixed format				
Coverage	Spec	[ISO/IEEE 11073-10420]				
	Testable items	WeightNumClass 21; M	BodyHeight22; M	BodyFat23; M		
Test purpose		Check that:				
		The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_027				
Other PICS						
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.				
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 1 (Body Weight), handle 2 (Body Height) and handle 3 (Body Fat) containing an observation with the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**23 –2) = 0x00800002]) and a time stamp.				
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.				
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 				
Notes		This test case has been considered as an implicit test case.				

TP ld		TP/PLT/PHG/CLASS/BCA/BV-023				
TP label		Special values. Negative infinity – variable format				
Coverage	Spec	[ISO/IEEE 11073-10420]				
	Testable items	WeightNumClass 26; M	BodyHeight38; M	BodyFat39; M		
Test purpose		Check that:				
		The PHG receives a –INFINITY value (variable format event report) but it does not use this value.				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_027				
Other PICS						
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.				
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Body Weight), handle 2 (Body Height) and handle 3 (Body Fat) containing an observation with the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**23 –2) = 0x00800002]). 				

	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/BCA/BV-024					
TP label		Special values. Reserved – fixed format					
Coverage	Spec	[ISO/IEEE 11073-10420]	ISO/IEEE 11073-10420]				
	Testable items	WeightNumClass 21; M	BodyHeight22; M	BodyFat23; M			
Test purpose	е	Check that:					
		The PHG receives a Reservate this value.	The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.				
Applicability	,	C_MAN_OXP_000 AND C_	_MAN_OXP_027				
Other PICS							
		The simulated PHD and the configuration.	PHG under test are in the Operati	ng state using the standard			
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 1 (Body Weight), handle 2 (Body Height) and handle 3 (Body Fat) containing an observation with the value that is reserved (Reserved for future use, [exponent 0, mantissa –(2**23–1) = 0x00800001]) and a time stamp.					
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.					
Pass/Fail criteria		 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 					
Notes This test case has be		This test case has been con	nsidered as an implicit test case.				

TP ld		TP/PLT/PHG/CLASS/BCA/BV-025				
TP label		Special values. Reserved – variable format				
Coverage	Spec	[ISO/IEEE 11073-10420]	[ISO/IEEE 11073-10420]			
	Testable items	WeightNumClass 26; M	BodyHeight38; M	BodyFat39; M		
Test purpose		Check that:				
		The PHG receives a Reserved for future use value (variable format event report) but it does not use this value.				
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_027				
Other PICS						
Initial condition		The simulated PHD and the configuration.	e PHG under test are in the C	Operating state using the standard		

Test procedure	1. The simulated PHD sends a confirmed variable event report for handle 1 (Body Weight), handle 2 (Body Height) and handle 3 (Body Fat) containing an observation with the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**23–1) = 0x00800001]).
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/BCA/BV-026				
TP label		Association procedure PHG BCA				
Coverage	Spec	[ISO/IEEE 11073-10420]				
	Testable	ManProcAsResp1; M	ManProcAsResp2; M	ManProcAsResp3; M		
	items	ManProcAsResp4; M	ManProcAsResp5; M	ManProcAsResp6; M		
		ManProcAsResp7; M	ManProcAsResp8; M	ManProcAsResp9; M		
		ManProcAsResp10; M	ManProcAsResp11; M	ManProcAsResp12; M		
		ManProcAsResp13; C				
Test purpose		Check that: In the association response message sent by the PHG: The result field shall be set to an appropriate response from those defined in ISO/IEEE P11073-20601. [AND] In the DataProtoList structure element, the data protocol identifier shall be set to data-proto-id-20601 [AND] The data-proto-info field shall be filled in with a PhdAssociationInformation structure [AND] The version of the data exchange protocol shall be set to protocol-version1 (i.e., protocol-version = 0x80000000) [AND] The PHG shall respond with a single selected encoding rule that is supported by both PHD and PHG. The PHG shall support at least the MDER encoding rules [AND] The version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000) [AND] The field functional-units shall have all bits reset except for those relating to a Test Association. [AND] The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000) [AND]				

	[AND]				
	The field dev-config-id shall be manager-config-response (0)				
	[AND]				
	The field data-req-mode-capab shall be 0				
	[AND]				
	The fields data-req-init-*-count shall be 0				
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_027				
Other PICS					
Initial condition	The PHG is in the Unassociated state.				
Test procedure	1. The simulated PHD sends an association request to the PHG under test, with the fields:				
	□ protocol-version = '100000000000000000000000000000000000				
	☐ encoding-rules= '100000000000000'B				
	□ nomenclature-version = '100000000000000000000000000000000000				
	☐ functional-units = '00000000000000000000000000000000000				
	□ system-type = '000000001000000000000000000000000000				
	☐ dev-config-id = 16481				
	☐ data-rep-mode-capab =				
	data_req_mode_flags= '00000000000001'B				
	data_req_init_agent_count = 1				
	data_req_init_manager_count = 0				
	□ option-list.length= 0				
	2. The PHG under test sends an association response. The fields of interest are:				
	a. APDU Type				
	☐ field-length = 2 bytes				
	ield-value = 0xE3 0x00 (AareApdu)				
	b. Result				
	☐ field-type = AssociateResult				
	☐ field-length = 2 bytes				
	☐ field-value = One of the following:				
	 If association is accepted, field-value= 0x00 0x00. 				
	 If association is rejected-permanent, field-value= 0x00 0x01. 				
	 If association is rejected-transient, field-value= 0x00 0x02. 				
	 If association is accepted-unknown-config, field-value= 0x00 0x03. 				
	 If association is rejected-no-common-protocol, field-value= 0x00 0x04. 				
	 If association is rejected -no-common-parameter, field-value= 0x00 0x05. 				
	 If association is rejected-unknown = 0x00 0x06. 				
	 If association is rejected-unauthorized, field-value= 0x00 0x07. 				
	 If association is rejected-unsupported-assoc-version, field-value= 0x00 				
	0x08. c. selected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data-				
	proto-info(defined by data-proto-id))				
	d. data-proto-id				
	☐ field-type = DataProtoId				

	☐ field-length = 2 bytes
	☐ field-value= 0x50 0x79 (20601)
e.	protocol-version
	ield-type = Protocol Version
	ifield-length = 4 bytes (BITS-32)
	☐ field-value= 0x80 0x00 0x00 0x00
f.	encoding-rules
	☐ field-type = EncodingRules
	ield-length = 2 bytes (BITS-16)
	field-value= depends on the encoding rules supported/selected, but only one can be supported at a time
g.	nomenclature version
	☐ field-type = NomenclatureVersion
	ield-length = 4 bytes (BITS-32)
	☐ field-value= Bit 0 must be set (nom-version1)
h.	functional units
	☐ field-type = FunctionalUnits
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value =
	■ Bit 0 must be 0
	Bits 1 and 2 may be set
	 The rest of the bits must not be set
i.	system type
	☐ field-type = SystemType
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
j.	system-id
	ifield-type = OCTET STRING
	☐ field-length = 8 bytes
	☐ field-value = (EUI-64 manufacturer and device)
k.	dev-config-id
	☐ field-type = Configld
	☐ field-length = 2 bytes
	☐ field-value = 0x00 0x00 (manager-config-response)
I.	data-req-mode-flags (DataReqModeCapab)
	☐ field-type = DataReqModeFlags
	☐ field-length = 2 bytes
	☐ field-value = 0x00 0x00
	☐ PHG response to data-req-mode-flags is always 0.
m.	data-req-init-agent-count (DataReqModeCapab)
	☐ field-type = INT-U8
	☐ field-length = 1 byte
	ifield-value = 0x00
n.	data-req-init-manager-count (DataReqModeCapab)

	☐ field-type = INT-U8
	☐ field-length = 1 byte
	☐ field-value = 0x00
Pass/Fail criteria	All checked values are as specified in the test procedure.
Notes	Value for protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].

	ogroup 2.			asic electrocardiograph (ECG)			
TP ld		TP/PLT/PHG/CLASS/ECG/BV-000					
TP label				ration Event Report. Basic ECG specialization/Heart Rate profile standard ration 600			
Coverage	Spec	[IS	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]				
	Testable items	Coi	ConfEventRep 18;M				
Test purpos	е	Ch	eck t	hat:			
		A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.					
		ent	er th	tively, the PHG may request the PHD to send the standard configuration in order to se Configuring state and check attributes from the MDS object prior to final acceptanc ction) of the PHD.			
Applicability	•	C_I	MAN	I_OXP_000 AND C_MAN_OXP_029			
Other PICS		C_I	MAN	I_OXP_085			
Initial condit	ion	The	e sim	nulated PHD and the PHG under test are in the Unassociated state.			
Test proced	ure	The simulated PHD sends an association request to the PHG under test with dev-configid set to 0x0258 (HR).					
		2.	The	e PHG under test responds with an association response, the field of interest is:			
			a.	Result			
				☐ field-type = INT-U16			
				☐ field-length = 2 bytes			
				ifield-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)			
		If th	ne re	sult of the association response was "accepted-unknown-config"			
		3.		e simulated PHD sends a configuration event report with config-report-id set to 0258.			
		4.	The	e PHG under test must respond with:			
			a.	APDU Type			
				☐ field-length = 2 bytes			
				☐ field-value = 0xE7 0x00 (PrstApdu)			
			b.	Invoke-id			
				☐ field-type = INT-U16			
				☐ field-length = 2 bytes			
				ifield-value = it must be the same as the invoke-id of the simulated PHD's message.			
			c.	Obj-Handle:			
				ield-type = HANDLE			

		☐ field-length = 2 bytes
		ield-value = 0x00
	d.	Event-time:
		☐ field-type = INT-U32
		☐ field-length = 4 bytes
		☐ field-value: 0xXX 0xXX
	e.	Event-type:
		☐ field-length = 2 bytes
		ield-value = MDC_NOTI_CONFIG
	f.	The following six bytes indicate:
		☐ Event-replay-info.length (2 bytes)
		☐ ConfigReportRsp.config-report-id: it must be the same as config-report-id of the simulated PHD's message
		☐ ConfigReportRsp.config-result: One of:
		accepted-config: 0x00 0x00
	5. IF	C_MAN_OXP_085 THEN:
	a.	The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes.
	b.	The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.
	C.	Once in the Operating state the PHG is forced to enable the scanner object.
	Wait ur	til the Operating state is reached in both cases.
	6. Th	e simulated PHD sends a fixed event report with one measurement.
Pass/Fail criteria		e PHG under test must respond either to the association request with an "accepted" essage or to the Configuration Event Report with an "accepted-config".
	• Th	e measurement is correctly presented.
Notes	The Ph	IG can request Get MDS while they are in the Associated state.

TP ld		TP/PLT/PHG/CLASS/ECG/BV-001				
TP label	Maximum APDU size: Basic ECG specialization/Heart Rate profile without PM-Store					
Coverage	age Spec [ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			2016C]		
	Testable items	CommonCharac 4;M				
	Spec	[ISO/IEEE 11073-10406]				
	Testable items	CommChar1; M				
Test purpos	se	Check that:				
		If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.				
		specializations the PHG suppo	be at least as large as the large orts. The buffer size limitations in of whether a standard or extend	this bullet and the next on		

Applicability	C_MAN_OXP_000 AND C_MAN_OXP_029
Other PICS	
Initial condition	The PHG under test is in the Operating state.
Test procedure	 The simulated PHD sends a Confirmed variable event report: ScanReportInfoVar. obs_scan_var: Count = 2 Length = 1248 ObservationScan ::= {
Pass/Fail criteria	 In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report". In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
Notes	

TP Id		TP/PLT/PHG/CLASS/ECG/BV-002		
TP label		Maximum APDU size: Basic ECG specialization/ Simple ECG profile without PM-Store		
Coverage Spec		[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	CommonCharac 4;M		
Spec		[ISO/IEEE 11073-10406]		
	Testable items	CommChar1; M		

Test purpose	Check that:
1000 purpood	If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.
	The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_030
Other PICS	
Initial condition	The PHG under test is in the Operating state.
Test procedure	The simulated PHD sends a Confirmed variable event report:
	a. ScanReportInfoVar. obs_scan_var:
	☐ Count = 2
	☐ Length = 7136
	<pre>ObservationScan ::= { obj-handle: 9 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 61441 attribute-value: '00(7112 bytes) 00'0 } } } ObservationScan ::= { obj-handle: 9 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 2454 (MDC_ATTR_UNIT_CODE) attribute-value: 2194 (MDC_DIM_MILLI_VOLT) } } }</pre>
	2. Check the response of the PHG under test.
	3. The simulated PHD sends a Confirmed variable event report with one attribute update.4. Check the response of the PHG under test.
Pass/Fail criteria	In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
	 In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
Notes	

TP Id		TP/PLT/PHG/CLASS/ECG/BV-003		
TP label		Maximum APDU size: Basic ECG Specialization/Heart Rate profile with PM-Store		
Coverage Spec		[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	CommonCharac 4;M		
	Spec	[ISO/IEEE 11073-10406]		

Testable items	CommChar1; M		
Test purpose	Check that:		
	If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.		
	The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.		
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_003 AND C_MAN_OXP_029		
Other PICS			
Initial condition	The PHG under test is in the Operating state.		
Test procedure	The simulated PHG sends a Confirmed variable event report:		
	a. ScanReportInfoVar. obs_scan_var:		
	☐ Count = 2		
	☐ Length = 64472		
	<pre>ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 61441 attribute-value: '00(64448 bytes) 00'0 } } ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 2636 (MDC_ATTR_NU_VAL_OBS_BASIC) attribute-value: 79 } } }</pre>		
	 Check the response of the PHG under test. The simulated PHD sends a confirmed fixed format event report with one measurement. Check the response of the PHG under test. 		
Pass/Fail criteria	In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".		
	In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".		
Notes			

TP ld		TP/PLT/PHG/CLASS/ECG/BV-004
TP label		Maximum APDU size: Basic ECG/Simple ECG profile with PM-Store
Coverage Spec		[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]
	Testable items	CommonCharac 4;M

	Spec	[ISO/IEEE 11073-10406]		
	Testable items	CommChar1; M		
Test purpose)	Check that:		
		If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.		
		The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_003 AND C_MAN_OXP_030		
Other PICS				
Initial conditi	on	The PHG under test is in the Operating state.		
Test procedu	ire	The simulated PHD sends a Confirmed variable event report:		
		<pre>a. ScanReportInfoVar.obs_scan_var:</pre>		
Pass/Fail crit	eria	2. Check the response of the PHG under test. 3. The simulated PHD sends a Confirmed variable event report with one attribute update. 4. Check the response of the PHG under test. • In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report". • In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".		
Notes				

TP Id		TP/PLT/PHG/CLASS/ECG/BV-005	
TP label		Basic ECG Specialization/Heart Rate profile. Attribute-Value-Map. Order change	
Coverage Spec		[ISO/IEEE 11073-10406]	

	Testable items	HeartRate22; M		
Test purpose		Check that: For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_REL		
Applicability		C_MAN_OXP_000 AND C_MAN_0	OXP_029	
Other PICS				
Initial conditi	on	The simulated PHD and the PHG u configuration.	nder test are in the Operatir	ng state using the standard
Test procedu	re	The simulated PHD sends a condition Attribute-Value-Map order of:	onfirmed fixed format event	report that matches the
		□ MDC_ATTR_NU_VAL_OB Heart Rate Object	3S_BASIC then MDC_ATTR	R_TIME_STAMP_REL for
		2. The simulated PHD waits until		
		3. The simulated PHD sends a co Value-Map configuration of har		
		☐ MDC_ATTR_TIME_STAM Heart Rate Object	P_REL then MDC_ATTR_N	IU_VAL_OBS_BASIC for
		4. The simulated PHD waits until	it receives a confirmation.	
		Send a confirmed fixed format measurement data for Heart R		elative-time-stamp) by a
		6. The simulated PHD waits until	it receives a confirmation.	
		7. The simulated PHD sends an a	association release request	(normal).
		8. The simulated PHD waits until	there is an association relea	ase response.
		The simulated PHD sends an a that was used previously.	association request using the	e same standard configuration
		If the PHG under test responds unknown-config", then	s with association request re	sponse with "accepted-
		The simulated PHD sends configuration.	the confirmed configuration	event report with the standard
		The simulated PHD waits report that was sent.	until there is a confirmation	to the configuration event
		11. The simulated PHD sends a fix attribute-value-format (MDC_A MDC_ATTR_TIME_STAMP_R	TTR_NU_VAL_OBS_BASI	C then
		12. The simulated PHD waits until	it receives a confirmation.	
Pass/Fail crit	eria	 In steps 2, 6 and 12 verify that applies the correct bytes to the measurement and date are dis 	correct attributes (e.g., if th	
		In steps 2, 6 and 12 verify that Heart Rate (or reports the prop		
		 In steps 2, 6 and 12 verify that a time stamp derived from the have occurred sometime in the 	observation's time stamp (i.e	
		 When automated, it is necessal back since the ability to look at operator verification. 	ry to be careful about sendi things like an UI may requi	ng these messages back to re that there be pauses for
Notes				

TP Id		TP/PLT/PHG/CLASS/ECG/BV-006		
TP label		Basic ECG Specialization/Heart Rate profile. Special values. Not a number – fixed format (Std Config 600)		
Coverage	Spec	[ISO/IEEE 11073-10406]		
	Testable items	HeartRate22; M		
Test purpos	е	Check that:		
		The PHG receives a NaN value (fixed format event report) but it does not use this value.		
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_029		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 600.		
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 1 (Heart Rate Object) containing an observation value with the value for NaN ([exponent 0, mantissa +(2**11 -1) = 0x07FF]) and a time stamp. 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area). 		
Notes		This test case has been considered as an implicit test case.		

TP ld TP label		TP/PLT/PHG/CLASS/ECG/BV-007 Basic ECG Specialization/Heart Rate profile. Special values. Not a number – variable format (Std Config 600)		
	Testable items	HeartRate44; M		
Test purpos	se	Check that:		
		The PHG receives a NaN value (variable format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_029		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 600.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Heart Rate Object) containing an observation value set to the value for NaN ([exponent 0, mantissa +(2**11 -1) = 0x07FF]). 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking 		

	the display area).
Notes	This test case has been considered as an implicit test case.

TP ld TP label		TP/PLT/PHG/CLASS/ECG/BV-008 Basic ECG Specialization/Heart Rate profile. Special values. Not at this resolution – fixed format (Std Config 600)		
	Testable items	HeartRate22; M		
Test purpos	se	Check that:		
		The PHG receives NRes value (fixed format event report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_029		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 600.		
Test procedure		The simulated PHD sends a confirmed fixed event report for handle 1 (Heart Rate Object) containing an observation value set to the value for NRes ([exponent 0, mantissa –(2**11) = 0x0800]) and a time stamp.		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes		This test case has been considered as an implicit test case.		

TP Id TP label		TP/PLT/PHG/CLASS/ECG/BV-009 Basic ECG Specialization/Heart Rate profile. Special values. Not at this resolution – variable format (Std Config 600)		
	Testable items	HeartRate44; M		
Test purpose		Check that:		
		The PHG receives NRes value (variable format event report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_029		
Other PICS				
Initial condition		The simulated PHD and the F configuration 600.	PHG under test are in the Operation	ng state using the standard
Test procedure		The simulated PHD sends a confirmed variable event report for handle 1 (Heart Rate Object) containing an observation value set to the value for NRes ([exponent 0, mantissa –(2**11) = 0x0800]).		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		

Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld TP label		TP/PLT/PHG/CLASS/ECG/BV-010		
		Basic ECG Specialization/Heart Rate profile. Special values. Positive infinity – fixed format (Std Config 600)		
Coverage Spec		[ISO/IEEE 11073-10406]		
	Testable items	HeartRate22; M		
Test purpos	е	Check that:		
		The PHG receives a +INFINITY value (fixed format event report) but it does not use this value.		
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_029		
Other PICS				
Initial condit	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 600.		
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 1 (Heart Rate Object) containing an observation value set to the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**11 -2) = 0x07FE]) and a time stamp. 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes		This test case has been considered as an implicit test case.		

TP ld TP label		TP/PLT/PHG/CLASS/ECG/BV-011 Basic ECG Specialization/Heart Rate profile. Special values. Positive infinity – variable format (Std Config 600)		
	Testable items	HeartRate44; M		
Test purpos	se	Check that:		
		The PHG receives a +INFINITY value (variable format event report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_029		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 600.		
Test procedure		The simulated PHD sends a confirm	ed variable event report for handle 1 (Heart Rate	

	Object) containing an observation value set to the value for positive infinity (+INFINITY, [exponent 0, mantissa $+(2^{**}11 - 2) = 0x07FE$]).
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld TP label		TP/PLT/PHG/CLASS/ECG/BV-012		
		Basic ECG Specialization/Heart Rate profile. Special values. Negative infinity – fixed format (Std Config 600)		
Coverage Spec [IS		[ISO/IEEE 11073-10406]		
	Testable items	HeartRate22; M		
Test purpos	se .	Check that:		
		The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.		
Applicability	у	C_MAN_OXP_000 AND C_MAN_OXP_029		
Other PICS				
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 600.		
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 1 (Heart Rate Object) containing an observation value set to the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**11 –2) = 0x0802]) and a time stamp.		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes		This test case has been considered as an implicit test case.		

TP Id TP label		TP/PLT/PHG/CLASS/ECG	G/BV-013	
		Basic ECG Specialization/Heart Rate profile. Special values. Negative infinity – variable format (Std Config 600)		
Coverage	Spec	[ISO/IEEE 11073-10406]		
	Testable items	HeartRate44; M		
Test purpose		Check that: The PHG receives a –INF value.	FINITY value (variable format event	t report) but it does not use this
Applicability		C_MAN_OXP_000 AND	C_MAN_OXP_029	
Other PICS				

Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 600.		
Test procedure	1. The simulated PHD sends a confirmed variable event report for handle 1 (Heart Rate Object) containing an observation value set to the value for negative infinity (–INFINITY [exponent 0, mantissa –(2**11 –2) = 0x0802]).		
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Verify that the PHG under test is able to accept the data, but does not use the value they were an actual measurement (e.g., if there is a UI, verify that the measurement displayed in some form that indicates it is not a measurement).			
Notes	This test case has been considered as an implicit test case.		

TP ld TP label		TP/PLT/PHG/CLASS/ECG/BV-014		
		Basic ECG Specialization/Heart Rate profile. Special values. Reserved – fixed format (Std Config 600)		
Coverage Spec		[ISO/IEEE 11073-10406]		
	Testable items	HeartRate22; M		
Test purpos	se	Check that: The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_029		
Other PICS				
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 600.		
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 1 (Heart Rate Object) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**11 –1) = 0x0801]) and a time stamp. 		
		The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/ECG/BV-015		
TP label		Basic ECG Specialization/Heart Rate profile. Special values. Reserved – variable format (Std Config 600)		
Coverage Spec		[ISO/IEEE 11073-10406]		
	Testable items	HeartRate44; M		
Test purpose		Check that:		
		The PHG receives a Reserved for future use value (variable format event report) but it does not use this value.		

Applicability	C_MAN_OXP_000 AND C_MAN_OXP_029	
Other PICS		
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.	
Test procedure	 The simulated PHD sends a confirmed variable event report for handle 1 (Heart Rate Object) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**11 –1) = 0x0801]). 	
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.	
• Verify that the PHG under test either reports an error or is able to accept does not use the values as if they were an actual measurement (e.g., if t verify that the measurement is displayed in some form that indicates it is measurement).		
Notes	This test case has been considered as an implicit test case.	

TP ld		TP/PLT/PHG/CLASS/ECG/BV-016			
TP label		Association procedure PHG ECG			
Coverage Spec		[ISO/IEEE 11073-10406]			
	Testable	ManProcAsResp1; M	ManProcAsResp2; M	ManProcAsResp3; M	
	items	ManProcAsResp4; M	ManProcAsResp6; M	ManProcAsResp7; M	
		ManProcAsResp8; M	ManProcAsResp9; M	ManProcAsResp10; M	
		ManProcAsResp11; M	ManProcAsResp12; M	ManProcAsResp13; M	
		ManProcAsResp14; C			
Test purpos	se	Check that:			
		In the association response message sent by the PHG:			
		The result field shall be set to an appropriate response from those defined in ISO/IEEE P11073-20601.			
		[AND]			
		In the DataProtoList structure element, the data protocol identifier shall be set to data-proto-id-20601			
		[AND]			
		The data-proto-info field shall be filled in with a PhdAssociationInformation structure			
		[AND]			
		The version of the data exchange protocol shall be set to protocol-version2 (i.e., protocol-version = 0x40000000)			
		[AND]			
		The PHG shall respond with a single selected encoding rule that is supported by both PHD and PHG. The PHG shall support at least the MDER encoding rules			
		[AND]			
		The version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000)			
		[AND]			
		The field functional-units shassociation.	nall have all bits reset except for	those relating to a Test	

	TANIDI			
	[AND]			
	The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000)			
	[AND]			
	The System-Id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier			
	[AND]			
	The field dev-config-id shall be manager-config-response (0)			
	[AND]			
	The field data-req-mode-capab shall be 0			
	[AND]			
	The fields data-req-init-*-count shall be 0			
Applicability	C_MAN_OXP_000 AND (C_MAN_OXP_029 OR C_MAN_OXP_030)			
Other PICS				
Initial condition	The PHG is in the Unassociated state.			
Test procedure	The simulated PHD sends an association request to the PHG under test, with the fields:			
	□ protocol-version = '010000000000000000000000000000000000			
	□ encoding-rules= '100000000000000'B			
	□ nomenclature-version = '100000000000000000000000000000000000			
	☐ functional-units = '00000000000000000000000000000000000			
	□ system-type = '000000001000000000000000000000000000			
	dev-config-id = 16481			
	☐ data-rep-mode-capab =			
	data_req_mode_flags= '00000000000001'B			
	data_req_init_agent_count = 1			
	data_req_init_manager_count = 0			
	☐ option-list.length= 0			
	2. The PHG under test sends an association response. The fields of interest are:			
	a. APDU Type			
	☐ field-length = 2 bytes			
	☐ field-value = 0xE3 0x00 (AareApdu)			
	b. Result			
	☐ field-type = AssociateResult			
	☐ field-length = 2 bytes			
	☐ field-value = One of the following:			
	 If association is accepted, field-value= 0x00 0x00. 			
	 If association is rejected-permanent, field-value= 0x00 0x01. 			
	 If association is rejected-transient, field-value= 0x00 0x02. 			
	 If association is accepted-unknown-config, field-value= 0x00 0x03. 			
	 If association is rejected-no-common-protocol, field-value= 0x00 0x04. 			
	 If association is rejected-no-common-parameter, field-value= 0x00 0x05. 			
	If association is rejected-unknown = 0x00 0x06.			
	 If association is rejected-unauthorized, field-value= 0x00 0x07. 			
	 If association is rejected-unsupported-assoc-version, field-value= 0x00 			

	0x08.
C.	selected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data-proto-info(defined by data-proto-id))
d.	data-proto-id
	☐ field-type = DataProtoId
	☐ field-length = 2 bytes
	☐ field-value= 0x50 0x79 (20601)
e.	protocol-version
	☐ field-type = Protocol Version
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value= 0x40 0x00 0x00 0x00
f.	encoding-rules
	☐ field-type = EncodingRules
	☐ field-length = 2 bytes (BITS-16)
	ield-value= depends on the encoding rules supported/selected, but only one can be supported at a time
g.	nomenclature version
	☐ field-type = NomenclatureVersion
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value= Bit 0 must be set (nom-version1)
h.	functional units
	☐ field-type = FunctionalUnits
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value =
	■ Bit 0 must be 0
	Bits 1 and 2 may be set
	 The rest of the bits must not be set
i.	system type
	☐ field-type = SystemType
	☐ field-length = 4 bytes (BITS-32)
	ield-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
j.	system-id
	☐ field-type = OCTET STRING
	☐ field-length = 8 bytes
	☐ field-value = (EUI-64 manufacturer and device)
k.	dev-config-id
	☐ field-type = Configld
	☐ field-length = 2 bytes
	☐ field-value = 0x00 0x00 (manager-config-response)
I.	data-req-mode-flags (DataReqModeCapab)
	☐ field-type = DataReqModeFlags
	☐ field-length = 2 bytes
	$\Box \text{field-value} = 0x00 \ 0x00$
	☐ PHG response to data-req-mode-flags is always 0.
m	data-reg-init-agent-count (DataRegModeCanah)

	☐ field-type = INT-U8
	☐ field-length = 1 byte
	☐ field-value = 0x00
	n. data-req-init-manager-count (DataReqModeCapab)
	☐ field-type = INT-U8
	☐ field-length = 1 byte
	☐ field-value = 0x00
Pass/Fail criteria	All checked values are as specified in the test procedure.
Notes	Value for protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].

A.15 Subgroup 2.3.14: International normalized ratio (INR)

TP Id		TP/PLT/PHG/CLASS/IN	R/BV-000			
TP label		Association procedure PHG INR				
Coverage	Spec	[ISO/IEEE 11073-10418C]				
	Testable items	ManProcAs 1;M	ManProcAs 2;M	ManProcAs 3;M		
	items	ManProcAs 4;M	ManProcAs 5;M	ManProcAs 6;M		
		ManProcAs 7;M	ManProcAs 8;M	ManProcAs 9;M		
		ManProcAs 10;M	ManProcAs 11;M	ManProcAs 12;M		
Test purpos	е	Check that:				
		The result field shall be P11073-20601.	set to an appropriate response f	rom those defined in ISO/IEEE		
		[AND]				
		In the DataProtoList structure element, the data protocol identifier shall be set to data-proto-id-20601.				
		[AND]				
		The data-proto-info field shall be filled in with a PhdAssociationInformation structure				
		[AND]				
		The version of the data exchange protocol shall be set to protocol-version 2				
		[AND]				
		The PHG shall respond with a single selected encoding rule that is supported by both PHD and PHG. The PHG shall support at least the MDER encoding rules				
		[AND]				
		The version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000)				
		[AND]				
		The field functional-units shall have all bits reset except for those relating to a Test Association.				
		[AND]				
		The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000)				
		[AND]				
		The System-Id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier				
		[AND]				

	The field dev-config-id shall be manager-config-response (0)					
	AND]					
	he field data-req-mode-capab shall be 0					
	ND]					
	If the PHD supports only the INR specialization, data-req-init-agent-count shall be set to 0 and data-req-init-manager-count shall be set to 0.					
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_067					
Other PICS						
Initial condition	The PHG is in the Unassociated state.					
Test procedure	1. The simulated PHD sends an association request to the PHG under test, with the fields:					
	□ protocol-version = '010000000000000000000000000000000000					
	□ encoding-rules= '100000000000000'B					
	□ nomenclature-version = '100000000000000000000000000000000000					
	☐ functional-units = '00000000000000000000000000000000000					
	□ system-type = '000000010000000000000000000000000000					
	dev-config-id = 16440					
	☐ data-rep-mode-capab =					
	data_req_mode_flags= '00000000000001'B					
	data_req_init_agent_count = 1					
	data_req_init_manager_count = 0					
	option-list.length= 0					
	2. The PHG under test sends an association response. The fields of interest are:					
	a. APDU Type					
	☐ field-length = 2 bytes					
	☐ field-value = 0xE3 0x00 (AareApdu)					
	b. Result					
	☐ field-type = AssociateResult					
	☐ field-length = 2 bytes					
	☐ field-value = One of the following:					
	 If association is accepted, field-value= 0x00 0x00. 					
	 If association is rejected-permanent, field-value= 0x00 0x01. 					
	If association is rejected-transient, field-value= 0x00 0x02.					
	 If association is accepted-unknown-config, field-value= 0x00 0x03. 					
	 If association is rejected-no-common-protocol, field-value= 0x00 0x04. 					
	 If association is rejected-no-common-parameter, field-value= 0x00 0x05. 					
	 If association is rejected–unknown = 0x00 0x06. 					
	If association is rejected-unauthorized, field-value= 0x00 0x07.					
	 If association is rejected–unsupported-assoc-version, field-value= 0x00 0x08. 					
	 selected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data-proto-info(defined by data-proto-id)) 					
	d. data-proto-id					
	☐ field-type = DataProtoId					

	☐ field-length = 2 bytes
	☐ field-value= 0x50 0x79 (20601)
e.	protocol-version
	ield-type = Protocol Version
	ifield-length = 4 bytes (BITS-32)
	☐ field-value= 0x80 0x00 0x00 0x00
f.	encoding-rules
	☐ field-type = EncodingRules
	ield-length = 2 bytes (BITS-16)
	field-value= depends on the encoding rules supported/selected, but only one can be supported at a time
g.	nomenclature version
	☐ field-type = NomenclatureVersion
	ield-length = 4 bytes (BITS-32)
	☐ field-value= Bit 0 must be set (nom-version1)
h.	functional units
	☐ field-type = FunctionalUnits
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value =
	Bit 0 must be 0
	 Bits 1 and 2 may be set
	 The rest of the bits must not be set
i.	system type
	☐ field-type = SystemType
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
j.	system-id
	☐ field-type = OCTET STRING
	☐ field-length = 8 bytes
	☐ field-value = (EUI-64 manufacturer and device)
k.	dev-config-id
	☐ field-type = Configld
	☐ field-length = 2 bytes
	☐ field-value = 0x00 0x00 (manager-config-response)
I.	data-req-mode-flags (DataReqModeCapab)
	☐ field-type = DataReqModeFlags
	☐ field-length = 2 bytes
	☐ field-value = 0x00 0x00
	☐ PHG response to data-req-mode-flags is always 0.
m.	data-req-init-agent-count (DataReqModeCapab)
	☐ field-type = INT-U8
	☐ field-length = 1 byte
	ifield-value = 0x00
n.	data-req-init-manager-count (DataReqModeCapab)

	☐ field-type = INT-U8
	☐ field-length = 1 byte
	☐ field-value = 0x00
Pass/Fail criteria	All checked values are as specified in the test procedure.
Notes	Value for protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].

TP ld		TP/PLT/PHG/CLASS/INR/BV-001				
TP label		Configuration Event Re	port. INR monitor standard config	guration 1800		
Coverage	Spec	[ISO/IEEE 11073-1041	8C]			
	Testable items	ConfProc 4;M	MDSEvents 2;M	ObjAccServ 5;M		
	Spec	[ISO/IEEE 11073-2060	1-2015A] and [ISO/IEEE 11073-2	20601-2016C]		
	Testable items	ConfEventRep 18;M				
Test purpos	se	Check that:				
		Response Confirmed	The PHG shall respond to a configuration notification message using a "Remote Operation Response Confirmed Event Report" data message with an MDC_NOTI_CONFIG event using the ConfigReportRsp structure for the event-info field.			
		[AND]				
		A PHG shall support both single-person and multi-person event reports.				
		[AND]				
		A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.				
		[AND]				
		Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the Configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_067				
Other PICS		C_MAN_OXP_085				
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state. The simulated PHD implements an INR monitor device specialization with standard configuration 1800.				
Test procedure		The simulated PHD sends an association request to the PHG under test with dev-configid set to 0x07 0x08 (INR monitor – Std Config 1800)				
		2. The PHG under tes	st responds with an association re	esponse, the field of interest is:		
		a. Result				
			= INT-U16			
			th = 2 bytes	20.00/		
				0 0x03 (accepted-unknown-config)		
			ciation response was "accepted-u			
		3. The simulated PHI 0x08.	o senus a configuration event rep	port with config-report-id set to 0x07		
		4. The PHG under tes	st must respond with:			

		a.	APDU Type
			☐ field-length = 2 bytes
			☐ field-value = 0xE7 0x00 (PrstApdu)
		b.	Invoke-id
			☐ field-type = INT-U16
			☐ field-length = 2 bytes
			☐ field-value= it must be the same as the invoke-id of the simulated PHD's message.
		c.	Obj-Handle:
			☐ field-type = HANDLE
			☐ field-length = 2 bytes
			☐ field-value = 0x00 0x00
		d.	Event-time:
			☐ field-type = INT-U32
			☐ field-length = 4 bytes
			☐ field-value: 0xXX 0xXX
		e.	Event-type:
			☐ field-length = 2 bytes
			☐ field-value= MDC_NOTI_CONFIG
		f.	The following six bytes indicate:
			□ Event-replay-info.length (2 bytes)
			☐ ConfigReportRsp.config-report-id: it must be the same as config-report-id of the simulated PHD's message
			☐ ConfigReportRsp.config-result: One of:
			accepted-config: 0x00 0x00
	5.	IF C	C_MAN_OXP_085 THEN:
		a.	The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes.
		b.	The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.
		c.	Once in the Operating state the PHG is forced to enable the scanner object.
	Wai	it unt	il the Operating state is reached in both cases.
	6.	The	simulated PHD sends a fixed event report with one INR measurement.
Pass/Fail criteria	•		PHG under test must respond either to the association request with an "accepted" sage or to the Configuration Event Report with an "accepted-config".
	•	The	measurement is correctly presented.

TP ld		TP/PLT/PHG/CLASS/INR/BV-002
TP label		Configuration Event Report. Glucose Meter standard configuration 1801
Coverage Spec		[ISO/IEEE 11073-10418C]

	Testable items	ConfProc	4;M	MDSEvents 2;M	ObjAccServ 5;M		
	Spec		[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]				
	Testable items	ConfEven	tRep 18;M				
Test purpose	•	Check tha	t:				
		The PHG shall respond to a configuration notification message using a "Remote Operation Response Confirmed Event Report" data message with an MDC_NOTI_CONFIG event using the ConfigReportRsp structure for the event-info field.					
		[AND]					
		A PHG sh	all support both sin	gle-person and multi-person ever	nt reports.		
		[AND]					
		standards	shall be able to ac	more) of the ISO/IEEE 11073-10 cept all the standard device confige Table 23 under Gen-4.			
		[AND]					
		enter the 0		equest the PHD to send the stand nd check attributes from the MDS			
Applicability		C_MAN_C	OXP_000 AND C_N	MAN_OXP_067			
Other PICS		C_MAN_C	XP_085				
Initial conditi	ion			PHG under test are in the Unassonitor device specialization with sta			
Test procedu	ıre	The simulated PHD sends an association request to the PHG under test with dev-configid set to 0x07 0x09 (INR monitor – Std Config 1801).					
			HG under test resp	oonds with an association respon	se, the field of interest is:		
		a. F	Result				
			field-type = INT	-U16			
			ifield-length = 2	bytes			
			ifield-value = 0x	00 0x00 (accepted) or 0x00 0x03	(accepted-unknown-config)		
		If the resu	It of the association	n response was "accepted-unknow	wn-config"		
		3. The s 0xA5.		ds a configuration event report with	th config-report-id set to 0x06		
		4. The F	HG under test mus	st respond with:			
		a. A	PDU Type				
			i field-length = 2	bytes			
			ifield-value = 0x	E7 0x00 (PrstApdu)			
		b. Ir	nvoke-id				
			ifield-type = INT	-U16			
			3.				
			field-value = it r message.	must be the same as the invoke-io	d of the simulated PHD's		
		c. C	bj-Handle:				
			field-type = HAI	NDLE			
			i field-length = 2	bytes			
			i field-value = 0x	00 0x00			

	d. Event-time:
	☐ field-type = INT-U32
	☐ field-length = 4 bytes
	☐ field-value: 0xXX 0xXX
	e. Event-type:
	☐ field-length = 2 bytes
	☐ field-value= MDC_NOTI_CONFIG
	f. The following six bytes indicate:
	☐ Event-replay-info.length (2 bytes)
	 ConfigReportRsp.config-report-id: it must be the same as config-report-id of the simulated PHD's message
	☐ ConfigReportRsp.config-result: One of:
	 accepted-config: 0x00 0x00
	5. IF C_MAN_OXP_085 THEN:
	 The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes.
	 The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.
	c. Once in the Operating state the PHG is forced to enable the scanner object.
	Wait until the Operating state is reached in both cases.
	The simulated PHD sends a fixed event report with one INR measurement and other fixed event report with Control Solution measurement.
Pass/Fail criteria	The PHG under test must respond either to the association request with an "accepted" message or to the Configuration Event Report with an "accepted-config".
	The measurement is correctly presented.
Notes	
	1

TP Id		TP/PLT/PHG/CLASS/INR/BV-003		
TP label		Maximum APDU size: INR monitor without PM-Store		
Coverage	Spec	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		2016C]
	Testable items	CommonCharac 4;M		
	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	ComChar 2; M		
Test purpos	se .	Check that:		
		If a PHG receives an APDU that is large error (roer) code of protocol-violation.	r than the PHG's receive	ve buffer, it shall reply with an
		The PHG's receive buffer shall be at lea specializations the PHG supports. The bapply to all APDUs regardless of whether	ouffer size limitations in	this bullet and the next on
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_	067	

Other PICS	
Initial condition	The PHG under test is in the Operating state.
Test procedure	The simulated PHD sends a Confirmed variable event report:
	a. ScanReportInfoVar. obs_scan_var:
	☐ Count = 2
	☐ Length = 856
	<pre>ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 61441 attribute-value: '00(832 bytes) 00'0 } } ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 2636 (MDC_ATTR_NU_VAL_OBS_BASIC) attribute-value: 1 } } }</pre>
	Check the response of the PHG under test.
	The simulated PHD sends a confirmed fixed format event report with one measurement.
	4. Check the response of the PHG under test.
Pass/Fail criteria	In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
	In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
Notes	

TP ld		TP/PLT/PHG/CLASS/INR/BV-004		
TP label		Maximum APDU size: INR monitor with PM-Store		
Coverage Spec		[ISO/IEEE 11073-20601-20	015A] and [ISO/IEEE 11073-20601-	2016C]
	Testable items	CommonCharac 4;M		
	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	ComChar 2; M		
Test purpos	se	Check that:		
		If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.		
			hall be at least as large as the large pports. The buffer size limitations in	

	apply to all APDUs regardless of whether a standard or extended configuration is being used.	
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_067 AND C_MAN_OXP_003	
Other PICS		
Initial condition	The PHG under test is in the Operating state.	
Test procedure	The simulated PHD sends a Confirmed variable event report: a. ScanReportInfoVar. obs_scan_var:	
	a. Scankeportiniovar. obs_scan_var. □ Count = 2	
	☐ Length = 64472	
	<pre>ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 61441 attribute-value: '00(64448 bytes) 00'0 } ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 2636 (MDC_ATTR_NU_VAL_OBS_BASIC) attribute-value: 1 } } }</pre>	
	2. Check the response of the PHG under test.	
	3. The simulated PHD sends a confirmed fixed format event report with one measurement.4. Check the response of the PHG under test.	
Pass/Fail criteria	 In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report". In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report". 	
Notes		

TP Id		TP/PLT/PHG/CLASS/INR/BV-005		
TP label		INR Attribute-Value-Map. Order change		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	INR 10; M		
Test purpose)	Check that:		
		For [Standard-Configuration] th	ne [Attribute-Value-Map] attribute	shall be present
		The value of the [Attribute-ValuMDC_ATTR_TIME_STAMP_B	ue-Map] attribute shall be MDC_/ O	ATTR_NU_VAL_OBS_BASIC
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_067	
Other PICS				

Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure	 The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_BO.
	2. The simulated PHD waits until it receives a confirmation.
	3. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 1 (INR Object) to reverse the values to: MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_NU_VAL_OBS_BASIC.
	4. The simulated PHD waits until it receives a confirmation.
	5. Send a confirmed fixed format event report with the date first followed by an INR value.
	6. The simulated PHD waits until it receives a confirmation.
	7. The simulated PHD sends an association release request (normal).
	8. The simulated PHD waits until there is an association release response.
	9. The simulated PHD sends an association request using the same standard configuration that was used previously.
	 If the PHG under test responds with association request response with "accepted-unknown-config", then
	 The simulated PHD sends the confirmed configuration event report with the standard configuration.
	 The simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_BO). The observation should be a reasonable INR observation.
	12. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	 In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).
	 In steps 2, 6 and 12 verify that the PHG under test uses INR unit as the unit code for the measurement report (or reports the proper value after conversion to another unit code).
	 In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e., the actual observation may have occurred sometime in the past).
	 When automated, it is necessary to be careful about sending these messages back to back since the ability to look at things like an UI may require that there be pauses for operator verification.
Notes	

TP ld		TP/PLT/PHG/CLASS/INR/BV-0	006	
TP label		INR Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	INR 10;M		
Test purpose		Check that:		
		For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present		
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC		

	MDC_ATTR_TIME_STAMP_BO		
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_067		
Other PICS			
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration. (INR Numeric standard configuration Unit code attribute is set to MDC_DIM_INR)		
Test procedure	The simulated PHD sends a confirmed variable event report to change the Value-Map configuration of handle 1 (INR Object) to set the values to: MDC_ATTR_NU_VAL_OBS_BASIC, MDC_ATTR_UNIT_CODE, then MDC_ATTR_TIME_STAMP_BO.		
	2. The simulated PHD waits until it receives a confirmation.		
	 Send a confirmed fixed format event report with the new data layout. For the unit-code attribute, use MDC_DIM_INR (6608). 		
	4. The simulated PHD waits until it receives a confirmation.		
	 The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC attribute. 		
	6. The simulated PHD waits until it receives a confirmation.		
Pass/Fail criteria	 In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly). 		
	 In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement is displayed properly). 		
	 In steps 4 and 6, verify that the PHG under test uses INR unit as the unit code for the measurement reports. 		
Notes			

TP Id		TP/PLT/PHG/CLASS/INR/BV-007		
TP label		INR Unit-Code. Use default INR units – variable format observation		
Coverage	erage Spec [ISO/IEEE 11073-10418C]			
	Testable items	INR 8;M		
Test purpos	se	Check that:		
		For [Standard-Configuration] the [Unit-Code] attribute shall be present		
		The value of the [Unit-Code] attribute shall be MDC_DIM_INR		
Applicability	у	C_MAN_OXP_000 AND C_MAN_OXP_067		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		Send a confirmed variable format event report using a measurement in INR unit.		
		2. The simulated PHD waits until it receives a confirmation.		
Pass/Fail criteria		Verify that the PHG under test is able to accept the data properly and applies INR unit to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).		

Notes	

TP ld TP label		TP/PLT/PHG/CLASS/INR/BV-008	
		Special values. Not a number – fixed format (Std Config 1800)	
Coverage	Spec	[ISO/IEEE 11073-10418C]	
	Testable items	INR 10; M	
Test purpos	se .	Check that:	
		The PHG receives a NaN value (fixed format event report) but it does not use this value.	
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_067	
Other PICS			
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1800.	
Test procedure		The simulated PHD sends a confirmed fixed event report for handle 1 (INR Object) containing an observation value with the value for NaN ([exponent 0, mantissa +(2**11 – 1) = 0x07FF]) and a time stamp.	
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.	
Pass/Fail criteria		• Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).	
Notes		This test case has been considered as an implicit test case.	

TP Id		TP/PLT/PHG/CLASS/INR/BV-009		
TP label		Special values. Not a number – variable format (Std Config 1800)		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	INR 20; R		
Test purpos	e	Check that:		
		The PHG receives a NaN value (variable format event report) but it does not use this value.		
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_067		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1800.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (INR Object) containing an observation value set to the value for NaN ([exponent 0, mantissa +(2**11 -1) = 0x07FF]). 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking 		

	the display area).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/INR/BV-010		
TP label		Special values. Not at this resolution – fixed format (Std Config 1800)		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	INR 10; M		
Test purpos	e	Check that:		
		The PHG receives NRes value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_067		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1800.		
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 1 (INR Object) containing an observation value set to the value for NRes ([exponent 0, mantissa –(2**11) = 0x0800]) and a time stamp. 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes This test case has been considered as an implicit test case.		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/INR/BV-011		
TP label		Special values. Not at this resolution – variable format (Std Config 1800)		
Coverage Spec		[ISO/IEEE 11073-10418C]		
	Testable items	INR 20; R		
Test purpose		Check that: The PHG receives NRes value (variable format event report) but it does not use this value.		
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_067		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1800.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (INR Object) containing an observation value set to the value for NRes ([exponent 0, mantissa –(2**11) = 0x0800]). 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is		

displayed in some form that indicates it is not a measurement).	
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/INR/BV-012		
TP label		Special values. Positive infinity – fixed format (Std Config 1800)		
Coverage Spec		[ISO/IEEE 11073-10418C]		
	Testable items	INR 10; M		
Test purpose		Check that:		
		The PHG receives a +INFINITY value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_067		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1800.		
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 1 (INR Object) containing an observation value set to the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**11 -2) = 0x07FE]) and a time stamp.		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes This test case has been considered as an ir		This test case has been considered as an implicit test case.		

TP Id		TP/PLT/PHG/CLASS/INR/BV-013		
		THE THOROGAGO/INIVIDV-013		
TP label		Special values. Positive infinity – variable format (Std Config 1800)		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	INR 20; R		
Test purpos	se	Check that:		
		The PHG receives a +INFINITY value (variable format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_067		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1800.		
Test procedure		1. The simulated PHD sends a confirmed variable event report for handle 1 (INR Object) containing an observation value set to the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**11 -2) = 0x07FE]).		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		

Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/INR/BV-014		
TP label		Special values. Negative infinity – fixed format (Std Config 1800)		
Coverage Spec		[ISO/IEEE 11073-10418C]		
	Testable items	INR 10; M		
Test purpose		Check that:		
		The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.		
Applicability C_MAN_OXP_000 AND C_MAN_OXP_067		C_MAN_OXP_000 AND C_MAN_OXP_067		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1800.		
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 1 (INR Object) containing an observation value set to the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**11 –2) = 0x0802]) and a time stamp.		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes This test case has been considered as an implicit test case.		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/INR/BV-015		
TP label		Special values. Negative infinity – variable format (Std Config 1800)		
Coverage Spec [ISO/IEEE 11073-10418C]		[ISO/IEEE 11073-10418C]		
	Testable items	INR 20; R		
Test purpos	se .	Check that:		
		The PHG receives a –INFINITY value (variable format event report) but it does not use this value.		
Applicability	у	C_MAN_OXP_000 AND C_MAN_OXP_067		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1800.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (INR Object) containing an observation value set to the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**11 –2) = 0x0802]). 		

	The simulated PHD waits until it receives a confirmation from the PHG under test.	
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 	
Notes	This test case has been considered as an implicit test case.	

TP ld		TP/PLT/PHG/CLASS/INR/BV-016		
TP label		Special values. Reserved – fixed format (Std Config 1800)		
Coverage Spec		[ISO/IEEE 11073-10418C]		
	Testable items	INR 10; M		
Test purpose		Check that:		
		The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.		
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_067		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1800.		
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 1 (INR Object) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**11 –1) = 0x0801]) and a time stamp. 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes This test case has been considered as an implicit test case.		This test case has been considered as an implicit test case.		

TP Id		TP/PLT/PHG/CLASS/INR/BV-017		
TP label		Special values. Reserved – variable format (Std Config 1800)		
Coverage Spec		[ISO/IEEE 11073-10418C]		
	Testable items	INR 20; R		
Test purpose		Check that:		
		The PHG receives a Reserved for furnot use this value.	ture use value (variable for	rmat event report) but it does
Applicability		C_MAN_OXP_000 AND C_MAN_O	(P_067	
Other PICS				
Initial condition		The simulated PHD and the PHG unconfiguration 1800.	der test are in the Operatir	ng state using the standard

Test procedure	1. The simulated PHD sends a confirmed variable event report for handle 1 (INR Object) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**11 –1) = 0x0801]).		
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria	Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).		
Notes	This test case has been considered as an implicit test case.		

TP Id		TP/PLT/PHG/CLASS/INR/BV-018				
TP label		Control Calibration Attribute-Value-Map. Order change				
Coverage	Spec	[ISO/IEEE 11073-10418C]				
-	Testable items	Ctrl	Cal 7;M			
Test purpose		Check that:				
		For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present				
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC MDC_ATTR_TIME_STAMP_BO				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_067				
Other PICS						
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.				
Test procedure		The simulated PHD sends a Control Solution confirmed fixed format event report that matches the Attribute-Value-Map order of MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_BO.				
		2. The simulated PHD waits until it receives a confirmation.				
		3.	3. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Control Calibration Object) to reverse the values to: MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_NU_VAL_OBS_BASIC.			
		4. The simulated PHD waits until it receives a confirmation.				
		5.	 Send a confirmed fixed format event report with the date first followed by a control calibration value (in INR units since it is the standard configuration unit code). 			
		6.	6. The simulated PHD waits until it receives a confirmation.			
		7. The simulated PHD sends an association release request (normal).				
		8.	8. The simulated PHD waits until there is an association release response.			
		9. The simulated PHD sends an association request using the same standard configurati that was used previously.			e same standard configuration	
		10. If the PHG under test responds with association request response with "accepted-unknown-config", then			esponse with "accepted-	
			The simulated PHD seconfiguration.	ends the confirmed configuration	n event report with the standard	
			The simulated PHD w report that was sent.	aits until there is a confirmation	to the configuration event	
		11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_NU_VAL_OBS_BASIC, then				

		MDC_ATTR_TIME_STAMP_BO). The observation should be a reasonable INR units INR observation.	
	12.	The simulated PHD waits until it receives a confirmation.	
Pass/Fail criteria	•	In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).	
	•	In steps 2, 6 and 12 verify that the PHG under test uses INR units as the unit code for the measurement report (or reports the proper value after conversion to another unit code).	
	•	In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e., the actual observation may have occurred sometime in the past).	
	•	When automated, it is necessary to be careful about sending these messages back to back since the ability to look at things like an UI may require that there be pauses for operator verification.	
Notes			

TP ld		TP/PLT/PHG/CLASS/INR/BV-019			
TP label		Control Calibration Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map			
Coverage	Spec	[ISO/IEEE 11073-10418C]			
	Testable items	CtrlCal 7;M			
Test purpose	•	Check that:			
		For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present			
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC MDC_ATTR_TIME_STAMP_BO			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_067			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (Control Calibration Numeric standard configuration Unit code attribute is set to MDC_DIM_INR).			
Test procedure		The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Control Calibration Object) to set the values to: MDC_ATTR_NU_VAL_OBS_BASIC, MDC_ATTR_UNIT_CODE, then MDC_ATTR_TIME_STAMP_BO.			
		2. The simulated PHD waits until it receives a confirmation.			
		3. Send a confirmed fixed format event report with the new data layout. For the unit-code attribute, use MDC_DIM_INR (6608).			
		4. The simulated PHD waits until it receives a confirmation.			
		5. The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC attribute.			
		6. The simulated PHD waits until it receives a confirmation.			
Pass/Fail criteria		• In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).			
		In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the			

	 measurement is displayed properly). In steps 4 and 6, verify that the PHG under test uses INR units as the unit code for the
	measurement reports.
Notes	

TP ld		TP/PLT/PHG/CLASS/INR/BV-020		
TP label		Control Calibration Unit-Code. Use default INR units – variable format observation		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	CtrlCal 6;M		
Test purpos	e	Check that:		
		For [Standard-Configuration] the [Unit-Code] attribute shall be present		
		The value of the [Unit-Code] attribute shall be MDC_DIM_INR		
Applicability C_MAN_OXP_000 AND C_MAN_OXP_067		C_MAN_OXP_000 AND C_MAN_OXP_067		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test proced	ure	Send a confirmed variable format event report using a measurement in INR units.		
		2. The simulated PHD waits until it receives a confirmation.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data properly and applies INR units to the observation (e.g., if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units). 		
Notes				

TP ld		TP/PLT/PHG/CLASS/INR/BV-021		
TP label Special values. Not a number – fixed format (Std Config 1801)		Special values. Not a number – fixed format (Std Config 1801)		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	CtrlCal 7; M		
Test purpos	se	Check that:		
		The PHG receives a NaN value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_067		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1801.		
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 2 (Control Calibration Object) containing an observation value with the value for NaN ([exponent 0, mantissa +(2**11 -1) = 0x07FF]) and a time stamp. 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		

Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/INR/BV-022		
TP label		Special values. Not at this resolution – fixed format (Std Config 1801)		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	CtrlCal 7; M		
Test purpose	e	Check that:		
		The PHG receives NRes value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_067		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1801.		
Test procedure		The simulated PHD sends a confirmed fixed event report for handle 2 (Control Calibration Object) containing an observation value set to the value for NRes ([exponent 0, mantissa –(2**11) = 0x0800]) and a time stamp.		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/INR/BV-023		
TP label Special values. Positive infinity – fixed format (Std Config 1801))		
Coverage Spec [ISO/IEEE 11073-10418C]				
	Testable items	CtrlCal 7; M		
Test purpos	se	Check that:		
		The PHG receives a +INFINITY value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_067		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1801.		
Test procedure		Object) containing an obse	a confirmed fixed event report for ervation value set to the value for $^{**}11-2) = 0x07FE]$) and a time s	

	The simulated PHD waits until it receives a confirmation from the PHG under test.	
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 	
Notes	This test case has been considered as an implicit test case.	

TP Id		TP/PLT/PHG/CLASS/INR/BV-024		
TP label		Special values. Negative infinity – fixed format (Std Config 1801)		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	CtrlCal 7; M		
Test purpos	se .	Check that:		
		The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.		
Applicability	у	C_MAN_OXP_000 AND C_MAN_OXP_067		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1801.		
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 2 (Control Calibration Object) containing an observation value set to the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**11 –2) = 0x0802]) and a time stamp. 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/INR/BV-025		
TP label Special values. Reserved – fixed format (Std Config 1801)				
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	CtrlCal 7; M		
Test purpose		Check that: The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MA	AN_OXP_067	
Other PICS				
Initial condition		The simulated PHD and the Ph configuration 1801.	HG under test are in the Operatir	ng state using the standard
Test procedure 1. The simulated PHD sends a confirmed fixed event report for handle 2 (Control Ca		or handle 2 (Control Calibration		

	Object) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa $-(2^{**}11 - 1) = 0x0801$]) and a time stamp.
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/INR/BV-026				
TP label		Special values. Not a number – variable format (Std Config 1801)				
Coverage	Spec	[ISO/IEEE 11073-10418C]				
	Testable items	CtrlCal 13; R				
Test purpose	•	Check that:				
		The PHG receives a NaN value (variable format event report) but it does not use this value.				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_067				
Other PICS						
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1801.				
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 2 (Control Calibration Object) containing an observation value set to the value for NaN ([exponent 0, mantissa +(2**11 -1) = 0x07FF]). 				
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.				
Pass/Fail criteria		 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area). 				
Notes		This test case has been considered as an implicit test case.				

TP ld TP label		TP/PLT/PHG/CLASS/INR/BV-027 Special values. Not at this resolution – variable format (Std Config 1801)				
	Testable items	CtrlCal 13; R				
Test purpose		Check that: The PHG receives NRes value (v	ariable format event report) bu	ut it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN	_OXP_067			
Other PICS						
Initial condition		The simulated PHD and the PHG configuration 1801.	under test are in the Operatin	g state using the standard		

Test procedure	The simulated PHD sends a confirmed variable event report for handle 2 (Control Calibration Object) containing an observation value set to the value for NRes ([exponent 0, mantissa –(2**11) = 0x0800]).
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	 Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/INR/BV-028				
TP label		Special values. Positive infinity – variable format (Std Config 1801)				
Coverage	Spec	[ISO/IEEE 11073-10418C]				
	Testable items	CtrlCal 13; R				
Test purpose	e	Check that:				
		The PHG receives a +INFINITY value (variable format event report) but it does not use this value.				
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_067				
Other PICS						
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1801.				
Test procedure		1. The simulated PHD sends a confirmed variable event report for handle 2 (Control Calibration Object) containing an observation value set to the value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**11 -2) = 0x07FE]).				
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.				
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).				
Notes		This test case has been considered as an implicit test case.				

TP ld TP label		TP/PLT/PHG/CLASS/INR/BV-029 Special values. Negative infinity – variable format (Std Config 1801)					
	Testable items	CtrlCal 13; R					
Test purpos	se	Check that:					
		The PHG receives a –INFINITY value (variable format event report) but it does not use this value.					
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_067				
Other PICS							
Initial condition		The simulated PHD and the Ph	HG under test are in the Operatir	ng state using the standard			

	configuration 1801.		
Test procedure	 The simulated PHD sends a confirmed variable event report for handle 2 (Control Calibration Object) containing an observation value set to the value for negative infinity (-INFINITY, [exponent 0, mantissa –(2**11 –2) = 0x0802]). 		
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).		
Notes	This test case has been considered as an implicit test case.		

TP Id		TP/PLT/PHG/CLASS/INR/BV-030					
TP label		Special values. Reserved – variable format (Std Config 1801)					
Coverage	Spec	[ISO/IEEE 11073-10418C]					
	Testable items	CtrlCal 13; R					
Test purpose	е	Check that:					
		The PHG receives a Reserved for future use value (variable format event report) but it does not use this value.					
Applicability	•	C_MAN_OXP_000 AND C_MAN_OXP_067					
Other PICS							
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1801.					
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 2 (Control Calibration Object) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa –(2**11 –1) = 0x0801]). 					
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.					
Pass/Fail criteria		 Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement). 					
Notes		This test case has been considered as an implicit test case.					

A.16 Subgroup 2.3.15: Sleep apnoea breathing therapy equipment (SABTE)

TP ld	8 1	TP/PLT/PHG/CLASS/SABTE/BV-000					
TP label		Association procedure PHG SABTE					
Coverage	Spec	[ISO/IEEE 11073-10424]	[ISO/IEEE 11073-10424]				
	Testable items	ManProcAs 1;M	ManProcAs 2;M	ManProcAs 3;M			
		ManProcAs 4;M	ManProcAs 5;M	ManProcAs 6;M			
		ManProcAs 7;M	ManProcAs 8;M	ManProcAs 9;M			
		ManProcAs 10;M	ManProcAs 11;M	ManProcAs 12;M			

Test purpose	Check that:
	The result field shall be set to an appropriate response from those defined in ISO/IEEE P11073-20601.
	[AND]
	In the DataProtoList structure element, the data protocol identifier shall be set to data-proto-id-20601.
	[AND]
	The data-proto-info field shall be filled in with a PhdAssociationInformation structure
	[AND]
	The version of the data exchange protocol shall be set to protocol-version 2
	[AND]
	The PHG shall respond with a single selected encoding rule that is supported by both PHD and PHG. The PHG shall support at least the MDER encoding rules
	[AND]
	The version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000)
	[AND]
	The field functional-units shall have all bits reset except for those relating to a Test Association.
	[AND]
	The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000)
	[AND]
	The System-Id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier
	[AND]
	The field dev-config-id shall be manager-config-response (0)
	[AND]
	The field data-req-mode-capab shall be 0
	[AND]
	If the PHD supports only the SABTE specialization, data-req-init-agent-count shall be set to 0 and data-req-init-manager-count shall be set to 0.
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_069
Other PICS	
Initial condition	The PHG is the Unassociated state.
Test procedure	1. Simulated PHD sends an Association Request to the PHG under test, with the fields:
	□ protocol-version = '010000000000000000000000000000000000
	□ encoding-rules= '100000000000000'B
	□ nomenclature-version = '100000000000000000000000000000000000
	☐ functional-units = '00000000000000000000000000000000000
	□ system-type = '000000001000000000000000000000000000
	dev-config-id = 16440
	☐ data-rep-mode-capab =
	data_req_mode_flags= '00000000000001'B
	data_req_init_agent_count = 1
	data_req_init_manager_count = 0

		opt	ion-list.length= 0
2.	The	e PH	G under test sends an Association Response. The fields of interest are:
	a.	AP	DU Type
			field-length = 2 bytes
			field-value = 0xE3 0x00 (AareApdu)
	b.	Re	sult
			field-type = AssociateResult
			field-length = 2 bytes
			field-value = One of the following:
			■ If association is accepted, field-value= 0x00 0x00.
			■ If association is rejected-permanent, field-value= 0x00 0x01.
			 If association is rejected-transient, field-value= 0x00 0x02.
			■ If association is accepted-unknown-config, field-value= 0x00 0x03.
			■ If association is rejected-no-common-protocol, field-value= 0x00 0x04.
			■ If association is rejected -no-common-parameter, field-value= 0x00 0x05.
			■ If association is rejected –unknown = 0x00 0x06.
			If association is rejected -unauthorized, field-value= 0x00 0x07.
			 If association is rejected –unsupported-assoc-version, field-value= 0x00 0x08.
	C.		ected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data-to-info(defined by data-proto-id))
	d.	dat	a-proto-id
			field-type = DataProtold
			field-length = 2 bytes
			field-value= 0x50 0x79 (20601)
	e.	pro	tocol-version
			field-type = Protocol Version
			field-length = 4 bytes (BITS-32)
			field-value= 0x80 0x00 0x00 0x00
	f.	end	coding-rules
			field-type = EncodingRules
			field-length = 2 bytes (BITS-16)
			field-value= depends on the encoding rules supported/selected, but only one can be supported at a time
	g.	nor	menclature version
			field-type = NomenclatureVersion
			field-length = 4 bytes (BITS-32)
			field-value= Bit 0 must be set (nom-version1)
	h.	fun	ctional units
			field-type = FunctionalUnits
			field-length = 4 bytes (BITS-32)
			field-value =
			■ Bit 0 must be 0
			■ Bits 1 and 2 may be set
			 The rest of the bits must not be set

	i.	system type
		☐ field-type = SystemType
		☐ field-length = 4 bytes (BITS-32)
		☐ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
	j.	system-id
		☐ field-type = OCTET STRING
		☐ field-length = 8 bytes
		ield-value = (EUI-64 manufacturer and device)
	k.	dev-config-id
		☐ field-type = Configld
		☐ field-length = 2 bytes
		☐ field-value = 0x00 0x00 (manager-config-response)
	I.	data-req-mode-flags (DataReqModeCapab)
		☐ field-type = DataReqModeFlags
		☐ field-length = 2 bytes
		$\Box \text{field-value} = 0x00 \ 0x00$
		☐ PHG response to data-req-mode-flags is always 0.
	m.	data-req-init-agent-count (DataReqModeCapab)
		☐ field-type = INT-U8
		☐ field-length = 1 byte
		$\Box \text{field-value} = 0x00$
	n.	data-req-init-manager-count (DataReqModeCapab)
		☐ field-type = INT-U8
		☐ field-length = 1 byte
		☐ field-value = 0x00
Pass/Fail criteria	All chec	cked values are as specified in the test procedure.
Notes	[AT4wir	eless] Value for protocol-version has been modified according to 20601-2015A.
	L	

TP ld TP label		TP/PLT/PHG/CLASS/SABTE/BV-001 Configuration Event Report. SABTE standard configuration 2400						
								Coverage Spec
	Testable items	ConfProc 4;M	ObjAccServ 5;M					
Spec		[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]						
	Testable items	ConfEventRep 18;M						
Test purpos	se	Check that:						
		The PHG shall respond to a configuration notification message using a "Remote Operation Response Confirmed Event Report" data message with an MDC_NOTI_CONFIG event using the ConfigReportRsp structure for the event-info field.						
		[AND]						
		A PHG shall support both single-person and multi-person event reports.						

	[AND]			
	A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.			
	[AND]			
	Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the Configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.			
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_069			
Other PICS	C_MAN_OXP_085			
Initial condition	The simulated PHD and the PHG under test are the Unassociated state. The simulated PHD implements a SABTE device specialization with Standard Configuration 2400			
Test procedure	 The simulated PHD sends an Association Request to the PHG under test with dev- config-id set to 0x09 0x60 (SABTE – Std Config 2400) 			
	2. The PHG under test responds an Association Response, the field of interest is:			
	a. Result			
	☐ field-type = INT-U16			
	☐ field-length = 2 bytes			
	☐ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unkown-config)			
	IF the result of the Association Response was "accepted-unkown-config"			
	3. The simulated PHD sends a configuration event report with config-report-id set to 0x07 0x08			
	4. The PHG under test must respond with:			
	a. APDU Type			
	☐ field-length = 2 bytes			
	☐ field-value = 0xE7 0x00 (PrstApdu)			
	b. Invoke-id			
	☐ field-type = INT-U16			
	☐ field-length = 2 bytes			
	field-value= it must be the same that the invoke-id of the simulated PHD's message.			
	c. Obj-Handle:			
	☐ field-type = HANDLE			
	☐ field-length = 2 bytes			
	☐ field-value = 0x00 0x00			
	d. Event-time:			
	☐ field-type = INT-U32			
	☐ field-length = 4 bytes			
	☐ field-value: 0xXX 0xXX			
	e. Event-type:			
	☐ field-length = 2 bytes			
	☐ field-value= MDC_NOTI_CONFIG			
	f. The following six bytes indicate:			
	☐ Event-replay-info.length (2 bytes)			

	 ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message
	☐ ConfigReportRsp.config-result: One of:
	 accepted-config: 0x00 0x00
	5. IF C_MAN_OXP_085 THEN:
	 The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes.
	b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.
	c. Once in the Operating state the PHG is forced to enable the scanner object
	Wait until the Operating state is reached in both cases
	6. The simulated PHD sends a fixed event report with one SABTE measurement
Pass/Fail criteria	The PHG under test must respond either to the Association Request with an "accepted" message or to the Configuration Event Report with an "accepted-config"
	The measurement is correctly presented
Notes	

TP ld		TP/PLT/PHG/CLASS/SABTE/BV-002			
TP label		Maximum APDU size: SABTE			
Coverage	Spec	[ISO/IEEE 1	1073-20601-2015 <i>F</i>	A] and [ISO/IEEE 11073-20601-2	2016C]
	Testable items	CommonCh	arac 4;M		
	Spec	[ISO/IEEE 1	1073-10424]		
	Testable items	ComChar 2	M		
Test purpos	e	Check that:			
		If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.			
		The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.			
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_069			
Other PICS					
Initial condit	ion	The PHG under test is in the Operating state.			
Test proced	ure	The simulated PHD sends a Confirmed variable event report:			
		a. ScanReportInfoVar. obs_scan_var:			
		☐ Count = 2			
		☐ Length = 64472			
		ObservationScan ::= { obj-handle: 1			
		attributes: AttributeList ::= {			

Notes						
	In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report"					
Pass/Fail criteria	In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report"					
	4. Check the response of the PHG under test					
	3. Simulated PHD sends a confirmed fixed format event report with one measurement.					
	Check the response of the PHG under test					
	ı					
	}					
	}					
	attribute-value: 1					
	(MDC ATTR NU VAL OBS BASIC)					
	attribute-id: 2636					
	<pre>attributes: AttributeList ::= { AVA-Type ::= {</pre>					
	obj-handle: 1					
	ObservationScan ::= {					
	}					
	}					
	by ces /					
	attribute-value: '00(64448 bytes) 00'0					
	attribute-id: 61441					
	AVA-Type ::= {					

TP Id	TP/bt//phg/class/sabte/bv-003				
TP label		Attribute-Value-Map. Order change			
Coverage	Spec [ISO/IEEE 11073-10424]				
	Testable items	DPU 10; M	DFG 10; M	DevMode 8; M	
	items	TherMode 8; M			
Test purpose	9	Check that:			
		For [Standard-Configuration, Duration of Patient Use] the [Attribute-Value-Map] attribute shall be present and its value shall be MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_BO			
		[AND]			
		For [Standard-Configuration, Duration of Flow Generation] the [Attribute-Value-Map] attribute shall be present and its value shall be MDC_ATTR_NU_VAL_OBS_SIMP then MDC_ATTR_TIME_STAMP_BO.			
		[AND]			
		For [Standard-Configuration, Device Mode Set] the [Attribute-Value-Map] attribute shall be present and its value shall be MDC_ATTR_ENUM_OBS_VAL_SIMP_OID then MDC_ATTR_TIME_STAMP_BO.			
		[AND]			
		For [Standard-Configuration, Therapy Mode Set] the [Attribute-Value-Map] attribute shall be present and its value shall be MDC_ATTR_ENUM_OBS_VAL_SIMP_OID then MDC_ATTR_TIME_STAMP_BO.			
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_069			
Other PICS					

Initial condition The simulated PHD and the PHG under test are in the Operating state using the standard configuration. **Test procedure** The simulated PHD sends a confirmed fixed format event report with that matches the Attribute-Value-Map order of: MDC_ATTR_NU_VAL_OBS_BASIC then MDC_ATTR_TIME_STAMP_BO for **Duration of Patient Use Object** MDC_ATTR_NU_VAL_OBS_SIMP then MDC_ATTR_TIME_STAMP_BO for **Duration of Flow Generation Object** MDC_ATTR_ENUM_OBS_VAL_SIMP_OID, then MDC_ATTR_TIME_STAMP_BO for Device Mode Set MDC ATTR ENUM OBS VAL SIMP OID, then MDC ATTR TIME STAMP BO for Therapy Mode Set. The simulated PHD waits until it receives a confirmation 2. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 1 (Duration of Patient Use) Object) handle 2 (Duration of Flow Generation Object), handle 3 (Device Mode Set Object) and handle 4 (Therapy Mode Set Object) to reverse the values to: MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_NU_VAL_OBS_BASIC for Duration of Patient Use Object. MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_NU_VAL_OBS_SIMP for Duration of Flow Generation Object. MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_ENUM_OBS_VAL_SIMP_OID for Device Mode Set Object. MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_ENUM_OBS_VAL_SIMP_OID for Therapy Mode Set Object. The simulated PHD waits until it receives a confirmation Send a confirmed fixed format event report with the date first followed by a value for 5. every object. The simulated PHD waits until it receives a confirmation 6. The simulated PHD sends an Association Release Request (normal) The simulated PHD waits until there is a Association Release Response 8. The simulated PHD sends an Association Request using the same standard configuration that was used previously If the PHG under test responds with association request response with "acceptedunknown-config", then The simulated PHD sends the confirmed configuration event report with the standard configuration The simulated PHD waits until there is a confirmation to the configuration event report that was sent. 11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (Observed value defined for every object, then MDC_ATTR_TIME_STAMP_BO). The observation should be reasonable Duration of Patient Use, Duration of Flow Generation, Device Mode Set and Therapy Mode Set observations 12. The simulated PHD waits until it receives a confirmation Pass/Fail criteria In Step 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly). In Step 2, 6 and 12 verify the PHG under test uses minutes as the unit-code for Duration of Patient Use and Duration of Flow Generation measurement reports (or reports the proper value after convert to another unit-code) In Step 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e., the actual observation may

Notes	verification.
	When automated, need to be careful about just sending these messages back to back since the ability to look at things like a UI may need there to be pauses for operator and the sending these messages back to back since the ability to look at things like a UI may need there to be pauses for operator.
	have occurred sometime in the past).

TP ld		TP/PLT/PHG/CLASS/SABTE/BV-004			
TP label		Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map			
Coverage	Spec	[ISO/IEEE 11073-10424]			
3	Testable items	DPU 10;M			
Test purpose		Check that: For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC MDC_ATTR_TIME_STAMP_BO			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_069			
Other PICS					
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration. (Duration of Patient Use Numeric standard configuration Unit code attribute is set to MDC_DIM_MIN)			
Test procedure		The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 1 (Duration of Patient Use Object) to set the values to: MDC_ATTR_NU_VAL_OBS_BASIC, MDC_ATTR_UNIT_CODE, then MDC_ATTR_TIME_STAMP_BO.			
		2. The simulated PHD waits until it receives a confirmation			
		 Send a confirmed fixed format event report with the new data layout. For unit-code Attribute, use MDC_DIM_MIN (2208). 			
		4. The simulated PHD waits until it receives a confirmation			
		 The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC Attribute. 			
		6. The simulated PHD waits until it receives a confirmation.			
Pass/Fail criteria		• In Step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).			
		In Step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement is displayed properly)			
		 In Step 4 and 6, verify the PHG under test uses Duration of Patient Use unit as the unit- code for the measurement reports 			
Notes					

TP Id TP/PLT/PHG/CLASS/SABTE/BV-005		TP/PLT/PHG/CLASS/SABTE/BV-005
TP label Unit-Co		Unit-Code Duration of Patient Use. Use default minutes - variable format observation
Coverage	Spec	[ISO/IEEE 11073-10424]

	Testable items	DPU 8;M			
Test purpose		Check that:			
		For [Standard-Configuration] the [Unit-Code] attribute shall be present			
		The value of the [Unit-Code] at	tribute shall be MDC_DIM_MIN		
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_069		
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedu	ire	Send a confirmed variable format event report using a measurement in minutes			
		2. The simulated PHD waits until it receives a confirmation			
Pass/Fail criteria Verify that the PHG under test is able to accept the data properly and applies minu observation (e.g., if there is a UI verify the measurement and date are displayed preven if they are converted to a different set of units).					
Notes					

TP ld		TP/PLT/PHG/CLASS/SABTE/BV-006		
TP label		Unit-Code Duration of Flow Generation. Use default minutes - variable format observation		
Coverage Spec [ISO/IEEE 11073-10424]				
	Testable items	DFG 8;M		
Test purpose		Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present The value of the [Unit-Code] attribute shall be MDC_DIM_MIN		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_069		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure 1. Send a confirmed variable format event report usin 2. The simulated PHD waits until it receives a confirm		1 5	asurement in minutes.	
Pass/Fail criteria		Verify that the PHG under test is able to accept the data properly and applies minutes to the observation (e.g., if there is a UI verify the measurement and date are displayed properly even if they are converted to a different set of units).		
Notes				

TP Id		TP/PLT/PHG/CLASS/SABTE/BV-007
TP label		Special values. Not a number - fixed format (Std Config 2400)
Coverage	Spec	[ISO/IEEE 11073-10424]

	Testable items	DPU 10; M	DFG 10; M		
Test purpose		Check that: The PHG receives a NaN value (fixed format event report) but it does not use this value.			
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_069		
Other PICS					
Initial condition The simulated PHD and the PHG under test are in the Operating state using the configuration 2400.		ng state using the standard			
		 The simulated PHD sends a confirmed fixed event report for handle 1 (Duration of Patient Use Object) and handle 2 (Duration of Flow Generation Object) containing an observation value with the value for not a number (NaN (not a number) [exponent 0, mantissa +(2**11 -1) = 0x07FF for Duration of Patient Use], [exponent 0, mantissa +(2**23 -1) = 0x007FFFFF for Duration of Flow Generation]) and a time stamp The simulated PHD waits until it receives a confirmation from the PHG under test 			
they		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).			
Notes This test case has been considered as an implicit test case.					

TP ld		TP/PLT/PHG/CLASS/SABTE/BV-008				
TP label		Special values. Not a number	- variable format (Std Config 240	00)		
Coverage	Spec	[ISO/IEEE 11073-10424]				
	Testable items	DPU 12; M	DFG 12; M			
Test purpose	•	Check that:				
		The PHG receives a NaN valu	e (variable format event report) b	out it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_069				
Other PICS						
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2400.				
Test procedure		1. The simulated PHD sends a confirmed variable event report for handle 1 (Duration of Patient Use Object) and handle 2 (Duration of Flow Generation Object) containing an observation value with the value for not a number (NaN (not a number) [exponent 0, mantissa +(2**11 -1) = 0x07FF for Duration of Patient Use], [exponent 0, mantissa +(2**23 -1) = 0x007FFFFF for Duration of Flow Generation]) and a time stamp				
		The simulated PHD waits until it receives a confirmation from the PHG under test				
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).				
Notes		This test case has been considered as an implicit test case.				

TP ld		TP/PLT/PHG/CLASS/SABTE/BV-009				
TP label		Special values. Not a	Special values. Not at this resolution - fixed format (Std Config 2400)			
Coverage	Spec	[ISO/IEEE 11073-104	424]			
	Testable items	DPU 10; R	DFG 10; R			
Test purpos	se	Check that:				
Applicability	y	The PHG receives NRes value (fixed format event report) but it does not use this value. C_MAN_OXP_000 AND C_MAN_OXP_069				
Other PICS						
Initial condi	tion	The simulated PHD and PHG under test are in the Operating state using the standard configuration 2400.				
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 1 (Duration of Patient Use Object) and handle 2 (Duration of Flow Generation Object) containing an observation value set to the value for not at this resolution (NRes (not at this resolution) [exponent 0, mantissa –(2**11) = 0x0800 for Duration of Patient Use], [exponent 0, mantissa –(2**23) = 0x00800000 for Duration of Flow Generation])				
		2. The simulated PHD waits until it receives a confirmation from the PHG under test				
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).				
Notes		This test case has been considered as an implicit test case.				

TP ld		TP/PLT/PHG/CLASS/SABTE/BV-010				
TP label		Special values. Not at this resolution - variable format (Std Config 2400)				
Coverage	Spec	[ISO/IEEE 11073-10424]		_		
	Testable items	DPU 12; R	DFG 12; R			
Test purpose		Check that: The PHG receives NRes value (variable format event report) but it does not use this value.				
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_069				
Other PICS						
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2400.				
Test procedure		1. The simulated PHD sends a confirmed variable event report for handle 1 (Duration of Patient Use Object) and handle 2 (Duration of Flow Generation Object) containing an observation value set to the value for not at this resolution (NRes (not at this resolution) [exponent 0, mantissa –(2**11) = 0x0800 for Duration of Patient Use], [exponent 0, mantissa –(2**23) = 0x00800000 for Duration of Flow Generation])				
		2. The simulated PHD waits until it receives a confirmation from the PHG under test				
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).				

Notes	This test case has been considered as an implicit test case.	

TP ld		TP/PLT/PHG/CLASS/SABTE/BV-011			
TP label		Special values. Pos	sitive infinity - fixed format (Std C	config 2400)	
Coverage	Spec	[ISO/IEEE 11073-10	0424]		
	Testable items	DPU 10; M	DFG 10; M		
Test purpos	se .	Check that:			
		The PHG receives a	a +INFINITY value (fixed format	event report) but it does not use this value.	
Applicability	у	C_MAN_OXP_000 AND C_MAN_OXP_069			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2400.			
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 1 (Duration of Patient Use Object) and handle 2 (Duration of Flow Generation Object) containing an observation value set to the value for positive infinity (+INFINITY [exponent 0, mantissa +(2**11 -2) = 0x07FE for Duration of Patient Use], [exponent 0, mantissa +(2**23 -2) = 0x007FFFE for Duration of Flow Generation]) and a time stamp			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test			
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).			
Notes		This test case has been considered as an implicit test case.			

TP Id		TP/PLT/PHG/CLASS/SABTE/BV-012					
TP label		Special values. Positive infinity - variable format (Std Config 2400)					
Coverage	Spec	[ISO/IEEE 11073-104	24]				
	Testable items	DPU 12; R	DFG 12;	R			
Test purpos	se	Check that:	Check that:				
		The PHG receives a +INFINITY value (variable format event report) but it does not use this value.					
Applicabilit	y	C_MAN_OXP_000 AND C_MAN_OXP_069					
Other PICS							
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2400.					
Test procedure		1. The simulated PHD sends a confirmed variable event report for handle 1 (Duration of Patient Use Object) and handle 2 (Duration of Flow Generation Object) containing an observation value set to the value for positive infinity (+INFINITY [exponent 0, mantissa +(2**11 -2) = 0x07FE for Duration of Patient Use], [exponent 0, mantissa +(2**23 -2) = 0x007FFFFE for Duration of Flow Generation])					
		2. The simulated PHD waits until it receives a confirmation from the PHG under test					

Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/SABTE/BV-013				
TP label		Special values. Nega	ative infinity - fixed format (Std Config 2	2400)		
Coverage	Spec	[ISO/IEEE 11073-104	424]			
	Testable items	DPU 10; M	DFG 10; M			
Test purpose	9	Check that:				
		The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.				
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_069				
Other PICS						
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2400.				
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 1 (Duration of Patient Use Object) and handle 2 (Duration of Flow Generation Object) containing an observation value set to the value for negative infinity (– INFINITY [exponent 0, mantissa –(2**11 –2) = 0x0802 for Duration of Patient Use], [exponent 0, mantissa –(2**23 –2) = 0x00800002 for Duration of Flow Generation]) and a time stamp				
		2. The simulated PHD waits until it receives a confirmation from the PHG under test				
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).				
Notes		This test case has been considered as an implicit test case.				

TP ld		TP/PLT/PHG/CLASS/SABTE/BV-014			
TP label		Special values. Negative infinit	y - variable format (Std Config 2	400)	
Coverage	Spec	[ISO/IEEE 11073-10424]			
	Testable items	DPU 12; R DFG 12; R			
Test purpose		Check that: The PHG receives a –INFINITY value (variable format event report) but it does not use this value.			
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_069			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2400.			
Test procedure		The simulated PHD sends a confirmed variable event report for handle 1 (Duration of Patient Use Object) and handle 2 (Duration of Flow Generation Object) containing an			

	observation value set to the value for negative infinity ($-$ INFINITY [exponent 0, mantissa $-(2^{**}11 - 2) = 0x0802$ for Duration of Patient Use], [exponent 0, mantissa $-(2^{**}23 - 2) = 0x00800002$ for Duration of Flow Generation])
	2. The simulated PHD waits until it receives a confirmation from the PHG under test
Pass/Fail criteria	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/SABTE/BV-015				
TP label		Special values. Reserved - fixed format (Std Config 2400)				
Coverage	Spec	[ISO/IEEE 11073-10424]				
	Testable items	DPU 10; M	DFG 10; M			
Test purpose	e	Check that:				
		The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_069				
Other PICS						
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2400.				
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 1 (Duration of Patient Use Object) and handle 2 (Duration of Flow Generation Object) containing an observation value set to the value for reserved (Reserved for future use [exponent 0, mantissa –(2**11 –1) = 0x0801 for Duration of Patient Use], [exponent 0, mantissa –(2**23 –1) = 0x00800001 for Duration of Flow Generation]) and a time stamp The simulated PHD waits until it receives a confirmation from the PHG under test 				
Pass/Fail criteria		Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).				
Notes		This test case has been considered as an implicit test case.				

TP Id		TP/PLT/PHG/CLASS/SABTE/BV-016			
TP label		Special values. Reserved - variable format (Std Config 2400)			
Coverage Spec		[ISO/IEEE 11073-10424]			
	Testable items	DPU 12; R DFG 12; R			
Test purpose		Check that: The PHG receives a not use this value.	Reserved for future use value (v	variable format event report) but it does	
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_069			
Other PICS					

Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1800.		
Test procedure	 The simulated PHD sends a confirmed variable event report for handle 1 (Duration of Patient Use Object) and handle 2 (Duration of Flow Generation Object) containing an observation value set to the value for reserved (Reserved for future use [exponent 0, mantissa –(2**11 –1) = 0x0801 for Duration of Patient Use], [exponent 0, mantissa –(2**23 –1) = 0x00800001 for Duration of Flow Generation]) 		
	2. The simulated PHD waits until it receives a confirmation from the PHG under test		
Pass/Fail criteria	Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).		
Notes	This test case has been considered as an implicit test case.		

A.17 Su	ogroup 2.	3.16: Continuous gluco	se monitor (CGM)		
TP Id		TP/PLT/PHG/CLASS/CGM/BV-000			
TP label	Association procedure PHG Continuous Glucose Monitor				
Coverage	Spec	[ISO/IEEE 11073-10425]			
	Testable	ManProcAsCGM 1;M	ManProcAsCGM 2;M	ManProcAsCGM 3;M	
	items	ManProcAsCGM 4;M	ManProcAsCGM 5;M	ManProcAsCGM 6;M	
		ManProcAsCGM 7;M	ManProcAsCGM 8;M	ManProcAsCGM 9;M	
		ManProcAsCGM 10;M	ManProcAsCGM 11;M	ManProcAsCGM 12;M	
Test purpose		Check that: The result field shall be set to an appropriate response from those defined in [ISO/IEEE 11073-20601-2016C]. [AND] In the DataProtoList structure element, the data protocol identifier shall be set to data-proto-id-20601 [AND] The data-proto-info field shall be filled in with a PhdAssociationInformation structure [AND] The version of the data exchange protocol shall be set to protocol-version 2			
		and PHG. The PHG shall su [AND] The version of the nomenclar version = 0x80000000) [AND] The field functional-units shall Association. [AND]	a single selected encoding rule to a single selecte	rsion1 (i.e., nomenclature-	

	The System-Id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier [AND] The field dev-config-id shall be manager-config-response (0) [AND] The field data-req-mode-capab shall be 0 [AND] If the PHD supports only the CGM specialization, data-req-init-agent-count shall be 0 and data-req-init-manager-count shall be 0		
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_073		
Other PICS			
Initial condition	The PHG is in the Unassociated state		
Test procedure	1. The simulated PHD sends an Association Request to the PHG under test, with the fields: protocol-version = '010000000000000000000000000000000000		

d.	data-proto-id
	☐ field-type = DataProtold
	☐ field-length = 2 bytes
	☐ field-value= 0x50 0x79 (20601)
e.	protocol-version
	☐ field-type = Protocol Version
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value= 0x40 0x00 0x00 0x00
f.	encoding-rules
	☐ field-type = EncodingRules
	☐ field-length = 2 bytes (BITS-16)
	ield-value = depends on the encoding rules supported/selected, but only one can be supported at a time
g.	nomenclature version
	☐ field-type = NomenclatureVersion
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value = Bit 0 must be set (nom-version1)
h.	functional units
	☐ field-type = FunctionalUnits
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value =
	Bit 0 must be 0
	Bits 1 and 2 may be set
	 The rest of the bits must not be set
i.	system type
	☐ field-type = SystemType
	☐ field-length = 4 bytes (BITS-32)
	☐ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
j.	system-id
	ield-type = OCTET STRING
	☐ field-length = 8 bytes
	☐ field-value = (EUI-64 manufacturer and device)
k.	dev-config-id
	☐ field-type = Configld
	☐ field-length = 2 bytes
	☐ field-value = 0x00 0x00 (manager-config-response)
I.	data-req-mode-flags (DataReqModeCapab)
	☐ field-type = DataReqModeFlags
	☐ field-length = 2 bytes
	☐ field-value = 0x00 0x00
	□ PHG response to data-req-mode-flags is always 0.
m.	data-req-init-agent-count (DataReqModeCapab)
	☐ field-type = INT-U8
	☐ field-length = 1 byte

			field-value = 0x00
	n.	data	a-req-init-manager-count (DataReqModeCapab)
			field-type = INT-U8
			field-length = 1 byte
			field-value = 0x00
Pass/Fail criteria	All chec	ked \	values are as specified in the test procedure.
Notes			

TP ld		TP/PLT/PHG/CLASS/CGM	l/BV-001			
TP label		Configuration Event Report. Continuous Glucose Monitor standard configuration				
Coverage	Spec	[ISO/IEEE 11073-10425]				
	Testable items	ConfProcCGM 4;M	MDSEventsCGM 2;M	ObjAccServCGM 5;M		
	Spec	[ISO/IEEE 11073-20601-20	016C]			
	Testable items	ConfEventRep 18;M				
Test purpos	se	Check that:				
		Response Confirmed Eve	a configuration notification mes int Report" data message with a structure for the event-info fiel			
		[AND]				
		A PHG shall support both s	single-person and multi-person	event reports.		
		[AND]				
		A Continuous Glucose Monitor PHG shall respond to an [MDS-Configuration-Event] using a [Confirmed] event report response.				
		The Response shall include	e the event-reply-info [ConfigRe	eportRsp]		
		[AND]				
			or more) of the ISO/IEEE 11073 accept all the standard device o ce Table 23 under Gen-4.			
		[AND]				
		Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the Configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.				
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_073				
Other PICS		C_MAN_OXP_085				
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state. The simulated PHD implements a Continuous Glucose Monitor device specialization with Standard Configuration (2500)				
Test proced	lure	The simulated PHD sends an Association Request to the PHG under test with dev-configid set to 0x09 0xC4 (Continuous Glucose Monitor PHD – Std Config 2500)				
		2. The PHG under test re	esponds an Association Respor	nse, the field of interest is:		
		a. Result				

			D. C.LL. INT.IIIO
			ield-type = INT-U16
			ifield-length = 2 bytes
			☐ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unkown-config)
	IF t	he re	esult of the Association Response was "accepted-unkown-config"
	3.	The 0xC	e simulated PHD sends a configuration event report with config-report-id set to 0x09
	4.	The	e PHG under test must respond with:
		a.	APDU Type
			☐ field-length = 2 bytes
			☐ field-value = 0xE7 0x00 (PrstApdu)
		b.	Invoke-id
			☐ field-type = INT-U16
			☐ field-length = 2 bytes
			ifield-value = it must be the same that the invoke-id of the simulated PHD's message.
		c.	Obj-Handle:
			☐ field-type = HANDLE
			☐ field-length = 2 bytes
			$\Box \text{field-value} = 0x00 \ 0x00$
		d.	Event-time:
			☐ field-type = INT-U32
			☐ field-length = 4 bytes
			$\Box \text{field-value} = 0 \text{xXX} \ 0 \text{xXX}$
		e.	Event-type:
			☐ field-length = 2 bytes
			☐ field-value = MDC_NOTI_CONFIG
		f.	The following six bytes indicate:
			☐ Event-replay-info.length (2 bytes)
			☐ ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message
			☐ ConfigReportRsp.config-result: One of:
			 accepted-config: 0x00 0x00
	5.	IF C	C_MAN_OXP_085 THEN:
		a.	The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes.
		b.	The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.
		c.	Once in the Operating state the PHG is forced to enable the scanner object.
	Wa	it unt	til the Operating state is reached in both cases
	6.	The	e simulated PHD sends a fixed event report with one CGM measurement.
Pass/Fail criteria	•		e PHG under test must respond either to the Association Request with an "accepted" ssage or to the Configuration Event Report with an "accepted-config"
	•	The	e measurement is correctly presented
Notes			

TP ld		TP/PLT/PHG/CLASS/CGM/BV-002_A			
TP label		Maximum APDU size: Continuous Glucose Monitor without PM-Store			
Coverage	Spec	[ISO/IEEE 11073-20601-2016C]			
Testable items		CommonCharac 4; M			
	Spec	[ISO/IEEE 11073-10425]			
	Testable items	ComCharCGM 2; M			
Test purpose	e	Check that:			
		If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.			
		The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_073			
Other PICS					
Initial condit	ion	The PHG under test is in the Operating state.			
Initial condition Test procedure		1. The simulated PHD sends a Confirmed variable event report: a. ScanReportInfoVar. obs_scan_var: Count = 2 Length = 856 ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 61441 attribute-value: '00(832) bytes)00'0 } ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 2636 (MDC_ATTR_NU_VAL_OBS_BASIC)			
		4. Check the response of the PHG under test 4. Check the response of the PHG under test			
Pass/Fail cri	teria	In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report.			

	•	In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report.
Notes		

TP ld		TP/PLT/PHG/CLASS/CGM/BV-002_B			
TP label		Maximum APDU size: Continuous Glucose Monitor with PM-Store			
Coverage	Spec	[ISO/IEEE 11073-20601-2016C]			
	Testable items	CommonCharac 4; M			
	Spec	[ISO/IEEE 11073-10425]			
	Testable items	ComCharCGM 3; M			
Test purpos	e	Check that: If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation. The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.			
Applicability Other PICS	y	C_MAN_OXP_000 AND C_MAN_OXP_073 AND C_MAN_OXP_003			
Initial condi	tion	The PHG under test is in the Operating state.			
Test procedure		1. The simulated PHD sends a Confirmed variable event report: a. ScanReportInfoVar. obs_scan_var: Count = 2 Length = 5080 ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 61441 attribute-value: '00(5056) bytes) 00'0 } ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 2636} (MDC_ATTR_NU_VAL_OBS_BASIC) attribute-value: 100 } }			
		 Check the response of the PHG under test. The simulated PHD sends a Confirmed fixed event report with one measurement. 			

	4.	Check the response of the PHG under test.
Pass/Fail criteria	•	In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report" In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report"
Notes		

TP Id		TP/PLT/PHG/CLASS/CGM/BV-003				
TP label		Glucose Attribute-Value-Map. Order change				
Coverage	Spec	[ISO/IEEE 11073-10425]				
	Testable items	Glucose 14; M				
Test purpose	•	Check that:				
		For [Standard-Configuration] the [Attribute-Value-Map] attribute SHALL BE PRESENT.				
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC, then				
		MDC_ATTR_TIME_STAMP_BO				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_073				
Other PICS						
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.				
Test procedu	ıre	The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_BO				
		2. The simulated PHD waits until it receives a confirmation				
		 The simulated PHD sends a confirmed variable event report to change the Attribute- Value-Map configuration of handle 1 (Glucose Numeric Object) to reverse the values to MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_NU_VAL_OBS_BASIC. 				
		4. The simulated PHD waits until it receives a confirmation				
		The simulated PHD sends a confirmed fixed format event report with the date first followed by a blood glucose value.				
		6. The simulated PHD waits until it receives a confirmation				
		7. The simulated PHD sends an Association Release Request (normal)				
		8. The simulated PHD waits until there is a Association Release Response				
		The simulated PHD sends an Association Request using the same standard configuration that was used previously				
		If the PHG under test responds with association request response with "accepted-unknown-config", then:				
		 Simulated PHD sends the confirmed configuration event report with the standard configuration 				
		 Simulated PHD waits until there is a confirmation to the configuration event report that was sent. 				
		11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_BO). The observation should be a reasonable blood glucose observation.				
		12. The simulated PHD waits until it receives a confirmation				

Pass/Fail criteria	 In step 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).
	In step 2, 6 and 12 verify that the PHG under test uses MDC_DIM_MILLI_G_PER_DL as the unit-code for the measurement report (or reports the proper value after convert to another unit-code)
	• In step 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation time stamp (i.e., the actual observation may have occurred sometime in the past).
	When automated, need to be careful about just sending these messages back to back since the ability to look at things like an UI may need a pause for operator verification.
Notes	

TP Id		TP/PLT/PHG/CLASS/CGM/BV-004		
TP label		Glucose Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map		
Coverage	Spec	[ISO/IEEE 11073-10425]		
	Testable items	Glucose 14; M		
Test purpose	9	Check that:		
		For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present		
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC MDC_ATTR_TIME_STAMP_BO		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_073		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (2500). (Glucose Numeric object [Unit-Code] attribute is set to MDC_DIM_MILLI_G_PER_DL)		
Test procedure		The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 1 (Glucose Numeric Object) to set the values to: MDC_ATTR_NU_VAL_OBS_BASIC, MDC_ATTR_UNIT_CODE, then MDC_ATTR_TIME_STAMP_BO.		
		2. The simulated PHD waits until it receives a confirmation		
		3. The simulated PHD sends a confirmed fixed format event report with the new data layout. For unit-code Attribute, use MDC_DIM_MILLI_G_PER_DL (2130).		
		4. The simulated PHD waits until it receives a confirmation		
		 The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC Attribute. 		
		6. The simulated PHD waits until it receives a confirmation		
Pass/Fail criteria		• In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).		
		• In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement is displayed properly).		
		In step 4 and 6, verify that the PHG under test uses MDC_DIM_MILLI_G_PER_DL as the unit-code for the measurement reports.		
Notes				

TP Id		TP/PLT/PHG/CLASS/CGM/BV-005	
TP label		Glucose Unit-Code. Use default Glucose un	its - variable format observation
Coverage Spec		[ISO/IEEE 11073-10425]	
	Testable items	Glucose 12; M	
Test purpos	se .	Check that:	
		For [Standard-Configuration] the [Unit-Code	attribute shall be present
		The value of the [Unit-Code] attribute shall be	pe MDC_DIM_MILLI_G_PER_DL
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_073	3
Other PICS			
Initial condition		The simulated PHD and the PHG under test configuration (2500).	t are in the Operating state using the standard
Test procedure		Send a confirmed variable format event MDC_DIM_MILLI_G_PER_DL units.	t report using a measurement using
		2. The simulated PHD waits until it receive	es a confirmation
Pass/Fail criteria		Verify that the PHG under test is able to acc MDC_DIM_MILLI_G_PER_DL unit to the ob- measurement and date are displayed proper units).	
Notes			

TP ld		TP/PLT/PHG/CLASS/CGM/BV-006
TP label		Glucose Special values. Not a number - fixed format (Std Config)
Coverage	Spec	[ISO/IEEE 11073-10425]
	Testable items	Glucose 14; M
Test purpos	se	Check that:
		The PHG receives a NaN value (fixed format event report) but it does not use this value.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_073
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2500.
Test procedure		The simulated PHD sends a confirmed fixed event report for handle 1 (Glucose Numeric Object) containing an observation value with the value for not a number (NaN (not a number) [exponent 0, mantissa +(2**11 –1) = 0x07FF]) and a time stamp
		2. The simulated PHD waits until it receives a confirmation from the PHG under test
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement such as "—" or by blanking the display area).

Notes	This test case has been considered as an implicit test case.	

TP ld		TP/PLT/PHG/CLASS/CGM/BV-007
TP label		Glucose Special values. Not a number - variable format (Std Config)
Coverage	Spec	[ISO/IEEE 11073-10425]
	Testable items	Glucose 18; M
Test purpos	ie	Check that:
		The PHG receives a NaN value (variable format event report) but it does not use this value.
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_073
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2500.
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Glucose Numeric Object) containing an observation value set to the value for not a number (NaN (not a number) [exponent 0, mantissa +(2**11 -1) = 0x07FF])
		2. The simulated PHD waits until it receives a confirmation from the PHG under test
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).
Notes		This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/CGM/BV-008		
TP label		Glucose Special values. Not at this resolution - fixed format (Std Config)		
Coverage	Spec	[ISO/IEEE 11073-10425]		
	Testable items	Glucose 14; M		
Test purpose	9	Check that:		
		The PHG receives NRes value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_073		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2500.		
Test procedure		The simulated PHD sends a confirmed fixed event report for handle 1 (Glucose Numeric Object) containing an observation value set to the value for not at this resolution (NRes (not at this resolution) [exponent 0, mantissa –(2**11) = 0x0800]) and a time stamp		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test		
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).		

Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/CGM/BV-009
TP label		Glucose Special values. Not at this resolution - variable format (Std Config)
Coverage	Spec	[ISO/IEEE 11073-10425]
	Testable items	Glucose 18; M
Test purpos	ie .	Check that:
		The PHG receives NRes value (variable format event report) but it does not use this value.
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_073
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2500.
Test procedure		The simulated PHD sends a confirmed variable event report for handle 1 (Glucose Numeric Object) containing an observation value set to the value for not at this resolution (NRes (not at this resolution) [exponent 0, mantissa –(2**11) = 0x0800])
		2. The simulated PHD waits until it receives a confirmation from the PHG under test
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).
Notes		This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/CGM/BV-010
TP label		Glucose Special values. Positive infinity - fixed format (Std Config)
Coverage	Spec	[ISO/IEEE 11073-10425]
	Testable items	Glucose 14; M
Test purpose	9	Check that:
		The PHG receives a +INFINITY value (fixed format event report) but it does not use this value.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_073
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2500.
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 1 (Glucose Numeric Object) containing an observation value set to the value for positive infinity (+INFINITY [exponent 0, mantissa +(2**11 -2) = 0x07FE]) and a time stamp
		2. The simulated PHD waits until it receives a confirmation from the PHG under test
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).

Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/CGM/BV-011	
TP label		Glucose Special values. Positive infinity - variable format (Std Config)	
Coverage Spec		[ISO/IEEE 11073-10425]	
	Testable items	Glucose 18; M	
Test purpos	se .	Check that:	
		The PHG receives a +INFINITY value (variable format event report) but it does not u value.	ise this
Applicability	у	C_MAN_OXP_000 AND C_MAN_OXP_073	
Other PICS			
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the star configuration 2500.	ndard
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Gluco Numeric Object) containing an observation value set to the value for positive infi (+INFINITY [exponent 0, mantissa +(2**11 -2) = 0x07FE]) 	
		2. The simulated PHD waits until it receives a confirmation from the PHG under test	st
Pass/Fail Criteria		Verify that the PHG under test is able to accept the data, but does not use the values they were an actual measurement (e.g., if there is a UI verify the measurement is dissome form that indicates it is not a measurement).	
Notes		This test case has been considered as an implicit test case.	

TP Id		TP/PLT/PHG/CLASS/CGM/BV-012		
TP label		Glucose Special values. Negative infinity - fixed format (Std Config)		
Coverage	Spec [ISO/IEEE 11073-10425]			
	Testable items	Glucose 14; M		
Test purpose		Check that:		
		The PHG receives a -INFINITY value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_073		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2500.		
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 1 (Glucose Numeric Object) containing an observation value set to the value for negative infinity (–INFINITY [exponent 0, mantissa –(2**11 –2) = 0x0802]) and a time stamp		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test		
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).		

Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/CGM/BV-013		
TP label		Glucose Special values. Negative infinity - variable format (Std Config)		
Coverage Spec		[ISO/IEEE 11073-10425]		
	Testable items	Glucose 18; M		
Test purpose		Check that:		
		The PHG receives a –INFINITY value (variable format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_073		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2500.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Glucose Numeric Object) containing an observation value set to the value for negative infinity (– INFINITY [exponent 0, mantissa –(2**11 –2) = 0x0802]) 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test		
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).		
Notes		This test case has been considered as an implicit test case.		

TP Id		TP/PLT/PHG/CLASS/CGM/BV-014	
TP label		Glucose Special values. Reserved - fixed format (Std Config)	
Coverage	Spec	[ISO/IEEE 11073-10425]	
	Testable items	Glucose 14; M	
Test purpose		Check that:	
		The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.	
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_073	
Other PICS			
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2500.	
Test procedure		 The simulated PHD sends a confirmed fixed event report for handle 1 (Glucose Numeric Object) containing an observation value set to the value for reserved (Reserved for future use [exponent 0, mantissa –(2**11 –1) = 0x0801]) and a time stamp 	
		2. The simulated PHD waits until it receives a confirmation from the PHG under test	
Pass/Fail criteria		Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the	

	measurement is displayed in some form that indicates it is not a measurement).
Notes	This test case has been considered as an implicit test case.

TP Id		TP/PLT/PHG/CLASS/CGM/BV-015		
TP label		Glucose Special values. Reserved - variable format (Std Config)		
Coverage Spec		[ISO/IEEE 11073-10425]		
	Testable items	Glucose 18; M		
Test purpose		Check that:		
		The PHG receives a "Reserved for future use value" (variable format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_073		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2500.		
Test procedure		 The simulated PHD sends a confirmed variable event report for handle 1 (Glucose Numeric Object) containing an observation value set to the value for reserved (Reserved for future use [exponent 0, mantissa –(2**11 –1) = 0x0801]) 		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test		
Pass/Fail criteria		Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g., if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).		
Notes		This test case has been considered as an implicit test case.		

A.18 Subgroup 2.3.17: Power status monitor (PSM)

TP ld		TP/PLT/PHG/CLASS/PSM/BV-000		
TP label		Association procedure PHG Power Status Monitor		
Coverage	Spec	[ISO/IEEE 11073-10427]		
	Testable	ManProcAsPSM 1;M	ManProcAsPSM 2;M	ManProcAsPSM 3;M
	items	ManProcAsPSM 4;M	ManProcAsPSM 5;M	ManProcAsPSM 6;M
		ManProcAsPSM 7;M	ManProcAsPSM 8;M	ManProcAsPSM 9;M
		ManProcAsPSM 10;M	ManProcAsPSM 11;M	ManProcAsPSM 12;M
Test purpose		Check that:		
		The result field shall be set to an appropriate response from those defined in IEEE Std 11073-20601.		
		[AND]		
		In the DataProtoList structure element, the data protocol identifier shall be set to data-proto-id-20601		
		[AND]		

	The data-proto-info field shall be filled in with a PhdAssociationInformation structure			
	[AND]			
	The version of the data exchange protocol shall be set to protocol-version 2 OR protocol-verion 3			
	[AND]			
	The PHG shall respond with a single selected encoding rule that is supported by both PHD and PHG. The PHG shall support at least the MDER encoding rules			
	[AND]			
	The version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000)			
	[AND]			
	The field functional-units shall have all bits reset except for those relating to a Test Association.			
	[AND]			
	The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000)			
	[AND]			
	The System-Id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier			
	[AND]			
	The field dev-config-id shall be manager-config-response (0)			
	[AND]			
	The field data-req-mode-capab shall be 0			
	[AND]			
	If the agent supports only the PSM specialization, data-req-init-manager-count shall be 0 for standard configuration and data-req-init-agent-count shall be 1.			
Applicability	C_MAN_OXP_000 AND (C_MAN_OXP_076 OR C_MAN_OXP_077)			
Other PICS				
Initial condition	PHG is in the unassociated State			
Test procedure	1. Simulated PHD sends an Association Request to the PHG under test, with the fields:			
	□ protocol-version = '011000000000000000000000000000000000			
	□ encoding-rules= '100000000000000'B			
	□ nomenclature-version = '100000000000000000000000000000000000			
	☐ functional-units = '00000000000000000000000000000000000			
	□ system-type = '000000001000000000000000000000000000			
	☐ dev-config-id = 16440			
	☐ data-req-mode-capab =			
	data_req_mode_flags= '000000000000001'B			
	data_req_init_agent_count = 1 (for standard configuration)			
	data_req_init_manager_count = 0			
	☐ option-list.length= 0			
	2. PHG under test sends an Association Response. The fields of interest are:			
	a. APDU Type			
	☐ field-length = 2 bytes			
	☐ field-value = 0xE3 0x00 (AareApdu)			

b.	Res	sult
		field-type = AssociateResult
		field-length = 2 bytes
		field-value = One of the following:
		■ If association is accepted, field-value= 0x00 0x00.
		■ If association is rejected-permanent, field-value= 0x00 0x01.
		■ If association is rejected-transient, field-value= 0x00 0x02.
		■ If association is accepted-unknown-config, field-value= 0x00 0x03.
		■ If association is rejected-no-common-protocol, field-value= 0x00 0x04.
		■ If association is rejected -no-common-parameter, field-value= 0x00 0x05.
		■ If association is rejected –unknown = 0x00 0x06.
		■ If association is rejected -unauthorized, field-value= 0x00 0x07.
		 If association is rejected –unsupported-assoc-version, field-value= 0x00 0x08.
C.		ected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data-to-info(defined by data-proto-id))
d.	dat	a-proto-id
		field-type = DataProtoId
		field-length = 2 bytes
		field-value= 0x50 0x79 (20601)
e.	pro	tocol-version
		field-type = Protocol Version
		field-length = 4 bytes (BITS-32)
		field-value= 0x40 0x00 0x00 0x00 OR 0x20 0x00 0x00 0x00 OR 0x60 0x00 0x00
f.	enc	coding-rules
		field-type = EncodingRules
		field-length = 2 bytes (BITS-16)
		field-value = depends on the encoding rules supported/selected, but only one can be supported at a time
g.	nor	nenclature version
		field-type = NomenclatureVersion
		field-length = 4 bytes (BITS-32)
		field-value = Bit 0 must be set (nom-version1)
h.	fun	ctional units
		field-type = FunctionalUnits
		field-length = 4 bytes (BITS-32)
		field-value =
		Bit 0 must be 0
		■ Bits 1 and 2 may be set
		 The rest of the bits must not be set
i.	sys	tem type
		field-type = SystemType
		field-length = 4 bytes (BITS-32)
		field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)

j.	system-id
	☐ field-type = OCTET STRING
	☐ field-length = 8 bytes
	☐ field-value = (EUI-64 manufacturer and device)
k.	dev-config-id
	☐ field-type = Configld
	☐ field-length = 2 bytes
	☐ field-value = 0x00 0x00 (manager-config-response)
I.	data-req-mode-flags (DataReqModeCapab)
	☐ field-type = DataReqModeFlags
	☐ field-length = 2 bytes
	$\Box \text{field-value} = 0x00 \ 0x00$
	□ PHG response to data-req-mode-flags is always 0.
m.	data-req-init-agent-count (DataReqModeCapab)
	☐ field-type = INT-U8
	☐ field-length = 1 byte
	☐ field-value = 0x00
n.	data-req-init-manager-count (DataReqModeCapab)
	☐ field-type = INT-U8
	☐ field-length = 1 byte
	☐ field-value = 0x00
All chec	ked values are as specified in the test procedure.
	k. I.

TP ld		TP/PLT/PHG/CLASS/PSM/BV-001					
TP label		Configuration Event Report. Power Status Monitor standard configuration 2700					
Coverage	Spec	[ISO/IEEE 11073-10427]					
Testable items		ConfProcPSM 4;M	MDSEventsPSM 2;M				
	Spec	[ISO/IEEE 11073-20601-2016	6C]				
	Testable items	ConfEventRep 18;M					
Test purpos	se	Check that:					
		The PHG shall respond to a configuration notification message using a "Remote Operation Response Confirmed Event Report" data message with an MDC_NOTI_CONFIG event using the ConfigReportRsp structure for the event-info field					
		[AND]					
		A Power Status Monitor PHG shall respond to an [MDS-Configuration-Event] using a [Confirmed] event report response.					
		The Response shall include the event-reply-info [ConfigReportRsp]					
		[AND]					
		A PHG that supports one (or more) of the ISO/IEEE 11073-104zz device specialization					

	standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.			
	[AND]			
	Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.			
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_076			
Other PICS	C_MAN_OXP_085			
Initial condition	Simulated PHD and PHG under test are in the unassociated state. Simulated PHD implements a Power Status Monitor device specialization with Standard Configuration (2700)			
Test procedure	The simulated PHD sends an Association Request to the PHG under test with dev-configing set to 0x0A 0x8C (Power Status Monitor PHD – Std Config 2700)			
	2. PHG under test responds an Association Response, the field of interest is:			
	a. Result			
	☐ field-type = INT-U16			
	☐ field-length = 2 bytes			
	☐ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unkown-config)			
	IF the result of the Association Response was "accepted-unkown-config"			
	3. Simulated PHD sends a configuration event report with config-report-id set to 0x0A 0x8C			
	PHG under test must respond with:			
	a. APDU Type			
	☐ field-length = 2 bytes			
	ield-value = 0xE7 0x00 (PrstApdu)			
	b. Invoke-id			
	☐ field-type = INT-U16			
	☐ field-length = 2 bytes			
	field-value = it must be the same that the invoke-id of the simulated PHD's message.			
	c. Obj-Handle:			
	☐ field-type = HANDLE			
	☐ field-length = 2 bytes			
	$\Box \text{field-value} = 0x00 \ 0x00$			
	d. Event-time:			
	☐ field-type = INT-U32			
	☐ field-length = 4 bytes			
	ield-value = 0xXX 0xXX			
	e. Event-type:			
	☐ field-length = 2 bytes			
	ield-value = MDC_NOTI_CONFIG			
	f. The following six bytes indicate:			
	□ Event-replay-info.length (2 bytes)			
	 ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message 			
	☐ ConfigReportRsp.config-result: One of:			
	accepted-config: 0x00 0x00			

	5. IF C_MAN_OXP_085 THEN:		
	 The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. 		
	b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.		
	c. Once in Operating state PHG is forced to enable the scanner object.		
	Wait until Operating state is reached in both cases		
	6. Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object.		
Pass/Fail criteria	The PHG under test must respond either to the Association Request with an "accepted" message or to the Configuration Event Report with an "accepted-config"		
	The measurements are correctly presented		
Notes			

TP Id		TP/PLT/PHG/CLASS/PSM/BV-002					
TP label		Configuration Event Report. Power Status Monitor standard configuration 2701					
Coverage	Spec	[ISO/IEEE 11073-10427]					
	Testable items	ConfProcPSM 4;M MDSEventsPSM 2;M					
	Spec	[ISO/IEEE 11073-20601-:	2016C]				
	Testable items	ConfEventRep 18;M					
Test purpos	se	Response Confirmed Ev	o a configuration notification mess vent Report" data message with a sp structure for the event-info field	n MDC_NOTI_CONFIG event			
		A Power Status Monitor PHG shall respond to an [MDS-Configuration-Event] using a [Confirmed] event report response.					
		The Response shall include the event-reply-info [ConfigReportRsp]					
		[AND]					
		A PHG that supports one (or more) of the ISO/IEEE 11073-104zz device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.					
		[AND]					
Alternatively, the PHG may request the PHD to send the standard configuration enter the configuring state and check attributes from the MDS object prior to find (or rejection) of the PHD.							
Applicability C_MAN_OXP_000 AND C_MAN_OXP_076							
Other PICS C_MAN_OXP_085							
Initial condi	ition		under test are in the unassociate us Monitor device specialization w	ed state. Simulated PHD vith Standard Configuration (2701)			
Test proced	dure	The simulated PHD s	sends an Association Request to t	the PHG under test with dev-config-			

		id s	et to	0x0A 0x8C (Power Status Monitor PHD – Std Config 2701)
	2.	PH	G un	der test responds an Association Response, the field of interest is:
		a.	Res	sult
				field-type = INT-U16
				field-length = 2 bytes
				field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unkown-config)
	IF t	he re	sult	of the Association Response was "accepted-unkown-config"
	3.	Sim	nulate	ed PHD sends a configuration event report with config-report-id set to 0x0A 0x8C
	4.	PH	G un	der test must respond with:
		a.	API	DU Type
				field-length = 2 bytes
				field-value = 0xE7 0x00 (PrstApdu)
		b.	Inv	oke-id
				field-type = INT-U16
				field-length = 2 bytes
				field-value = it must be the same that the invoke-id of the simulated PHD's message.
		c.	Obj	-Handle:
				field-type = HANDLE
				field-length = 2 bytes
				field-value = 0x00 0x00
		d.	Eve	ent-time:
				field-type = INT-U32
				field-length = 4 bytes
				field-value = 0xXX 0xXX
		e.	Eve	ent-type:
				field-length = 2 bytes
				field-value = MDC_NOTI_CONFIG
		f.	The	e following six bytes indicate:
				Event-replay-info.length (2 bytes)
				ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message
				ConfigReportRsp.config-result: One of:
				accepted-config: 0x00 0x00
	5.	IF C	C_M/	AN_OXP_085 THEN:
		a.	roiv	e PHG under test moves to Configuring/Sending GetMDS substate and issues r-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list to 0 to indicate all attributes.
		b.	attr	simulated PHD responds with a rors-cmip-get service message in which the ibute-list contains a list of all implemented attributes of the MDS object and the s-time-mgr-set-time bit is not set.
		c.	One	ce in Operating state, PHG is forced to enable the scanner object.
	Wa	it unt	til Op	perating state is reached in both cases
	6.			ed PHD sends a variable event report for each Battery Status and Battery y object.
Pass/Fail criteria	•			G under test must respond either to the Association Request with an "accepted" e or to the Configuration Event Report with an "accepted-config"

	The measurements are correctly presented
Notes	

TP Id		TP/PLT/PHG/CLASS/PSM/BV-003					
TP label Configuration Event Report. Power Status Monitor standard configuration 2702							
Coverage	Spec	[ISO/IEEE 11073-10427]	I				
	Testable items	ConfProcPSM 4;M	MDSEventsPSM 2;M				
	Spec	[ISO/IEEE 11073-20601-	-2016C]				
	Testable items	ConfEventRep 18;M					
Test purpos	se	Check that:					
		Response Confirmed E	to a configuration notification mess vent Report" data message with a sp structure for the event-info field	n MDC NOTI CONFIG event			
		[AND]					
		A Power Status Monitor PHG shall respond to an [MDS-Configuration-Event] using a [Confirmed] event response.					
		The Response shall include the event-reply-info [ConfigReportRsp]					
		[AND]					
		A PHG that supports one (or more) of the ISO/IEEE 11073-104zz device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.					
		[AND]					
		Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.					
Applicabilit	у	C_MAN_OXP_000 AND	C_MAN_OXP_076				
Other PICS		C_MAN_OXP_085					
Initial cond	ition	Simulated PHD and PHG under test are in the unassociated state. Simulated PHD implements a Power Status Monitor device specialization with Standard Configuration (2702)					
Test proced	dure	The simulated PHD sends an Association Request to the PHG under test with dev-configid set to 0x0A 0x8C (Power Status Monitor PHD – Std Config 2702)					
		2. PHG under test responds an Association Response, the field of interest is:					
		a. Result					
		☐ field-type = INT-U16					
		☐ field-length = 2 bytes					
		☐ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unkown-config)					
		IF the result of the Association Response was "accepted-unkown-config"					
		3. Simulated PHD sends a configuration event report with config-report-id set to 0x0A 0x8C					
		4. PHG under test must respond with:					
		a. APDU Type					
		☐ field-length	= 2 bytes				

field-value = 0xE7 0x00 (PrstApdu) b. Invoke-id field-type = INT-U16 field-type = INT-U16 field-length = 2 bytes field-value = it must be the same that the invoke-id of the simulated PHD's message. c. Obj-Handle:				
field-type = INT-U16 field-length = 2 bytes field-value = it must be the same that the invoke-id of the simulated PHD's message. c. Obj-Handle:				field-value = 0xE7 0x00 (PrstApdu)
field-length = 2 bytes field-value = it must be the same that the invoke-id of the simulated PHD's message. c. Obj-Handle:			b. Inv	oke-id
field-value = it must be the same that the invoke-id of the simulated PHD's message. c. Obj-Handle:				field-type = INT-U16
message. c. Obj-Handle:				field-length = 2 bytes
field-type = HANDLE field-length = 2 bytes field-value = 0x00 0x00 d. Event-time: field-type = INT-U32 field-length = 4 bytes field-value = 0xXX 0xXX d. Event-type: field-length = 2 bytes field-value = MDC_NOTI_CONFIG field-value = MDC_NOTI_CONFIG The following six bytes indicate: Event-replay-info.length (2 bytes) ConfigReportRsp.config-report-id: it must be the same that config-report-id the simulated PHD's message ConfigReportRsp.config-result: One of: accepted-config: 0x00 0x00 The PHG under test moves to Configuring/Sending GetMDS substate and issuer roiv-comple-command with handle set to 0 (request for MDS object) and attribute-is set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in Operating state, PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config"				
☐ field-length = 2 bytes ☐ field-value = 0x00 0x00 d. Event-time: ☐ field-type = INT-U32 ☐ field-length = 4 bytes ☐ field-value = 0xXX 0xXX e. Event-type: ☐ field-length = 2 bytes ☐ field-value = MDC_NOTI_CONFIG f. The following six bytes indicate: ☐ Event-replay-info.length (2 bytes) ☐ ConfigReportRsp.config-report-id: it must be the same that config-report-id the simulated PHD's message ☐ ConfigReportRsp.config-result: One of: ☐ accepted-config: 0x00 0x00 5. IF C_MAN_OXP_085 THEN: ☐ The PHG under test moves to Configuring/Sending GetMDS substate and issuer roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-is set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in Operating state, PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. • The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config"			c. Obj	j-Handle:
d. Event-time:				field-type = HANDLE
d. Event-time:				field-length = 2 bytes
field-type = INT-U32 field-length = 4 bytes field-value = 0xXX 0xXX field-value = 0xXX 0xXX field-value = 0xXX 0xXX field-length = 2 bytes field-value = MDC_NOTI_CONFIG field-value = MDC_NOTI_CONFIG The following six bytes indicate: Event-replay-info.length (2 bytes) ConfigReportRsp.config-report-id: it must be the same that config-report-id the simulated PHD's message ConfigReportRsp.config-result: One of: accepted-config: 0x00 0x00 TF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issueroiv-cmip-command with handle set to 0 (request for MDS object) and attribute-is set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in Operating state, PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config"				field-value = 0x00 0x00
☐ field-length = 4 bytes ☐ field-value = 0xXX 0xXX e. Event-type: ☐ field-length = 2 bytes ☐ field-value = MDC_NOTI_CONFIG f. The following six bytes indicate: ☐ Event-replay-info.length (2 bytes) ☐ ConfigReportRsp.config-report-id: it must be the same that config-report-id the simulated PHD's message ☐ ConfigReportRsp.config-result: One of: ☐ accepted-config: 0x00 0x00 5. IF C_MAN_OXP_085 THEN: ☐ The PHG under test moves to Configuring/Sending GetMDS substate and issueroiv-cmip-command with handle set to 0 (request for MDS object) and attribute-is set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in Operating state, PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. • The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config"			d. Eve	ent-time:
□ field-value = 0xXX 0xXX e. Event-type: □ field-length = 2 bytes □ field-value = MDC_NOTI_CONFIG f. The following six bytes indicate: □ Event-replay-info.length (2 bytes) □ ConfigReportRsp.config-report-id: it must be the same that config-report-id the simulated PHD's message □ ConfigReportRsp.config-result: One of: ■ accepted-config: 0x00 0x00 5. IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issueroiv-cmip-command with handle set to 0 (request for MDS object) and attribute-is set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in Operating state, PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. Pass/Fail criteria • The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted config"				field-type = INT-U32
e. Event-type: field-length = 2 bytes field-value = MDC_NOTI_CONFIG f. The following six bytes indicate: Event-replay-info.length (2 bytes) ConfigReportRsp.config-report-id: it must be the same that config-report-id the simulated PHD's message ConfigReportRsp.config-result: One of: accepted-config: 0x00 0x00 accepted-config: 0x00 0x00 T C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issueroiv-cmip-command with handle set to 0 (request for MDS object) and attribute-is et to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in Operating state, PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. Pass/Fail criteria The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config"				field-length = 4 bytes
☐ field-length = 2 bytes ☐ field-value = MDC_NOTI_CONFIG f. The following six bytes indicate: ☐ Event-replay-info.length (2 bytes) ☐ ConfigReportRsp.config-report-id: it must be the same that config-report-id the simulated PHD's message ☐ ConfigReportRsp.config-result: One of: ☐ accepted-config: 0x00 0x00 5. IF C_MAN_OXP_085 THEN: ☐ The PHG under test moves to Configuring/Sending GetMDS substate and issueroiv-cmip-command with handle set to 0 (request for MDS object) and attribute-is set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. ☐ Once in Operating state, PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. Pass/Fail criteria • The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config"				field-value = 0xXX 0xXX
☐ field-value = MDC_NOTI_CONFIG f. The following six bytes indicate: ☐ Event-replay-info.length (2 bytes) ☐ ConfigReportRsp.config-report-id: it must be the same that config-report-id the simulated PHD's message ☐ ConfigReportRsp.config-result: One of: ■ accepted-config: 0x00 0x00 5. IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issuer roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-is set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in Operating state, PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. Pass/Fail criteria • The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config"			e. Eve	ent-type:
f. The following six bytes indicate: Event-replay-info.length (2 bytes) ConfigReportRsp.config-report-id: it must be the same that config-report-id the simulated PHD's message ConfigReportRsp.config-result: One of: accepted-config: 0x00 0x00 FC_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issueroiv-cmip-command with handle set to 0 (request for MDS object) and attribute-ic set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in Operating state, PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. Pass/Fail criteria The PHG under test must respond either to the Association Request with an "acceptate message or to the Configuration Event Report with an "accepted-config"				field-length = 2 bytes
□ Event-replay-info.length (2 bytes) □ ConfigReportRsp.config-report-id: it must be the same that config-report-id the simulated PHD's message □ ConfigReportRsp.config-result: One of: ■ accepted-config: 0x00 0x00 5. IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issue: roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-is set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in Operating state, PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. Pass/Fail criteria • The PHG under test must respond either to the Association Request with an "acceptate message or to the Configuration Event Report with an "accepted-config"				field-value = MDC_NOTI_CONFIG
ConfigReportRsp.config-report-id: it must be the same that config-report-id the simulated PHD's message ConfigReportRsp.config-result: One of: accepted-config: 0x00 0x00 IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issueroiv-cmip-command with handle set to 0 (request for MDS object) and attribute-is set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in Operating state, PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. Pass/Fail criteria The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config"			f. The	e following six bytes indicate:
the simulated PHD's message ConfigReportRsp.config-result: One of: accepted-config: 0x00 0x00 IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issue roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-is set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in Operating state, PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. Pass/Fail criteria The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config"				Event-replay-info.length (2 bytes)
 accepted-config: 0x00 0x00 IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issuer roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-is set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in Operating state, PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config" * The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config"				ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message
 5. IF C_MAN_OXP_085 THEN: a. The PHG under test moves to Configuring/Sending GetMDS substate and issued roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-lesset to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in Operating state, PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. Pass/Fail criteria The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config" 				ConfigReportRsp.config-result: One of:
 a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-is set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in Operating state, PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. Pass/Fail criteria • The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config" 				accepted-config: 0x00 0x00
roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-is set to 0 to indicate all attributes. b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in Operating state, PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. Pass/Fail criteria The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config"		5.	IF C_M	AN_OXP_085 THEN:
attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. c. Once in Operating state, PHG is forced to enable the scanner object. Wait until Operating state is reached in both cases 6. Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. Pass/Fail criteria The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config"			roiv	/-cmip-command with handle set to 0 (request for MDS object) and attribute-id-lis
Wait until Operating state is reached in both cases 6. Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. Pass/Fail criteria The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config"			attr	ibute-list contains a list of all implemented attributes of the MDS object and the
Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config"			c. One	ce in Operating state, PHG is forced to enable the scanner object.
Capacity object. • The PHG under test must respond either to the Association Request with an "accepted message or to the Configuration Event Report with an "accepted-config"		Wai	t until Op	perating state is reached in both cases
message or to the Configuration Event Report with an "accepted-config"		6.		
The measurements are correctly presented	Pass/Fail criteria	•		
		•	The me	asurements are correctly presented
Notes	Notes			

TP ld		TP/PLT/PHG/CLASS/PSM/BV-004							
TP label		Configuration Event Report. P	Configuration Event Report. Power Status Monitor standard configuration 2703						
Coverage	Spec	[ISO/IEEE 11073-10427]	[ISO/IEEE 11073-10427]						
	Testable items	ConfProcPSM 4;M							

	Spec	[ISO/I	EEE 11073-20601-2016C]			
	Testable items	ConfE	EventRep 18;M			
Test purpose	Test purpose		k that:			
		The PHG shall respond to a configuration notification message using a "Remote Operation Response Confirmed Event Report" data message with an MDC_NOTI_CONFIG event using the ConfigReportRsp structure for the event-info field				
		[AND]				
		A Power Status Monitor PHG shall respond to an [MDS-Configuration-Event] using a [Confirmed] event report response.				
		The Response shall include the event-reply-info [ConfigReportRsp]				
		[AND]				
		standa	G that supports one (or more) of the ISO/IEEE 11073-104zz device specialization ards shall be able to accept all the standard device configurations specified for the is listed in conformance Table 23 under Gen-4.			
		[AND]				
		enter	natively, the PHG may request the PHD to send the standard configuration in order to the configuring state and check attributes from the MDS object prior to final acceptance jection) of the PHD.			
Applicability		C_MA	N_OXP_000 AND C_MAN_OXP_076			
Other PICS		C_MA	N_OXP_085			
Initial conditi	on	Simul	ated PHD and PHG under test are in the unassociated state. Simulated PHD ments a Power Status Monitor device specialization with Standard Configuration (2703)			
Test procedu	ire	The simulated PHD sends an Association Request to the PHG under test with dev-configid set to 0x0A 0x8C (Power Status Monitor PHD – Std Config 2703)				
		2. P	PHG under test responds an Association Response, the field of interest is:			
		а	. Result			
			☐ field-type = INT-U16			
			☐ field-length = 2 bytes			
			☐ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unkown-config)			
		IF the	result of the Association Response was "accepted-unkown-config"			
		3. S	simulated PHD sends a configuration event report with config-report-id set to 0x0A 0x80			
		4. P	PHG under test must respond with:			
		а	. APDU Type			
			☐ field-length = 2 bytes			
			☐ field-value = 0xE7 0x00 (PrstApdu)			
		b	. Invoke-id			
			☐ field-type = INT-U16			
			☐ field-length = 2 bytes			
			field-value = it must be the same that the invoke-id of the simulated PHD's message.			
		С	. Obj-Handle:			
			☐ field-type = HANDLE			
			☐ field-length = 2 bytes			
			$\Box \text{field-value} = 0x00 \ 0x00$			
		d	. Event-time:			

			ield-type = INT-U32
			ifield-length = 4 bytes
			field-value = 0xXX 0xXX
		e. E	Event-type:
			ifield-length = 2 bytes
			ifield-value = MDC_NOTI_CONFIG
		f. T	The following six bytes indicate:
			Event-replay-info.length (2 bytes)
			ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message
			ConfigReportRsp.config-result: One of:
			 accepted-config: 0x00 0x00
	5.	IF C_	MAN_OXP_085 THEN:
		r	The PHG under test moves to Configuring/Sending GetMDS substate and issues oiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes.
		а	The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the ands-time-mgr-set-time bit is not set.
		c. C	Once in Operating state, PHG is forced to enable the scanner object.
	Wai	t until	Operating state is reached in both cases
	6.		lated PHD sends a variable event report for each Battery Status and Battery city object.
Pass/Fail criteria	•		PHG under test must respond either to the Association Request with an "accepted" age or to the Configuration Event Report with an "accepted-config"
	•	The n	neasurements are correctly presented
Notes			

TP ld TP label		TP/PLT/PHG/CLASS/PSM/BV-005 Configuration Event Report. Power Status Monitor standard configuration 2704				
	Testable items	ConfProcPSM 4;M	MDSEventsPSM 2;M			
	Spec	[ISO/IEEE 11073-20601-2016C]				
	Testable items	ConfEventRep 18;M				
Test purpos	se	Check that:				
		The PHG shall respond to a configuration notification message using a "Remote Operation Response Confirmed Event Report" data message with an MDC_NOTI_CONFIG event using the ConfigReportRsp structure for the event-info field				
		[AND]				
		A Power Status Monitor PHG shall respond to an [MDS-Configuration-Event] using a [Confirmed] event report response.				
		The Response shall include the event-reply-info [ConfigReportRsp]				
		[AND]				

	A PHG that supports one (or more) of the ISO/IEEE 11073-104zz device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4. [AND] Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.			
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_076			
Other PICS	C_MAN_OXP_085			
Initial condition	Simulated PHD and PHG under test are in the unassociated state. Simulated PHD implements a Power Status Monitor device specialization with Standard Configuration (2704)			
Test procedure	 The simulated PHD sends an Association Request to the PHG under test with dev-configid set to 0x0A 0x8C (Power Status Monitor PHD – Std Config 2704) 			
	2. PHG under test responds an Association Response, the field of interest is:			
	a. Result			
	☐ field-type = INT-U16			
	☐ field-length = 2 bytes			
	☐ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unkown-config)			
	IF the result of the Association Response was "accepted-unkown-config"			
	3. Simulated PHD sends a configuration event report with config-report-id set to 0x0A 0x8C			
	4. PHG under test must respond with:			
	a. APDU Type			
	☐ field-length = 2 bytes			
	☐ field-value = 0xE7 0x00 (PrstApdu)			
	b. Invoke-id			
	☐ field-type = INT-U16			
	☐ field-length = 2 bytes			
	field-value = it must be the same that the invoke-id of the simulated PHD's message.			
	c. Obj-Handle:			
	☐ field-type = HANDLE			
	☐ field-length = 2 bytes			
	$\Box \text{field-value} = 0x00\ 0x00$			
	d. Event-time:			
	☐ field-type = INT-U32			
	☐ field-length = 4 bytes			
	☐ field-value = 0xXX 0xXX			
	e. Event-type:			
	☐ field-length = 2 bytes			
	☐ field-value = MDC_NOTI_CONFIG			
	f. The following six bytes indicate:			
	☐ Event-replay-info.length (2 bytes)			
	 ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message 			
	☐ ConfigReportRsp.config-result: One of:			

	accepted-config: 0x00 0x00		
	. IF C_MAN_OXP_085 THEN:		
	 a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. 		
	b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.		
	c. Once in Operating state PHG is forced to enable the scanner object.		
	Wait until Operating state is reached in both cases		
	 Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object. 		
Pass/Fail criteria	The PHG under test must respond either to the Association Request with an "accepted" message or to the Configuration Event Report with an "accepted-config"		
	The measurements are correctly presented		
Notes			

TP ld			000			
TP IQ		TP/PLT/PHG/CLASS/PSM/BV-006				
TP label		Configuration Event Report. Po	ower Status Monitor standard co	nfiguration 2705		
Coverage	Spec	[ISO/IEEE 11073-10427]				
	Testable items	ConfProcPSM 4;M	MDSEventsPSM 2;M			
	Spec	[ISO/IEEE 11073-20601-2016	C]			
	Testable items	ConfEventRep 18;M				
Test purpos	е	Check that:				
		The PHG shall respond to a configuration notification message using a "Remote Operation Response Confirmed Event Report" data message with an MDC_NOTI_CONFIG event using the ConfigReportRsp structure for the event-info field				
		[AND]				
		A Power Status Monitor PHG shall respond to an [MDS-Configuration-Event] using a [Confirmed] event report response.				
		The Response shall include the event-reply-info [ConfigReportRsp]				
		[AND]				
		A PHG that supports one (or more) of the ISO/IEEE 11073-104zz device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.				
		[AND]				
		Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_076				
Other PICS		C_MAN_OXP_085				
Initial condition		Simulated PHD and PHG under test are in the unassociated state. Simulated PHD implements a Power Status Monitor device specialization with Standard Configuration (2705)				

Test procedure	1.			ulated PHD sends an Association Request to the PHG under test with dev-config-0x0A 0x8C (Power Status Monitor PHD – Std Config 2705)		
	2.	PHO	3 un	der test responds an Association Response, the field of interest is:		
		a.	Res	sult		
				field-type = INT-U16		
				field-length = 2 bytes		
				field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unkown-config)		
	IF t	he re	sult	of the Association Response was "accepted-unkown-config"		
	3.	Sim	ulate	ed PHD sends a configuration event report with config-report-id set to 0x0A 0x8C		
	4.	PHO	PHG under test must respond with:			
		a.	API	DU Type		
				field-length = 2 bytes		
				field-value = 0xE7 0x00 (PrstApdu)		
		b.	Inv	oke-id		
				field-type = INT-U16		
				field-length = 2 bytes		
				field-value = it must be the same that the invoke-id of the simulated PHD's message.		
		c.	Obj	-Handle:		
				field-type = HANDLE		
				field-length = 2 bytes		
				field-value = 0x00 0x00		
		d.	Eve	ent-time:		
				field-type = INT-U32		
				field-length = 4 bytes		
				field-value = 0xXX 0xXX		
		e.	Eve	ent-type:		
				field-length = 2 bytes		
				field-value = MDC_NOTI_CONFIG		
		f.	The	e following six bytes indicate:		
				Event-replay-info.length (2 bytes)		
				ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message		
				ConfigReportRsp.config-result: One of:		
				accepted-config: 0x00 0x00		
	5.	IF C	C_MAN_OXP_085 THEN:			
		a.	roiv	e PHG under test moves to Configuring/Sending GetMDS substate and issues r-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list to 0 to indicate all attributes.		
		b.	attr	e simulated PHD responds with a rors-cmip-get service message in which the ibute-list contains a list of all implemented attributes of the MDS object and the s-time-mgr-set-time bit is not set.		
		c.	Ond	ce in Operating state PHG is forced to enable the scanner object.		
	Wa	it unt	il Op	perating state is reached in both cases		
	6.			ed PHD sends a variable event report for each Battery Status and Battery y object.		

Pass/Fail criteria	The PHG under test must respond either to the Association Request with an "accepted" message or to the Configuration Event Report with an "accepted-config"
	The measurements are correctly presented
Notes	

TP Id TP label		TP/PLT/PHG/CLASS/PSI	M/BV-007			
		Configuration Event Repo	Configuration Event Report. Power Status Monitor standard configuration 2706			
Coverage	Spec	[ISO/IEEE 11073-10427]				
	Testable items	ConfProcPSM 4;M MDSEventsPSM 2;M				
	Spec	[ISO/IEEE 11073-20601-	2016C]			
	Testable items	ConfEventRep 18;M				
Test purpos	se	Check that:				
		Response Confirmed Ev	o a configuration notification mes vent Report" data message with a sp structure for the event-info fiel			
		[AND]				
		A Power Status Monitor PHG shall respond to an [MDS-Configuration-Event] using a [Confirmed] event response.				
		The Response shall include the event-reply-info [ConfigReportRsp]				
		[AND]				
		A PHG that supports one (or more) of the ISO/IEEE 11073-104zz device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.				
		[AND]				
		Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.				
Applicabilit	у	C_MAN_OXP_000 AND	C_MAN_OXP_076			
Other PICS		C_MAN_OXP_085				
Initial condition		Simulated PHD and PHG under test are in the unassociated state. Simulated PHD implements a Power Status Monitor device specialization with Standard Configuration (2706)				
Test proced	dure	The simulated PHD sends an Association Request to the PHG under test with dev-configid set to 0x0A 0x8C (Power Status Monitor PHD – Std Config 2706)				
		2. PHG under test resp	onds an Association Response, t	the field of interest is:		
		a. Result				
		☐ field-type =	INT-U16			
		☐ field-length	= 2 bytes			
			= 0x00 0x00 (accepted) or 0x00 0			
			iation Response was "accepted-u	-		
				th config-report-id set to 0x0A 0x8C		
		4. PHG under test must	t respond with:			
		a. APDU Type				

Notes	
	The measurements are correctly presented
Pass/Fail criteria	The PHG under test must respond either to the Association Request with an "accepted" message or to the Configuration Event Report with an "accepted-config"
	6. Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object.
	Wait until Operating state is reached in both cases
	c. Once in Operating state, PHG is forced to enable the scanner object.
	b. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.
	 a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-lis set to 0 to indicate all attributes.
	5. IF C_MAN_OXP_085 THEN:
	accepted-config: 0x00 0x00
	☐ ConfigReportRsp.config-result: One of:
	 ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message
	☐ Event-replay-info.length (2 bytes)
	f. The following six bytes indicate:
	☐ field-value = MDC_NOTI_CONFIG
	☐ field-length = 2 bytes
	e. Event-type:
	☐ field-value = 0xXX 0xXX
	☐ field-length = 4 bytes
	field-type = INT-U32
	d. Event-time:
	field-length = 2 bytes field-value = 0x00 0x00
	☐ field-type = HANDLE ☐ field-length = 2 bytes
	c. Obj-Handle:
	message.
	☐ field-length = 2 bytes ☐ field-value = it must be the same that the invoke-id of the simulated PHD's
	field-type = INT-U16
	b. Invoke-id
	field-value = 0xE7 0x00 (PrstApdu)

TP Id		TP/PLT/PHG/CLASS/PSM/BV-008			
TP label		Configuration Event Report. Power Status Monitor standard configuration 2707			
Coverage	Spec	[ISO/IEEE 11073-10427]			
Testable items		ConfProcPSM 4;M	MDSEventsPSM 2;M		

	Spec	IISO/IE	EE 11072 20601 2016Cl				
Эрсо		[ISO/IE	EE 11073-20601-2016C]				
	Testable items	ConfEv	rentRep 18;M				
Test purpose	Test purpose		Check that:				
			The PHG shall respond to a configuration notification message using a "Remote Operation Response Confirmed Event Report" data message with an MDC_NOTI_CONFIG event using the ConfigReportRsp structure for the event-info field				
		[AND]					
		A Power Status Monitor PHG shall respond to an [MDS-Configuration-Event] using a [Confirmed] event report response.					
		The Re	sponse shall include the event-reply-info [ConfigReportRsp]				
		[AND]					
		standar	that supports one (or more) of the ISO/IEEE 11073-104zz device specialization rds shall be able to accept all the standard device configurations specified for the listed in conformance Table 23 under Gen-4.				
		[AND]					
		enter th	tively, the PHG may request the PHD to send the standard configuration in order to ne configuring state and check attributes from the MDS object prior to final acceptance ction) of the PHD.				
Applicability		C_MAN	N_OXP_000 AND C_MAN_OXP_076				
Other PICS		C_MAN	I_OXP_085				
Initial conditi	on	Simulated PHD and PHG under test are in the unassociated state. Simulated PHD implements a Power Status Monitor device specialization with Standard Configuration (2707)					
Test procedu	ire	The simulated PHD sends an Association Request to the PHG under test with dev-configid set to 0x0A 0x8C (Power Status Monitor PHD – Std Config 2707)					
		2. PH	IG under test responds an Association Response, the field of interest is:				
		a.	Result				
			☐ field-type = INT-U16				
			☐ field-length = 2 bytes				
			☐ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unkown-config)				
		IF the result of the Association Response was "accepted-unkown-config"					
		3. Simulated PHD sends a configuration event report with config-report-id set t					
		4. PH	IG under test must respond with:				
		a.	71				
			ield-length = 2 bytes				
			field-value = 0xE7 0x00 (PrstApdu)				
		b.	Invoke-id				
			ifield-type = INT-U16				
			field-length = 2 bytes				
			ield-value = it must be the same that the invoke-id of the simulated PHD's message.				
		C.	Obj-Handle:				
			☐ field-type = HANDLE				
			☐ field-length = 2 bytes				
			☐ field-value = 0x00 0x00				
		d.	Event-time:				

	☐ field-type = INT-U32
	☐ field-length = 4 bytes
	☐ field-value = 0xXX 0xXX
	e. Event-type:
	☐ field-length = 2 bytes
	☐ field-value = MDC_NOTI_CONFIG
	f. The following six bytes indicate:
	☐ Event-replay-info.length (2 bytes)
	 ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message
	☐ ConfigReportRsp.config-result: One of:
	 accepted-config: 0x00 0x00
	5. IF C_MAN_OXP_085 THEN:
	 a. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes.
	 The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.
	c. Once in Operating state, PHG is forced to enable the scanner object.
	Wait until Operating state is reached in both cases
	Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object.
Pass/Fail criteria	The PHG under test must respond either to the Association Request with an "accepted" message or to the Configuration Event Report with an "accepted-config"
	The measurements are correctly presented
Notes	

TP Id		TP/PLT/PHG/CLASS/PSM/BV-009_A		
TP label		Maximum APDU size: Power Status Monitor with Simple PSM profile		
Coverage Spec		[ISO/IEEE 11073-20601-2016C]		
	Testable items	CommonCharac 4; M		
	Spec	[ISO/IEEE 11073-10427]		
	Testable items	ComCharPSM 2; M	SimplePSMProf 7; M	
Test purpose		Check that:		
		If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.		
		The PHG's receive buffer shall be at least as large as the largest buffer specified in the specialization the PHG supports.		
Applicability C_MAN_OXP_000		C_MAN_OXP_000 AND C_MA	AN_OXP_076	
Other PICS				

Initial condition	PHG under test is in Operating state
Initial condition Test procedure	PHG under test is in Operating state 1. Simulated PHD sends a Confirmed variable event report: a. ScanReportInfoVar. obs_scan_var: Count = 2 Length = 900 ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= { attribute-value: '00(852 bytes) 00'0 } ObservationScan ::= { obj-handle: 1 attributes: AttributeList ::= { AVA-Type ::= {
	attribute-id: 2460 (MDC_ATTR_NU_CMPD_VAL_OBS) attribute-value: 100% and 100 min remaining } 2. Check the response of the PHG under test 3. Simulated PHD sends a Confirmed variable event report with one measurement. 4. Check the response of the PHG under test
Pass/Fail criteria	In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report."
Notes	 In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report. Ntx is given by the formula Ntx(i) = 28 + (102 + S) x i, where "i" is the number of batteries and "S" is the maximallly supported OCTET STRING.length for the Label-String attribute of the battery capacity object. Ntx with S = 12 is 940 octets for implementations supporting eight batteries.

TP ld TP label		TP/PLT/PHG/CLASS/PSM/BV-009_B Maximum APDU size: Power Status Monitor with Advanced PSM profile		
	Testable items	CommonCharac 4; M		
	Spec	[ISO/IEEE 11073-10427]		
	Testable items	ComCharPSM 2; M	AdvPSMProf 9; M	
Test purpose		Check that:		
		If a PHG receives an API error (roer) code of protoc	· ·	receive buffer, it shall reply with an
		The PHG's receive buffer specialization the PHG su	shall be at least as large as the	e largest buffer specified in the

Applicability	C_MAN_OXP_000 AND C_MAN_OXP_077
Other PICS	
Initial condition	PHG under test is in Operating state
Test procedure	 Simulated PHD sends a Confirmed variable event report: a. ScanReportInfoVar. obs_scan_var: Count = 2 Length = 1620 ObservationScan ::= {
Pass/Fail criteria	 In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report. In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report.
Notes	Ntx is given by the formula $Ntx(i) = 28 + (102 + S)x$ i, where "i" is the number of batteries and "S" is the maximally supported OCTET STRING.length for the Label-String attribute of the battery capacity object. Ntx with $S = 12$ is 1660 octets for implementations supporting sixteen batteries for this profile.

TP ld		TP/PLT/PHG/CLASS/PSM/BV-	010	
TP label Battery Status Attribute-Value-Map. Order change. Standard Config		onfiguration 2700.		
Coverage	Spec	[ISO/IEEE 11073-10427]		
	Testable items	BattStatus 25; M		
Test purpose		Check that:		
		For [Standard-Configurations 2700] the [Attribute-Value-Map] attribute SHALL BE PRESENT.		
		The value of the [Attribute-ValuMDC_ATTR_ENUM_OBS_VAL	e-Map] attribute shall be BASIC_BIT_STR, then MDC_	ATTR_TIME_STAMP_BO

Applicability	C_MAN_OXP_000 AND C_MAN_OXP_076
Other PICS	
Initial condition	The simulated PHD and PHG under test are in the Operating state using the standard configuration 2700
Test procedure	The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO
	2. The simulated PHD waits until it receives a confirmation
	3. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Battery Status Enumeration Object) to reverse the values to MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR.
	4. The simulated PHD waits until it receives a confirmation
	The simulated PHD sends a confirmed fixed format event report with the date first followed by a battery status value.
	6. The simulated PHD waits until it receives a confirmation
	7. The simulated PHD sends an Association Release Request (normal)
	8. The simulated PHD waits until there is a Association Release Response
	 The simulated PHD sends an Association Request using the same standard configuration that was used previously (2700)
	10. If the PHG under test responds with association request response with "accepted-unknown-config", then:
	 Simulated PHD sends the confirmed configuration event report with the standard configuration 2700
	 Simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO).
	12. The simulated PHD waits until it receives a confirmation.
	13. Repeat steps 1-12 for each Battery Status object.
Pass/Fail criteria	 In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).
	In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation time stamp (i.e.,the actual event may have occurred sometime in the past).
Notes	When automated, need to be careful about just sending these messages back to back since the ability to look at things like a UI may need a pause for operator verification.

TP ld		TP/PLT/PHG/CLASS/PSM/BV-011
TP label Battery Status Attribute-Value-Map. Order change. Standard Configuration 2701		Battery Status Attribute-Value-Map. Order change. Standard Configuration 2701.
Coverage	Spec	[ISO/IEEE 11073-10427]
	Testable items	BattStatus 25; M
Test purpose		Check that:
		For [Standard-Configurations 2701] the [Attribute-Value-Map] attribute shall be present.

	The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_076
Other PICS	
Initial condition	The simulated PHD and PHG under test are in the Operating state using the standard configuration 2701
Test procedure	The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO
	2. The simulated PHD waits until it receives a confirmation
	3. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Battery Status Enumeration Object) to reverse the values to MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR.
	4. The simulated PHD waits until it receives a confirmation
	The simulated PHD sends a confirmed fixed format event report with the date first followed by a battery status value.
	6. The simulated PHD waits until it receives a confirmation
	7. The simulated PHD sends an Association Release Request (normal)
	8. The simulated PHD waits until there is a Association Release Response
	The simulated PHD sends an Association Request using the same standard configuration that was used previously (2701)
	10. If the PHG under test responds with association request response with "accepted-unknown-config", then:
	 Simulated PHD sends the confirmed configuration event report with the standard configuration 2701
	 Simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	 The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO).
	12. The simulated PHD waits until it receives a confirmation.
	13. Repeat steps 1-12 for each Battery Status object.
Pass/Fail criteria	 In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).
	 In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation time stamp (i.e., the actual event may have occurred sometime in the past).
Notes	When automated, need to be careful about just sending these messages back to back since the ability to look at things like a UI may need a pause for operator verification.

TP Id		TP/PLT/PHG/CLASS/PSM/BV-012	
TP label		Battery Status Attribute-Value-Map. Order change. Standard Configuration 2702.	
Coverage	Spec	[ISO/IEEE 11073-10427]	
	Testable items	BattStatus 25; M	

Test purpose	Check that:
	For [Standard-Configurations 2702] the [Attribute-Value-Map] attribute SHALL BE PRESENT.
	The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_076
Other PICS	
Initial condition	The simulated PHD and PHG under test are in the Operating state using the standard configuration 2702
Test procedure	 The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO
	2. The simulated PHD waits until it receives a confirmation
	3. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Battery Status Enumeration Object) to reverse the values to MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR.
	4. The simulated PHD waits until it receives a confirmation
	The simulated PHD sends a confirmed fixed format event report with the date first followed by a battery status value.
	6. The simulated PHD waits until it receives a confirmation
	7. The simulated PHD sends an Association Release Request (normal)
	8. The simulated PHD waits until there is a Association Release Response
	The simulated PHD sends an Association Request using the same standard configuration that was used previously (2702)
	 If the PHG under test responds with association request response with "accepted-unknown-config", then:
	 Simulated PHD sends the confirmed configuration event report with the standard configuration 2702
	 Simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO).
	12. The simulated PHD waits until it receives a confirmation.
	13. Repeat steps 1-12 for each Battery Status object.
Pass/Fail criteria	 In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).
	 In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation time stamp (i.e., the actual event may have occurred sometime in the past).
Notes	When automated, need to be careful about just sending these messages back to back since the ability to look at things like an UI may need a pause for operator verification.

TP Id		TP/PLT/PHG/CLASS/PSM/BV-013
TP label		Battery Status Attribute-Value-Map. Order change. Standard Configuration 2703.
Coverage	Spec	[ISO/IEEE 11073-10427]

	Testable items	BattStatus 25; M			
Test purpose		Check that:			
		For [Standard-Configurations 2703] the [Attribute-Value-Map] attribute SHALL BE PRESENT.			
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_076			
Other PICS					
Initial conditi	on	The simulated PHD and PHG under test are in the Operating state using the standard configuration 2702			
Test procedu	ire	The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO			
		2. The simulated PHD waits until it receives a confirmation			
		3. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Battery Status Enumeration Object) to reverse the values to MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR.			
		4. The simulated PHD waits until it receives a confirmation			
		The simulated PHD sends a confirmed fixed format event report with the date first followed by a battery status value.			
		6. The simulated PHD waits until it receives a confirmation			
		7. The simulated PHD sends an Association Release Request (normal)			
		8. The simulated PHD waits until there is a Association Release Response			
		The simulated PHD sends an Association Request using the same standard configuration that was used previously (2703)			
		10. If the PHG under test responds with association request response with "accepted-unknown-config", then:			
		 Simulated PHD sends the confirmed configuration event report with the standard configuration 2703 			
		 Simulated PHD waits until there is a confirmation to the configuration event report that was sent. 			
		11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO).			
		12. The simulated PHD waits until it receives a confirmation.			
		13. Repeat steps 1-12 for each Battery Status object.			
Pass/Fail criteria		• In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).			
		• In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation time stamp (i.e.,the actual event may have occurred sometime in the past).			
Notes		When automated, need to be careful about just sending these messages back to back since the ability to look at things like an UI may need a pause for operator verification.			

		T		
TP ld		TP/PLT/PHG/CLASS/PSM/BV-014		
TP label		Battery Status Attribute-Value-Map. Order change. Standard Configuration 2704.		
Coverage	Spec	[ISO/IEEE 11073-10427]		
	Testable items	BattStatus 25; M		
Test purpose	•	Check that:		
		For [Standard-Configurations 2704] the [Attribute-Value-Map] attribute SHALL BE PRESENT.		
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_076		
Other PICS				
Initial conditi	on	The simulated PHD and PHG under test are in the Operating state using the standard configuration 2704		
Test procedu	ire	The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO		
		2. The simulated PHD waits until it receives a confirmation		
		3. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Battery Status Enumeration Object) to reverse the values to MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR.		
		4. The simulated PHD waits until it receives a confirmation		
		5. The simulated PHD sends a confirmed fixed format event report with the date first followed by a battery status value.		
		6. The simulated PHD waits until it receives a confirmation		
		7. The simulated PHD sends an Association Release Request (normal)		
		8. The simulated PHD waits until there is a Association Release Response		
		9. The simulated PHD sends an Association Request using the same standard configuration that was used previously (2704)		
		10. If the PHG under test responds with association request response with "accepted-unknown-config", then:		
		 Simulated PHD sends the confirmed configuration event report with the standard configuration 2704 		
		 Simulated PHD waits until there is a confirmation to the configuration event report that was sent. 		
		11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO).		
		12. The simulated PHD waits until it receives a confirmation.		
		13. Repeat steps 1-12 for each Battery Status object.		
Pass/Fail criteria		• In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).		
		In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation time stamp (i.e.,the actual event may have occurred sometime in the past).		
Notes		When automated, need to be careful about just sending these messages back to back since		

the ability to look at things like an UI may need a pause for operator verification.

TP ld		TP/PLT/PHG/CLASS/PSM/BV-015			
TP label		Battery Status Attribute-Value-Map. Order change. Standard Configuration 2705.			
Coverage	Spec	[ISO/IEEE 11073-10427]			
	Testable items	BattStatus 25; M			
Test purpose	•	Check that: For [Standard-Configurations 2705] the [Attribute-Value-Map] attribute SHALL BE PRESENT. The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_076			
Other PICS					
Initial conditi	on	The simulated PHD and PHG under test are in the Operating state using the standard configuration 2705			
Test procedu	ire	The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO			
		2. The simulated PHD waits until it receives a confirmation			
		3. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Battery Status Enumeration Object) to reverse the values to MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR.			
		4. The simulated PHD waits until it receives a confirmation			
		The simulated PHD sends a confirmed fixed format event report with the date first followed by a battery status value.			
		6. The simulated PHD waits until it receives a confirmation			
		7. The simulated PHD sends an Association Release Request (normal)			
		8. The simulated PHD waits until there is a Association Release Response			
		 The simulated PHD sends an Association Request using the same standard configuration that was used previously (2705) 			
		 If the PHG under test responds with association request response with "accepted-unknown-config", then: 			
		 Simulated PHD sends the confirmed configuration event report with the standard configuration 2705 			
		 Simulated PHD waits until there is a confirmation to the configuration event report that was sent. 			
		11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO).			
		12. The simulated PHD waits until it receives a confirmation.			
		13. Repeat steps 1-12 for each Battery Status object.			
Pass/Fail criteria		• In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).			
		In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation time stamp (i.e.,the actual event may have			

occurred sometime in the past).
When automated, need to be careful about just sending these messages back to back since the ability to look at things like a UI may need a pause for operator verification.

TP ld		TP/PLT/PHG/CLASS/PSM/BV-016			
TP label		Battery Status Attribute-Value-Map. Order change. Standard Configuration 2706.			
Coverage	Spec	[ISC	[ISO/IEEE 11073-10427]		
-	Testable items	Bat	tStatus 25; M		
Test purpose)	Che	eck that:		
		For	[Standard-Configurations 2	?706] the [Attribute-Value-Map] a	ttribute SHALL BE PRESENT.
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO			
Applicability		C_N	MAN_OXP_000 AND C_MA	N_OXP_076	
Other PICS					
Initial conditi	ion	The simulated PHD and PHG under test are in the Operating state using the standard configuration 2706			
Test procedu	ıre	The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO			
		2. The simulated PHD waits until it receives a confirmation			
		3.	 The simulated PHD sends a confirmed variable event report to change the Attribute- Value-Map configuration of handle 2 (Battery Status Enumeration Object) to reverse the values to MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR. 		
		4.	4. The simulated PHD waits until it receives a confirmation		
		5.	The simulated PHD sends followed by a battery statu	a confirmed fixed format event is value.	report with the date first
		6.	The simulated PHD waits	until it receives a confirmation	
		7.	The simulated PHD sends	an Association Release Reques	st (normal)
		8.	The simulated PHD waits	until there is a Association Relea	ase Response
		9.	The simulated PHD sends configuration that was use	an Association Request using the discriping the dis	ne same standard
		10.	If the PHG under test resp unknown-config", then:	onds with association request re	sponse with "accepted-
			Simulated PHD sends configuration 2706	the confirmed configuration even	ent report with the standard
			Simulated PHD waits that was sent.	until there is a confirmation to th	e configuration event report
		11.		a fixed event report following the C_ATTR_ENUM_OBS_VAL_BAPP_BO).	
		12.	12. The simulated PHD waits until it receives a confirmation.		
		13.	Repeat steps 1-12 for each	h Battery Status object.	
Pass/Fail crit	eria	•		that the PHG under test is able to the correct attributes (e.g., if the	

	measurement and date are displayed properly).
	 In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation time stamp (i.e.,the actual event may have occurred sometime in the past).
Notes	When automated, need to be careful about just sending these messages back to back since the ability to look at things like an UI may need a pause for operator verification.

TP ld		TP/PLT/PHG/CLASS/PSM/BV-017			
TP Label		Battery Status Attribute-Value-Map. Order change. Standard Configuration 2707.			
Coverage Spec		[ISO/IEEE 11073-10427]			
	Testable items	BattStatus 25; M			
Test purpose	•	Check that:			
		For [Standard-Configurations 2707] the [Attribute-Value-Map] attribute SHALL BE PRESENT.			
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_076			
Other PICS					
Initial conditi	ion	The simulated PHD and PHG under test are in the Operating state using the standard configuration 2707			
Test procedu	ire	The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO			
		2. The simulated PHD waits until it receives a confirmation			
		3. The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Battery Status Enumeration Object) to reverse the values to MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR.			
		4. The simulated PHD waits until it receives a confirmation			
		5. The simulated PHD sends a confirmed fixed format event report with the date first followed by a battery status value.			
		6. The simulated PHD waits until it receives a confirmation			
		7. The simulated PHD sends an Association Release Request (normal)			
		8. The simulated PHD waits until there is a Association Release Response			
		The simulated PHD sends an Association Request using the same standard configuration that was used previously (2707)			
		10. If the PHG under test responds with association request response with "accepted-unknown-config", then:			
		 Simulated PHD sends the confirmed configuration event report with the standard configuration 2707 			
		 Simulated PHD waits until there is a confirmation to the configuration event report that was sent. 			
		11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO).			
		12. The simulated PHD waits until it receives a confirmation.			
		13. Repeat steps 1-12 for each Battery Status object.			

Pass/Fail criteria	 In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).
	 In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation time stamp (i.e.,the actual event may have occurred sometime in the past).
Notes	When automated, need to be careful about just sending these messages back to back since the ability to look at things like a UI may need a pause for operator verification.

TP ld		TP/PLT/PHG/CLASS/PSM/BV-018		
TP label		Battery Status Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map. Standard Configuration 2700.		
Coverage	Spec	[ISO/IEEE 11073-10427]		
	Testable items	BattStatus 25; M		
Test purpose)	Check that:		
		For [Standard-Configurations 2700] the [Attribute-Value-Map] attribute shall be present		
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_076		
Other PICS				
Initial conditi	ion	The simulated PHD and PHG under test are in Operating State using the standard configuration (2700).		
Test procedu	ıre	The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Battery Status Enumeration Object) to set the values to: MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, MDC_ATTR_ID_LABEL_STRING, then MDC_ATTR_TIME_STAMP_BO.		
		2. The simulated PHD waits until it receives a confirmation		
		3. The simulated PHD sends a confirmed fixed format event report with the new data layout.		
		4. The simulated PHD waits until it receives a confirmation		
		 The simulated PHD sends a confirmed variable event report with just MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR Attribute. 		
		6. The simulated PHD waits until it receives a confirmation		
		7. Repeat steps 1-6 for each Battery Status Enumeration object		
Pass/Fail criteria		• In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).		
		In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement is displayed properly)		
Notes				

TP ld		TP/PLT/PHG/CLASS/PSM/BV-019		
TP label		Battery Status Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map. Standard Configuration 2701.		
Coverage	Spec	[ISO/IEEE 11073-10427]		
	Testable items	BattStatus 25; M		
Test purpose	•	Check that:		
		For [Standard-Configurations 2701] the [Attribute-Value-Map] attribute shall be present		
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_076		
Other PICS				
Initial condit	ion	The simulated PHD and PHG under test are in Operating State using the standard configuration (2701).		
Test procedure		The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Battery Status Enumeration Object) to set the values to: MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, MDC_ATTR_ID_LABEL_STRING, then MDC_ATTR_TIME_STAMP_BO.		
		2. The simulated PHD waits until it receives a confirmation		
		3. The simulated PHD sends a confirmed fixed format event report with the new data layout.		
		4. The simulated PHD waits until it receives a confirmation		
		5. The simulated PHD sends a confirmed variable event report with just MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR Attribute.		
		6. The simulated PHD waits until it receives a confirmation		
		7. Repeat steps 1-6 for each Battery Status Enumeration object (handle 4)		
Pass/Fail criteria		• In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).		
		In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement is displayed properly)		
Notes				

TP ld		TP/PLT/PHG/CLASS/PSM/BV-020		
TP label		Battery Status Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map. Standard Configuration 2702.		
Coverage	Spec	[ISO/IEEE 11073-10427]		
	Testable items	BattStatus 25; M		
Test purpose		Check that:		
		For [Standard-Configurations 2702] the [Attribute-Value-Map] attribute shall be present		
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO		

Applicability	C_MAN_OXP_000 AND C_MAN_OXP_076		
Other PICS			
Initial condition	The simulated PHD and PHG under test are in Operating State using the standard configuration (2702).		
Test procedure	 The simulated PHD sends a confirmed variable event report to change the Attribute- Value-Map configuration of handle 2 (Battery Status Enumeration Object) to set the values to: MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, MDC_ATTR_ID_LABEL_STRING, then MDC_ATTR_TIME_STAMP_BO. 		
	2. The simulated PHD waits until it receives a confirmation		
	3. The simulated PHD sends a confirmed fixed format event report with the new data layout.		
	4. The simulated PHD waits until it receives a confirmation		
	 The simulated PHD sends a confirmed variable event report with just MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR Attribute. 		
	6. The simulated PHD waits until it receives a confirmation		
	7. Repeat steps 1-6 for each Battery Status Enumeration object (handles 4 and 6)		
Pass/Fail criteria	• In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).		
	• In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement is displayed properly)		
Notes			

TP ld		TP/PLT/PHG/CLASS/PSM/BV-021		
TP label		Battery Status Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map. Standard Configuration 2703.		
Coverage	Spec	[ISO/IEEE 11073-10427]		
	Testable items	BattStatus 25; M		
Test purpose		Check that:		
		For [Standard-Configurations 2703] the [Attribute-Value-Map] attribute shall be present		
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_076		
Other PICS				
Initial condition		The simulated PHD and PHG under test are in Operating State using the standard configuration (2703).		
Test procedure		The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Battery Status Enumeration Object) to set the values to: MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, MDC_ATTR_ID_LABEL_STRING, then MDC_ATTR_TIME_STAMP_BO.		
		2. The simulated PHD waits until it receives a confirmation		
		3. The simulated PHD sends a confirmed fixed format event report with the new data layout.		
		4. The simulated PHD waits until it receives a confirmation		

	5.	The simulated PHD sends a confirmed variable event report with just MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR Attribute.
	6.	The simulated PHD waits until it receives a confirmation
	7.	Repeat steps 1-6 for each Battery Status Enumeration object (handles 4, 6 and 8)
Pass/Fail criteria	•	In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).
	•	In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement is displayed properly)
Notes		

TP Id		TP/PLT/PHG/CLASS/PSM/BV-022			
TP label		Battery Status Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map. Standard Configuration 2704.			
Coverage Spec		[ISO/IEEE 11073-10427]			
	Testable items	BattStatus 25; M			
Test purpos	е	Check that:			
		For [Standard-Configuration	s 2704] the [Attribute-Value-Map]	attribute shall be present	
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO			
Applicability	•	C_MAN_OXP_000 AND C_	MAN_OXP_076		
Other PICS					
Initial condition		The simulated PHD and PHG under test are in Operating state using the standard configuration (2704).			
Test procedure		The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Battery Status Enumeration Object) to set the values to: MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, MDC_ATTR_ID_LABEL_STRING, then MDC_ATTR_TIME_STAMP_BO.			
		2. The simulated PHD waits until it receives a confirmation			
		3. The simulated PHD sends a confirmed fixed format event report with the new data layout.			
		4. The simulated PHD waits until it receives a confirmation			
		 The simulated PHD sends a confirmed variable event report with just MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR Attribute. 			
		6. The simulated PHD waits until it receives a confirmation			
		7. Repeat steps 1-6 for each Battery Status Enumeration object (handles 4, 6, 8 and 10)			
Pass/Fail criteria			PHG under test is able to accept correct attributes (e.g., if there is erly).		
			PHG under test is able to accept correct attributes (e.g., if there is		
Notes					

TP Id		TP/PLT/PHG/CLASS/PSM/BV-023		
TP label		Battery Status Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map. Standard Configuration 2705.		
Coverage	Spec	[ISO/IEEE 11073-10427]		
	Testable items	BattStatus 25; M		
Test purpose	е	Check that:		
		For [Standard-Configurations 2705] the [Attribute-Value-Map] attribute shall be present		
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO		
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_076		
Other PICS				
Initial condition		The simulated PHD and PHG under test are in Operating State using the standard configuration (2705).		
Test procedure		The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Battery Status Enumeration Object) to set the values to: MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, MDC_ATTR_ID_LABEL_STRING, then MDC_ATTR_TIME_STAMP_BO.		
		2. The simulated PHD waits until it receives a confirmation		
		3. The simulated PHD sends a confirmed fixed format event report with the new data layout.		
		4. The simulated PHD waits until it receives a confirmation		
		5. The simulated PHD sends a confirmed variable event report with just MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR Attribute.		
		6. The simulated PHD waits until it receives a confirmation		
		7. Repeat steps 1-6 for each Battery Status Enumeration object (handles 4, 6, 8, 10 and 12)		
Pass/Fail criteria		 In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly). 		
		In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement is displayed properly)		
Notes				

TP ld		TP/PLT/PHG/CLASS/PSM/BV	-024	
TP label		Battery Status Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map. Standard Configuration 2706.		
Coverage Spec		[ISO/IEEE 11073-10427]		
	Testable items	BattStatus 25; M		
Test purpose		Check that:		
		For [Standard-Configurations 2706] the [Attribute-Value-Map] attribute shall be present		
		The value of the [Attribute-Value]		C_ATTR_TIME_STAMP_BO

Applicability	C_MAN_OXP_000 AND C_MAN_OXP_076		
Other PICS			
Initial condition	The simulated PHD and PHG under test are in Operating State using the standard configuration (2706).		
Test procedure	The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Battery Status Enumeration Object) to set the values to: MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, MDC_ATTR_ID_LABEL_STRING, then MDC_ATTR_TIME_STAMP_BO.		
	2. The simulated PHD waits until it receives a confirmation		
	3. The simulated PHD sends a confirmed fixed format event report with the new data layout.		
	4. The simulated PHD waits until it receives a confirmation		
	 The simulated PHD sends a confirmed variable event report with just MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR Attribute. 		
	6. The simulated PHD waits until it receives a confirmation		
	7. Repeat steps 1-6 for each Battery Status Enumeration object (handles 4, 6, 8, 10, 12 and 14)		
Pass/Fail criteria	 In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly). 		
	 In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement is displayed properly) 		
Notes			

TP Id		TP/PLT/PHG/CLASS/PSM/BV-025		
TP label		Battery Status Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map. Standard Configuration 2707.		
Coverage	Spec	[ISO/IEEE 11073-10427]		
	Testable items	BattStatus 25; M		
Test purpos	е	Check that:		
		For [Standard-Configurations 2707] the [Attribute-Value-Map] attribute shall be present		
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, then MDC_ATTR_TIME_STAMP_BO		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_076		
Other PICS				
Initial condition		The simulated PHD and PHG under test are in Operating State using the standard configuration (2707).		
Test procedure		The simulated PHD sends a confirmed variable event report to change the Attribute-Value-Map configuration of handle 2 (Battery Status Enumeration Object) to set the values to: MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR, MDC_ATTR_ID_LABEL_STRING, then MDC_ATTR_TIME_STAMP_BO.		
		2. The simulated PHD waits until it receives a confirmation		
		3. The simulated PHD sends a confirmed fixed format event report with the new data layout.		
		4. The simulated PHD waits until it receives a confirmation		

	5.	The simulated PHD sends a confirmed variable event report with just MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR Attribute.	
	6.	6. The simulated PHD waits until it receives a confirmation	
	7.	Repeat steps 1-6 for each Battery Status Enumeration object (handles 4, 6, 8, 10, 12, 14 and 16)	
Pass/Fail criteria	•	In step 4, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement and date are displayed properly).	
	•	In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g., if there is a UI verify the measurement is displayed properly)	
Notes			

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