ITU-T

TELECOMMUNICATION STANDARDIZATION SECTOR OF ITU



# 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

1-D.L



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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.

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4.0	ITU-T H.846	2018-08-29	16	11.1002/1000/13684
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#### History

#### 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.

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<sup>\*</sup> 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, <u>http://handle.itu.int/11.1002/1000/11</u> <u>830-en</u>.

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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	<ul> <li>Initial release for Test Tool DG2011. It uses "TSS&amp;TP_1.5_PAN-LAN_ PART_6_v1.3.doc" as a baseline and adds the following maintenance bugs fixes:</li> <li>TP/PLT/MAN/CLASS/AM/BV-032: Modified according to bug report 874</li> <li>TP/PLT/MAN/CLASS/PF/BV-013: Modified according to bug report 875</li> </ul>
1.5	2013-05-24	<ul> <li>Initial release for Test Tool DG2012. It uses "TSS&amp;TP_DG2011_PAN-LAN_PART_6_v1.4.doc" as a baseline and adds new features included in [b-CDG 2012]:</li> <li>Adds glucose meter new spec version</li> <li>Adds body composition analyser device specialization</li> <li>Adds basic electrocardiograph device specialization</li> </ul>
1.6	2014-01-24	<ul> <li>Initial release for Test Tool DG2013. It uses "TSS&amp;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]:</li> <li>Adds BLE glucose meter</li> <li>Adds BLE SSP support</li> <li>Adds NFC new transport</li> <li>Adds INR Device Specialization</li> </ul>
1.7	2014-04-24	<ul> <li>TM Lite &amp; Doc Enhancements (Test Tool v4.0 Maintenance Release 1).</li> <li>It uses "TSS&amp;TP_DG2013_PLT_PART_6_v1.6.doc" as a baseline and adds new features included in Documentation Enhancements:</li> <li>"Other PICS" row has been added</li> </ul>
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 due to the inclusion of the power status monitor of Personal Health Devices device specialization [ISO/IEEE 11073-10427] test cases.

# **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 Recommendation<sup>1</sup> 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 5O: Sleep apnoea breathing therapy equipment (SABTE)
  - Part 5P: Continuous glucose monitor (CGM)
  - Part 5Q: Power status monitor (PSM)
- 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

<sup>&</sup>lt;sup>1</sup> 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 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, Health informatics – Personal health device communication – Part 10418: Device specialization – International Normalized Ratio (INR) monitor, 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, <i>Health informatics – Personal</i> <i>health device communication – Part 10419: Device</i> <i>specialization – Insulin pump</i> . 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]	ISO/IEEE 11073-10427:2018, <i>Health informatics – Personal</i> <i>health device communication – Part 10427: Device</i> <i>specialization – Power status monitor of personal health devices.</i> <u>https://www.iso.org/standard/73759.html</u> Same publication as <u>https://standards.ieee.org/findstds/standard/11073-10427-2016.html</u>
[ISO/IEEE 11073-10441]	ISO/IEEE 11073-10441:2015, Health informatics – Personal 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), <i>Health informatics – Personal health device communication – Device specialization</i> . 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]	ISO/IEEE 11073-10442:2015, Health informatics – Personal health device communication – Part 10442: Device specialization – Strength fitness equipment. http://standards.ieee.org/findstds/standard/11073-10442-2008.html
[ISO/IEEE 11073-10471]	ISO/IEEE 11073-10471:2010, Health informatics – Personal 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, <i>Health informatics – Personal</i> <i>health device communication – Part 20601: Application profile –</i> <i>Optimized exchange protocol</i> , including ISO/IEEE 11073-20601:2010 Amd 1:2015. <u>https://www.iso.org/standard/54331.html</u> with <u>https://www.iso.org/standard/63972.html</u>
[ISO/IEEE 11073-20601-2016C]	ISO/IEEE 11073-20601:2016, <i>Health informatics – Personal</i> <i>health device communication – Part 20601: Application profile –</i> <i>Optimized exchange protocol</i> , including ISO/IEEE 11073- 20601:2016/Cor.1:2016. <u>https://www.iso.org/standard/=66717.html</u> with <u>https://www.iso.org/standard/71886.html</u>

#### **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 pressure
- MDS 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.

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 Iris maintenance updates of the CDG 2015 and additional guidelines that cover new functionalities.	
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.Gene	
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 Endomination Endominati	
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.Cat	
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].Adren	
2010 plus errata	_	1.6	CDG 2010 integrated with identified errata –	
2010	_	1.5	Release 2010 of the CDG with maintenance 1.5 updates of the CDG Version 1 and additional guidelines that cover new functionalities [b-CDG 2010].	
1.0	_	1.0	First released version of the CDG [b-CDG 1.0].	-

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

## 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)
  - 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)
  - 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)
- Subgroup 1.4.8: Whitepaper continuous glucose monitoring requirements (CGM)
- Group 2: Personal Health Gateway (PHG)
  - Group 2.1: Transport (TR)
    - Subgroup 2.1.1: Design guidelines: Common (DGC)
    - Subgroup 2.1.2: USB design guidelines (UDG)
    - Subgroup 2.1.3: Bluetooth design guidelines (BDG)
    - Subgroup 2.1.4: Cardiovascular design guidelines (CVDG)
    - Subgroup 2.1.5: Activity hub design guidelines (HUBDG)
    - Subgroup 2.1.6: ZigBee design guidelines (ZDG)
    - Subgroup 2.1.7: Bluetooth low energy design guidelines (BLEDG)
    - Subgroup 2.1.8: NFC design guidelines (NDG)
  - Group 2.2: IEEE 20601 Optimized exchange protocol (OXP)
    - Subgroup 2.2.1: General (GEN)
    - Subgroup 2.2.2: PHD domain information model (DIM)
    - Subgroup 2.2.3: PHD service model (SER)
    - Subgroup 2.2.4: PHD communication model (COM)
  - Group 2.3: Devices class specializations (CLASS)
    - 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)
    - 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)

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- 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 <a href="http://handle.itu.int/11.1002/2000/12067">http://handle.itu.int/11.1002/2000/12067</a>. 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".
  - $\circ$  <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)
  - <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.
  - $\circ$  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.

TP ld	TP/PLT/PHG/CLASS/WEG/BV-001					
TP label Association procedure PHG WEG		/EG				
Coverage Spec		[ISO/IEEE 11073-10415]				
	Testable	Weighing.Association 8;O	Weighing.Association 12;M	Weighing.Association 13;M		
	items	Weighing.Association 14;M	Weighing.Association 15;M	Weighing.Association 16;M		
		Weighing.Association 17;M	Weighing.Association 18;M	Weighing.Association 19;M		
		Weighing.Association 20;M	Weighing.Association 21;M	Weighing.Association 22;M		
		Weighing.Association 23;M				
Test purpos	e	Check that:				
		Association Response data ex	change (data-proto-id, data- pro	oto-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 version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000)				
		[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]				
			oto-info field parameters]: The s device, which shall be a valid EU			
		[AND]				

# A.2 Subgroup 2.3.1: Weighing scales (WEG)

	[association response data-proto-info field parameters]: The field dev-config-id shall be manager-config-response (0)
	[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
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_024
Other PICS	
Initial condition	The PHG is in the Unassociated state.
Test presedure	1. The simulated DUD could an ecception request to the DUC under test with the fields.
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 = 16449
	data-rep-mode-capab =
	<ul> <li>data_req_mode_flags= '00000000000001'B</li> </ul>
	data_req_init_agent_count = 1
	data_req_init_manager_count = 0
	$\Box$ option-list.length= 0;
	2. The PHG under test sends an association response. The fields of interest are:
	a. APDU Type
	$\Box  \text{field-length} = 2 \text{ bytes}$
	$\Box  \text{field-value} = 0 \times E3 \ 0 \times 00 \ (\text{AareApdu})$
	b. Result
	□ field- type = AssociateResult
	$\Box  \text{field-length} = 2 \text{ bytes}$
	□ 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.
	<ul> <li>If association is rejected—unsupported-assoc-version, field-value= 0x00 0x08.</li> </ul>
	<ul> <li>selected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data- proto-info(defined by data-proto-id))</li> </ul>
	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
	$\Box  \text{field-length} = 4 \text{ bytes (BITS-32)}$
	□ field-value= Bit 0 must be set (nom-version1)
h.	functional units
	□ field-type = FunctionalUnits
	$\Box  \text{field-length} = 4 \text{ bytes (BITS-32)}$
	□ 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
	$\Box  \text{field-length} = 4 \text{ bytes (BITS-32)}$
	□ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
j.	system-id
	□ field- type = OCTET STRING
	$\Box  \text{field-length} = 8 \text{ bytes}$
	field-value = (EUI-64 manufacturer and device)
k.	dev-config-id
	□ field- type = Configld
	$\Box  \text{field-length} = 2 \text{ bytes}$
	□ 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)

	<ul> <li>field- type = INT-U8</li> <li>field-length = 1 byte</li> </ul>
	<ul> <li>field-value = 0x00 b</li> </ul>
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	e Spec [ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
	Testable items	ConfEventRep 18;M		
Test purpos	e	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_024		
Other PICS				
Initial condi	tion	The simulated PHD and the PHG under test are in the Unassociated state.		
Test proced	ure	<ol> <li>The simulated PHD sends an association request to the PHG under test with dev-config- id set to 0x05 0xDC (Weighing Scales).</li> </ol>		
		2. The PHG under test responds with an association response, the field of interest is:		
		a. Result		
		□ field- type = INT-U16		
		$\Box  field-length = 2 \text{ bytes}$		
		□ 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 0x05 0xDC		
		4. The PHG under test must respond with:		
		a. APDU Type		
		$\Box  \text{field-length} = 2 \text{ bytes}$		
		□ field-value = 0xE7 0x00 (PrstApdu)		
		b. Invoke-id		
		□ field- type = INT-U16		
		$\Box  field-length = 2 \text{ bytes}$		
		field-value= it must be the same as the invoke-id of the simulated PHD's message.		
		c. Obj-Handle:		
		□ field- type = HANDLE		
		$\Box  field-length = 2 \text{ bytes}$		

		$\Box  \text{field-value} = 0x00 \ 0x00$
	d	Event-time:
		□ field- type = INT-U32
		$\Box  field-length = 4 \text{ bytes}$
		□ field-value: 0xXX 0xXX
	е	Event-type:
		$\Box  field-length = 2 \text{ bytes}$
		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	<ul> <li>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.</li> </ul>
	с	Once in the Operating state the PHG is forced to enable the scanner object
	Wait u	intil the Operating state is reached in both cases.
	6. T	he simulated PHD sends a fixed event report with one measurement.
Pass/Fail criteria		he PHG under test must respond either to the association request with an "accepted" ressage or to the Configuration Event Report with an "accepted-config".
	• т	he measurement is correctly presented.
Notes	See b	ug http://continua.plugfests.com/show_bug.cgi?id= 123

TP ld		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 purpos	se	Check that:		
		For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present		
		The value of the [Attribute-Valu then MDC_ATTR_TIME_STAM	ie-Map] attribute shall be MDC_/ IP_ABS	ATTR_NU_VAL_OBS_SIMP,
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_024	
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	<ol> <li>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.</li> </ol>
	2. The simulated PHD waits until it receives a confirmation.
	<ol> <li>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.</li> </ol>
	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 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.
	9. The simulated PHD sends an association request using the same standard configuration that was used previously.
	<ol> <li>If the PHG under test responds with association request response with "accepted- unknown-config", then</li> </ol>
	<ul> <li>The simulated PHD sends the confirmed configuration event report with the standar configuration.</li> </ul>
	• The simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	<ol> <li>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.</li> </ol>
	12. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	<ul> <li>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 user interface (UI), verify that the measurement and date are displayed properly.</li> </ul>
	• 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).
	<ul> <li>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).</li> </ul>
	• 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	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	<ol> <li>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.</li> </ol>
	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.
	<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_SIMP attribute.</li> </ol>
	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).
	<ul> <li>In steps 4 and 6, verify that the PHG under test uses pounds as the unit-code for the measurement reports.</li> </ul>
Notes	
Notes	

TP ld		TP/PLT/PHG/CLASS/WEG/BV-00	05	
TP label         Unit-Code. Change from default kilograms to pounds – fixed format observation		mat observation		
Coverage	Spec	[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] attrik	oute shall be MDC_DIM_KILO	_G.
Applicability		C_MAN_OXP_000 AND C_MAN	_OXP_024 AND C_MAN_WE	G_001
Other PICS				
Initial condition		The simulated PHD and the PHG configuration.	under test are in the Operatir	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 standar configuration.
		<ul> <li>The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.</li> </ul>
	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 ar 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/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 (NOT(C_MAN_WEG_001))		
Other PICS				
Initial condition The simulated PHD and the PHC configuration.		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		<ol> <li>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).</li> </ol>		
		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	<ul> <li>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.</li> </ul>
	• 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.
	<ul> <li>In step 5, verify that measurements do not appear, or if they do appear, they are somehow designated as 'unsupported' data.</li> </ul>
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       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		<ol> <li>Send a confirmed variable format event report using a measurement in kilograms.</li> <li>The simulated PHD waits until it receives a confirmation.</li> </ol>		
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]
	Testable items	WeightNumClass 20;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_KILO_G
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_024 AND C_MAN_WEG_001
Other PICS		

Test procedure	1.	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
		<ul> <li>The simulated PHD sends the confirmed configuration event report with the standard configuration.</li> </ul>
		<ul> <li>The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.</li> </ul>
	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 ld		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	e	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 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_024	
Other PICS			
Initial condition		The PHG under test is in the Operating state.	
Test procedure		<ol> <li>The simulated PHD sends a Confirmed variable event report:</li> <li>a. ScanReportInfoVar. obs_scan_var:</li> </ol>	

	$\Box$ Count = 2
	$\Box  \text{Length} = 858$
	<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 ::= {                 AVA-Type ::= {                     AVA-Type ::= {                          AVA-Type ::= {</pre>
	I
	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 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 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_024
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure		<ol> <li>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) = 0x007FFFF]) and a time stamp.</li> </ol>
		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.	
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TP ld		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	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_024		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		<ol> <li>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]).</li> </ol>		
		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/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 purpos	se	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		<ol> <li>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.</li> </ol>		
		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.	
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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 purpos	6e	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		<ol> <li>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])</li> <li>The simulated PHD with the value for NRes ([exponent 0, mantissa – (2**23) = 0x00800000])</li> </ol>
Pass/Fail criteria		<ul> <li>2. The simulated PHD waits until it receives a confirmation from the PHG under test.</li> <li>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).</li> </ul>
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	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_024
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure		<ol> <li>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.</li> </ol>
		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.
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TP Id TP label		TP/PLT/PHG/CLASS/WEG/BV-014				
		Special values. Positive 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 condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.				
Test procedure		<ol> <li>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]).</li> </ol>				
		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-015 Special values. Negative infinity – fixed format				
	Testable items	WeightNumClass 22; M				
Test purpos	e	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_024				
Other PICS						
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.				
Test procedure		<ol> <li>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.</li> </ol>				
		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/WEG/BV-016				
		Special values. Negative infinity – variable format				
Coverage	Spec	[ISO/IEEE 11073-10415]				
	Testable items	WeightNumClass 27; 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_024				
Other PICS						
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.				
Test procedure		<ol> <li>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]).</li> </ol>				
		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-017				
TP label		Special values. Reserved – fixed format				
Coverage Spec Testable items		[ISO/IEEE 11073-10415]				
		WeightNumClass 22; 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.				
Applicabilit	y	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		<ol> <li>The simulated PHD sends a confirmed fixed 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.</li> </ol>				
		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 label		TP/PLT/PHG/CLASS/WEG/BV-018 Special values. Reserved – variable format				
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		C_MAN_OXP_000 AND C_MAN_OXP_024				
Other PICS						
Initial condi	ition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.				
Test procedure		<ol> <li>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]).</li> </ol>				
		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)

TP Id TP label		TP/PLT/PHG/CLASS/GL/BV-000         Association procedure PHG GL				
						Coverage
	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-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-version3 (i.e., protocol-version = 0x20000000)					
	[AND]					
	The PHG shall respond with a single selected encoding rule that is supported by both PH 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 = 0x8000000)					
	[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_019					
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 = '00100000000000000000000000000'B					
	encoding-rules= '10000000000000'B					
	nomenclature-version = '100000000000000000000000000000'B					
	□ 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					
	<ul> <li>data_req_init_manager_count = 0</li> <li>option-list.length= 0</li> </ul>					
	$\Box$ option-list.length= 0					

	□ 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.
	<ul> <li>If association is rejected-no-common-parameter, field-value= 0x00 0x05.</li> </ul>
	If association is rejected–unknown = 0x00 0x06.
	If association is rejected-unauthorized, field-value= 0x00 0x07.
	<ul> <li>If association is rejected–unsupported-assoc-version, field-value= 0x00 0x08.</li> </ul>
С.	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= 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 =
	<ul> <li>Bit 0 must be 0</li> </ul>
	<ul> <li>Bits 1 and 2 may be set</li> </ul>
	<ul> <li>The rest of the bits must not be set</li> </ul>
i.	system type
	□ field- type = SystemType
	□ field-length = 4 bytes (BITS-32)
	□ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)

	j.	system-	d
		🛛 field	- type = OCTET STRING
		🛛 field	l-length = 8 bytes
		🛛 field	e-value = (EUI-64 manufacturer and device)
	k.	dev-con	fig-id
		🛛 field	l- type = ConfigId
		🗅 field	I-length = 2 bytes
		🗅 field	l-value = 0x00 0x00 (manager-config-response)
	Ι.	data-rec	-mode-flags (DataReqModeCapab)
		🗅 field	- type = DataReqModeFlags
		🗅 field	I-length = 2 bytes
		🗅 field	l-value = 0x00 0x00
		D PH	G response to data-req-mode-flags is always 0.
	m.	data-rec	-init-agent-count (DataReqModeCapab)
		🗅 field	I- type = INT-U8
		🗅 field	l-length = 1 byte
		🗅 field	l-value = 0x00
	n.	data-rec	-init-manager-count (DataReqModeCapab)
		🗅 field	I- type = INT-U8
		🗅 field	l-length = 1 byte
		🗅 field	l-value = 0x00
Pass/Fail criteria	All checked	alues ar	e as specified in the test procedure.
Notes	Value for pro	ocol-ver	sion 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				

	Check that
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	1. The simulated PHD sends an association request to the PHG under test with dev-config- id 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
	$\Box  field-length = 2 \text{ bytes}$
	□ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)
	If the result of the association response was "accepted-unknown-config"
	<ol> <li>The simulated PHD sends a configuration event report with config-report-id set to 0x06 0xA5</li> </ol>
	4. The PHG under test must respond with:
	a. APDU Type
	$\Box  field-length = 2 \text{ bytes}$
	□ field-value = 0xE7 0x00 (PrstApdu)
	b. Invoke-id
	□ field- type = INT-U16
	$\Box  field-length = 2 \text{ bytes}$
	field-value= it must be the same as the invoke-id of the simulated PHD's message.
	c. Obj-Handle:
	□ field- type = HANDLE
	$\Box  field-length = 2 \text{ bytes}$
	$\Box  field-value = 0x00 \ 0x00$
	d. Event-time:
	□ field- type = INT-U32
	$\Box  field-length = 4 \text{ bytes}$
	□ 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
	Wai	it until t	ne Operating state is reached in both cases.
	5.	IF C_M	/AN_OXP_085 THEN:
		rc	ne PHG under test moves to Configuring/Sending GetMDS substate and issues iv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list at to 0 to indicate all attributes.
		at	ne simulated PHD responds with a rors-cmip-get service message in which the tribute-list contains a list of all implemented attributes of the MDS object and the ds-time-mgr-set-time bit is not set.
		c. O	nce in Operating state the PHG is forced to enable the scanner object.
	Wai	it until t	ne Operating state is reached in both cases.
	6.	plasm	mulated PHD sends a fixed event report with one Blood Glucose (Undetermined a reference method) measurement and other fixed event report with Control on measurement.
Pass/Fail criteria	•		HG under test must respond either to the association request with an "accepted" ge or to the Configuration Event Report with an "accepted-config".
	•	The m	easurements are correctly presented.
Notes			

TP ld		TP/PLT/PHG/CLASS/GL/BV-001_B					
TP label		Configuration Event Report. Glucose Meter standard configuration 1702					
Coverage	Spec	[ISO/IEEE 11073-10417]					
Testable items Spec Testable items		ConfProc 4;M	MDSEvents 2;M	ObjAccServ 5;M			
		[ISO/IEEE 11073-20601-2015/	A] and [ISO/IEEE 11073-20601-	2016C]			
		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 acceptan (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	<ol> <li>The simulated PHD sends an association request to the PHG under test with dev-config- id set to 0x06 0xA6 (Glucose Meter – Std Config 1702).</li> </ol>				
	2. The PHG under test responds with an association response, the field of interest is:				
	a. Result				
	□ field- type = INT-U16				
	$\Box  field-length = 2 \text{ bytes}$				
	□ 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				
	$\Box  \text{field-length} = 2 \text{ bytes}$				
	☐ field-value = 0xE7 0x00 (PrstApdu)				
	b. Invoke-id				
	□ field- type = INT-U16				
	$\Box  field-length = 2 \text{ bytes}$				
	field-value= it must be the same as the invoke-id of the simulated PHD's message.				
	c. Obj-Handle:				
	□ field- type = HANDLE				
	$\Box  field-length = 2 \text{ bytes}$				
	$\Box  field-value = 0x00 \ 0x00$				
	d. Event-time:				
	□ field- type = INT-U32				
	$\Box  field-length = 4 \text{ bytes}$				
	□ 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	it unt	il the	Operating state is reached in both cases.
	5.	IF C	C_MA	N_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 o 0 to indicate all attributes.
		b.	attrib	simulated PHD responds with a rors-cmip-get service message in which the oute-list contains a list of all implemented attributes of the MDS object and the time-mgr-set-time bit is not set.
		c.	Once	e in Operating state the PHG is forced to enable the scanner object.
	Wa	it unt	il the	Operating state is reached in both cases.
	6.	plas	sma re	lated PHD sends three fixed event reports: Blood Glucose (Undetermined eference method) measurement, Control Solution measurement and Meal neasurement.
Pass/Fail criteria	•			under test must respond either to the association request with an "accepted" or to the Configuration Event Report with an "accepted-config".
	•	The	mea	surements are correctly presented.
Notes				

TP ld		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/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.				
		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 apply to all APDUs regardless of whether a standard or extended configuration is being	on			
Applicabilit	У	C_MAN_OXP_000 AND C_MAN_OXP_019				
Other PICS						
Initial condi	ition	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:
	$\Box$ Count = 2
	<pre> Length = 5080 ObservationScan ::= {     obj-handle: 1     attributes: AttributeList ::= {         AVA-Type ::= {             attribute-id: 61441             attribute-value: '00(5056 bytes) 00'C         }     }     ObservationScan ::= {         obj-handle: 1         attributes: AttributeList ::= {             AVA-Type ::= {                 AVA-Type ::= {                   AVA-Type ::= {                          AVA-Type ::= {</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 ld		TP/PLT/PHG/CLASS/GL/BV-002_A				
TP label		Maximum APDU size: Glucose Meter with PM-Store				
Coverage Spec		[ISO/IEEE 11073-20601-2015/	A] and [ISO/IEEE 11073-20601-2	2016C]		
	Testable items	CommonCharac 4;M				
	Spec	[ISO/IEEE 11073-10417]				
Testable items		ComChar 2; 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.				
		specializations the PHG suppo	be at least as large as the large rts. 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_019 AND C_MAN_OXP_003				
Other PICS						
Initial cond	ition	The PHG under test is in the C	perating state.			

Test procedure	1. The simulated PHD sends a Confirmed variable event report:				
	<ul> <li>a. ScanReportInfoVar. obs_scan_var:</li> <li>Count = 2</li> </ul>				
	<pre>Length = 64472 ObservationScan ::= {</pre>				
	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.				
	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 label		TP/PLT/PHG/CLASS/GL/BV-003 Blood Glucose Attribute-Value-Map. Order change (Std Config 1701)				
	Testable items	BloodGL 10;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_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 proced	dure	<ol> <li>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.</li> </ol>				
		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 (Blood Glucose Object) to reverse the values to: MDC_ATTR_TIME_STAMP_ABS, then MDC_ATTR_NU_VAL_OBS_BASIC.	
	. The simulated PHD waits until it receives a confirmation.	
	. Send a confirmed fixed format event report with the date first followed by a blood glucos value (in mg/dL since it is the standard configuration unit code).	e
	. The simulated PHD waits until it receives a confirmation.	
	. The simulated PHD sends an association release request (normal).	
	. 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.	n
	<ol> <li>If the PHG under test responds with association request response with "accepted- unknown-config", then</li> </ol>	
	<ul> <li>The simulated PHD sends the confirmed configuration event report with the standar configuration.</li> </ul>	rd
	<ul> <li>The simulated PHD waits until there is a confirmation to the configuration event report that was sent.</li> </ul>	
	<ol> <li>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 bloc glucose observation.</li> </ol>	bd
	2. 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 ar applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).	nd
	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 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/GL/BV-003_A			
TP label Blood Glucose Attribu		Blood Glucose Attribute-	/alue-Map. Order chang	e (Std Config 1702)	
Coverage	Spec	[ISO/IEEE 11073-10417]			
	Testable items	BloodGL 32; 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_019			
Other PICS					

Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure	<ol> <li>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.</li> </ol>
	2. The simulated PHD waits until it receives a confirmation.
	<ol> <li>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.</li> </ol>
	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
	<ul> <li>The simulated PHD sends the confirmed configuration event report with the standard configuration.</li> </ul>
	• 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	<ul> <li>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).</li> </ul>
	<ul> <li>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).</li> </ul>
	• 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.

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	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	<ol> <li>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.</li> </ol>		
	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.		
	<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC attribute.</li> </ol>		
	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).		
	<ul> <li>In steps 4 and 6, verify that the PHG under test uses mmol/L as the unit code for the measurement reports.</li> </ul>		
Notes			

TP Id TP label		TP/PLT/PHG/CLASS/GL/BV-004_A Blood Glucose Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map (Std Config 1702)		
	Testable items	BloodGL 32; 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		
Applicabilit	у	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		<ol> <li>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</li> </ol>		

Notes		
	•	In steps 4 and 6, verify that the PHG under test uses mmol/L as the unit code for the measurement reports.
	•	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).
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).
	6.	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.
	4.	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).
	2.	The simulated PHD waits until it receives a confirmation.
		MDC_ATTR_TIME_STAMP_BO.

TP ld		TP/PLT/PHG/CLASS/GL/BV-005			
TP label		Blood Glucose Unit-Code. Change from default mg/dL to mmol/L – fixed format observation			
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			
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_019 AND C_MAN_GL_001			
Other PICS					
Initial condi	ition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		<ol> <li>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).</li> </ol>			
		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 wa	aits until it receives a confirmation.		
		5. The simulated PHD se	ends an association release request (normal).		
		6. The simulated PHD wa	aits 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.
		<ul> <li>The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.</li> </ul>
	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 Id TP label		TP/PLT/PHG/CLASS/GL/BV-005_A			
		Blood Glucose Unit-Code. Do not change from default mg/dL to mmol/L – fixed 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	1	C_MAN_OXP_000 AND C_MAN_OXP_019 AND (NOT(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		<ol> <li>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).</li> </ol>			
		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		<ul> <li>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.</li> </ul>			
		• 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.			

	<ul> <li>In step 5, verify that measurements do not appear, or if they do appear, they are somehow designated as 'unsupported' data.</li> </ul>
Notes	

TP ld TP label		TP/PLT/PHG/CLASS/GL/BV-006		
		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		
Applicabilit	y	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.		
Test procedure		<ol> <li>Send a confirmed variable format event report using a measurement in mg/dL.</li> <li>The simulated PHD waits until it receives a confirmation.</li> </ol>		
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 label		TP/PLT/PHG/CLASS/GL/BV-007 Blood Glucose Unit-Code. Change from default mg/dL to mmol/L – variable format observation			
					Coverage Spec
	Testable items	BloodGL 8;M			
	Spec	[b-ITU-T H.810 (2015)]	_		
	Testable items	Communication 9; 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			
		[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_MA	AN_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	<ol> <li>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.</li> </ol>
	2. The simulated PHD waits until it receives a confirmation.
	<ol> <li>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).</li> </ol>
	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
	<ul> <li>The simulated PHD sends the confirmed configuration event report with the standard configuration.</li> </ul>
	<ul> <li>The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.</li> </ul>
	<ol> <li>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).</li> </ol>
	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).
	<ul> <li>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).</li> </ul>
Notes	

TP Id TP label		TP/PLT/PHG/CLASS/GL/BV-008 Special values. Blood Glucose - Not a number – fixed format (Std Config 1701)			
					Coverage
	Testable items	BloodGL 10; M			
Test purpose		Check that:			
		The PHG receives a NaN 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 PHG under test are in the Operating state using the standard configuration 1701.			
Test procedure		<ol> <li>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.</li> </ol>			

	2. The simulated PHD waits until it receives a confirmation from the PHG under test.	
<ul> <li>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 modisplayed in some form that indicates it is not a measurement such as "—the display area).</li> </ul>		
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 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_019		C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.		
Test procedure		<ol> <li>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]).</li> </ol>		
		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 by blanking the display area).		
Notes This		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/GL/BV-010		
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 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	<ol> <li>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.</li> </ol>	
	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	his test case has been considered as an implicit test case.	

TP ld		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 purpos	est purpose Check that: The PHG receives NRes value (variable format event report) but it does not use this			
Applicability	/	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
<b>Initial condition</b> The simulated PHD and the PHG under test are in the Operating state using the configuration 1701.		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.		
Object) containing an observ		<ol> <li>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]).</li> </ol>		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
if they were an actual measurement (e.g., if there		• 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/GL/BV-012		
TP label		Special values. Blood Glucose - Positive 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 (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 a configuration 1701.	are in the Operating state using the standard	

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Test procedure	<ol> <li>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.</li> </ol>	
	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 Spec		[ISO/IEEE 11073-10417]		
	Testable items	BloodGL 20; M		
Tł		Check that: The PHG receives a +INFINITY value (variable format event report) but it does not use this value.		
Applicability	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 1701.		
Test procedure		<ol> <li>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]).</li> <li>The simulated PHD waits until it receives a confirmation from the PHG under test.</li> </ol>		
Pass/Fail criteria		<ul> <li>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).</li> </ul>		
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/GL/BV-014		
TP label Special values. Blood Glucose - Negative infinity – fixed format (Std Config 1701		t (Std Config 1701)		
Coverage Spec		[ISO/IEEE 11073-10417]		
	Testable items	BloodGL 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		C_MAN_OXP_000 AND C_N	IAN_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	<ol> <li>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.</li> </ol>		
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
<ul> <li>Pass/Fail criteria</li> <li>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 meas displayed in some form that indicates it is not a measurement).</li> </ul>			
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	Spec	[ISO/IEEE 11073-10417]		
	Testable items	BloodGL 20; M		
Test purpos	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_019		
Other PICS				
Initial condition The simulated PHD and the PHG under test a configuration 1701.		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.		
Test procedure		<ol> <li>The simulated PHD sends a confirmed variable 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]).</li> </ol>		
		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 implici		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/GL/BV-016			
TP label Special values. Blood Glucose - Reserved – fixed format (Std Config 1701)		Config 1701)			
Coverage	erage 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	<ol> <li>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.</li> </ol>				
	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 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	/	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 configuration 1701.		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.		
Test procedure		<ol> <li>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]).</li> </ol>		
		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 con		This test case has been considered as an implicit test case.		

TP Id TP/PLT/PHG/CLASS/GL/BV-018		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	<ol> <li>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</li> </ol>					
	2. The simulated PHD waits until it receives a confirmation.					
	<ol> <li>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.</li> </ol>					
	4. The simulated PHD waits until it receives a confirmation.					
	<ol> <li>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).</li> </ol>					
	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					
	<ul> <li>The simulated PHD sends the confirmed configuration event report with the standard configuration.</li> </ul>					
	• The simulated PHD waits until there is a confirmation to the configuration event report that was sent.					
	<ol> <li>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.</li> </ol>					
	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-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	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_BASIC   MDC_ATTR_ID_PHYSIO   MDC_ATTR_TIME_STAMP_BO			
Applicability	y	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	1. 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.			
		<ol> <li>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.</li> </ol>			
		4. The simulated PHD waits until it receives a confirmation.			
		<ol> <li>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).</li> </ol>			
		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.			
		<ol> <li>The simulated PHD sends an association request using the same standard configuration that was used previously.</li> </ol>			
		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.			
		<ol> <li>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.</li> </ol>			
		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).			
		<ul> <li>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).</li> </ul>			
		• 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).			

	<ul> <li>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.</li> </ul>
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 configuration (Control Solution Numeric standard configuration Unit code att MDC_DIM_MILLI_G_PER_DL).						
Test procedure		<ol> <li>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.</li> </ol>				
		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.				
		<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC attribute.</li> </ol>				
		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).				
		<ul> <li>In steps 4 and 6, verify that the PHG under test uses mmol/L as the unit code for the measurement reports.</li> </ul>				
Notes						

TP ld	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/IEEE 11073-10	E 11073-10417]			
	Testable items	CtrlSol 18; M				
Test purpose	9	Check that:				
		For [Standard-Config	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	,	C_MAN_OXP_000 A	ND 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 MDC_DIM_MILLI_G_PER_DL).						
Test procedure		Value-Map conf MDC_ATTR_NL	iguration of h J_VAL_OBS		olution Obj	
		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.				
				confirmed variable BASIC attribute.	event repo	ort with just
		6. The simulated PHD waits until it receives a confirmation.				
Pass/Fail criteria		the correct byte	s to the corre	Gunder test is able t ect attributes (e.g., if displayed properly).		he data properly and applies UI, verify that the
		• 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 measurement re		he PHG under test	uses mmo	I/L as the unit code for the
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 observa		
Coverage       Spec       [ISO/IEEE 11073-10417]         Testable items       CtrlSol 6;M       Image: CtrlSol 6;M         Spec       [b-ITU-T H.810 (2015)]         Testable items       Communication 9; M				
		CtrlSol 6;M		
		[b-ITU-T H.810 (2015)]		
		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					
C_MAN_OXP_000 AND C_MAN_OXP_019 AND C_MAN_GL_002					
The simulated PHD and the PHG under test are in the Operating state using the standard configuration.					
<ol> <li>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).</li> </ol>					
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					
<ul> <li>The simulated PHD sends the confirmed configuration event report with the standard configuration.</li> </ul>					
<ul> <li>The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.</li> </ul>					
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.					
<ul> <li>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).</li> </ul>					
• 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).					

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	<ol> <li>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).</li> </ol>				
	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	<ul> <li>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.</li> </ul>				
	<ul> <li>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.</li> </ul>				
	• 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	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 state using the standard configuration.		
Test procedure		1. Send a confirmed variable format event report using a measurement in mg/dL.		
		2. The simulated PHD waits until it receives a confirmation.		

Notes	
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).

TP ld		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	Ctrl	Sol 6;M		
	Spec	[b-l	ГU-Т Н.810 (2015)]		
	Testable items	Con	nmunication 9; M		
Test purpos	e	Che	eck that:		
		For	[Standard-Configuration] th	e [Unit-Code] attribute shall be	present
		The	value of the [Unit-Code] at	tribute shall be MDC_DIM_MILL	I_G_PER_DL
		[AN	D]		
			itinua PAN client componer change to future measurem	nts that receive a report of a con ments only	figuration change shall apply
Applicability	y	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 proced	ure	<ol> <li>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.</li> </ol>			
		2.	The simulated PHD waits	until it receives a confirmation.	
		3.		variable format event report with hit the unit-code attribute in the e	
		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.	<ol><li>The simulated PHD sends an association request using the same configuration that wa used initially.</li></ol>		e same configuration that was
		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.			n event report with the standard
			• The simulated PHD w configuration event re	aits until it receives a confirmation port just sent.	on from the confirmed
		9.	mg/dL followed by date an	D sends a confirmed variable event report with an observation in date and time stamp (i.e., do not send the unit-code attribute it should the standard configuration).	
		10. The simulated PHD waits until it receives a confirmation.			

Pass/Fail criteria	<ul> <li>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).</li> <li>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).</li> </ul>
Notes	

TP ld		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	se	Check that:		
		The PHG receives a NaN 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 PHG under test are in the Operating state using the standard configuration 1701.		
Test procedure		<ol> <li>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.</li> </ol>		
		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.		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 Spec		[ISO/IEEE 11073-10417]		
	Testable items	CtrlSol 12; M		
Test purpose		Check that: The PHG receives a NaN valu	ue (variable format event report) I	out it does not use this value.
Applicability		C_MAN_OXP_000 AND C_M	AN_OXP_019	
Other PICS				
Initial condition		The simulated PHD and the P configuration 1701.	HG under test are in the Operati	ng state using the standard

Test procedure	<ul> <li>procedure</li> <li>1. The simulated PHD sends a confirmed variable event reports Solution Object) containing an observation value set to the mantissa +(2**11 –1) = 0x07FF]).</li> </ul>	
	2.	The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria		
Notes	Thi	s 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	6e	Check that: The PHG receives NRes value (fixed format event report) but it does not use this value.		
Applicabilit	y	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.		
Object) containing an observation value		<ol> <li>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.</li> </ol>		
		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/GL/BV-027		
TP label Special values. Control Solution - Not at this res		Special values. Control Solution - Not at this resolution – variable format (Std Config 1701)		
Coverage Spec [ISO/IEEE 11073-1041		[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 PHG under test are in the Operating state using the standard configuration 1701.		

Test procedure	<ol> <li>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]).</li> </ol>	
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.	
<ul> <li>Pass/Fail criteria</li> <li>Verify that the PHG under test is able to accept the data, but does not u 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).</li> </ul>		
Notes	This test case has been considered as an implicit test case.	

TP ld		TP/PLT/PHG/CLASS/GL/BV-028		
TP label		Special values. Control Solution - Positive infinity – fixed format (Std Config 1701)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	CtrlSol 8; M		
Test purpos	e	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_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		<ol> <li>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.</li> </ol>		
		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 imp		idered 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 purpos	e	Check that:		
		The PHG receives a +INFINIT value.	Y value (variable format event re	port) but it does not use this
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	<ol> <li>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]).</li> </ol>		
	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	e	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_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		<ol> <li>The simulated PHD sends a confirmed fixed 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]) and a time stamp.</li> </ol>		
		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-0	31	
TP label		Special values. Control Solution - Negative infinity – variable format (Std Config 1701)		
Coverage Spec		[ISO/IEEE 11073-10417]		
Testable CtrlSol 12; M titems				
Test purpose		Check that: The PHG receives a –INFINITY value.	Y value (variable format event re	port) but it does not use this
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	<ol> <li>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]).</li> <li>The simulated PHD waits until it receives a confirmation from the PHG under test.</li> </ol>
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-032		
TP label		Special values. Control Solution - Reserved – fixed format (Std Config 1701)		
Coverage Spec		[ISO/IEEE 11073-104	17]	
	Testable items	CtrlSol 8; 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_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		<ol> <li>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.</li> </ol>		
		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 bee	en considered as an implicit test	t case.

TP ld		TP/PLT/PHG/CLASS/GL/BV-03	33	
TP label		Special values. Control Solution - Reserved – variable format (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 fo	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	<ol> <li>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]).</li> </ol>		
	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 PO			
Coverage	Spec	[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	PulseAssocResp 11;M	
Test purpos	e	Check that:			
		In the DataProtoList structi id-20601 (i.e., , data-proto-		entifier 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 sh field dev-config-id shall be		tionInformation structure and the	

	[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= '10000000000000'B		
	nomenclature-version = '100000000000000000000000000000000000		
	□ functional-units = '00000000000000000000000000000000000		
	<ul> <li>system-type = '000000010000000000000000000000000000</li></ul>		
	$\Box  \text{dev-config-id} = 16443$		
	<ul> <li>det comig id = 10 mis</li> <li>data-rep-mode-capab =</li> </ul>		
	• data_req_mode_flags= '00000000000001'B		
	<pre>• data_req_init_agent_count = 1</pre>		
	<pre>•data_req_init_manager_count = 0</pre>		
	• option-list.length= 0		
	2. The PHG under test sends an association response. The fields of interest are:		
	a. APDU Type		
	$\Box  field-length = 2 \text{ bytes}$		
	field-value = 0xE3 0x00 (AareApdu)		
	b. Result		
	field- type = AssociateResult		
	$\Box  field-length = 2 \text{ bytes}$		
	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.		
	<ul> <li>If association is rejected-no-common-protocol, field-value= 0x00 0x04.</li> </ul>		
	<ul> <li>If association is rejected-no-common-parameter, field-value= 0x00 0x05.</li> </ul>		
	<ul> <li>If association is rejected—unknown = 0x00 0x06.</li> </ul>		
	<ul> <li>If association is rejected-unauthorized, field-value= 0x00 0x07.</li> </ul>		
	<ul> <li>If association is rejected–unsupported-assoc-version, field-value= 0x00 0x08.</li> </ul>		
	<ul> <li>selected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data- proto-info(defined by data-proto-id))</li> </ul>		
	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
	$\Box  \text{field-length} = 2 \text{ bytes (BITS-16)}$
	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
	$\Box  \text{field-length} = 4 \text{ bytes (BITS-32)}$
	□ 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
	$\Box  \text{field-length} = 4 \text{ bytes (BITS-32)}$
	□ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
j.	system-id
	□ field- type = OCTET STRING
	$\Box  \text{field-length} = 8 \text{ bytes}$
	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)
Ι.	data-req-mode-flags (DataReqModeCapab)
	field- type = DataReqModeFlags field-type = DataReqModeFlags
	□ field-length = 2 bytes
	<ul> <li>field-value = 0x00 0x00</li> <li>BUC segmentes to data real mode flame is always 0</li> </ul>
~	PHG response to data-req-mode-flags is always 0.
m.	<ul><li>data-req-init-agent-count (DataReqModeCapab)</li><li>field- type = INT-U8</li></ul>
	□ field-length = 1 byte
	$\Box  \text{field-value} = 000$
n.	data-req-init-manager-count (DataReqModeCapab)
	$\Box  \text{field- type = INT-U8}$
	□ 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 11073-20601-2	

TP ld		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	ConfEventRep 18;M						
Test purpose	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_026						
Other PICS		C_MAN_OXP_085						
Initial condit	ion	The simulated PHD and the PHG under test are in the Unassociated state						
Test procedu	ure	1. The simulated PHD sends an association request to the PHG under test with dev-config- id set to 0x01 0x90 (PulseOximeter).						
		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 0x01 0x90.						
		4. The PHG under test must respond with:						
		a. APDU Type						
		$\Box  field-length = 2 \text{ bytes}$						
		□ 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_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	e 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	ait 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	Se	e <u>http</u>	://co	ntinua.plugfests.com/show_bug.cgi?id= 123

TP ld		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 purpos	5e	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.					
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_026					
Other PICS		C_MAN_OXP_085					
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.					
Test proced	lure	1. The simulated PHD sends an association request to the PHG under test with dev-config- id set to 0x01 0x91 (PulseOximeter).					

	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)
	lf th	ne res	sult of the association response was "accepted-unknown-config"
	3.	The 0x9	e simulated PHD sends a configuration event report with config-report-id set to 0x01
	4.	The	e PHG under test must respond with:
		b.	APDU Type
			□ field-length = 2 bytes
			□ field-value = 0xE7 0x00 (PrstApdu)
		c.	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.	Obj-Handle:
			□ field- type = HANDLE
			$\Box  field-length = 2 \text{ bytes}$
			$\Box  field-value = 0x00 \ 0x00$
		e.	Event-time:
			□ field- type = INT-U32
			□ field-length = 4 bytes
			□ field-value: 0xXX 0xXX
		f.	Event-type:
			$\Box  field-length = 2 \text{ bytes}$
			□ 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	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 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 measurement is correctly presented.
Notes	See http://continua.plugfests.com/show_bug.cgi?id= 123

TP Id TP label		TP/PLT/PHG/CLASS/PO/BV-006					
		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		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 conditi	ion	The PHG under test is in the Operating state.					
Test procedu		<pre>1. The simulated PHD sends a Confirmed variable event report: a. ScanReportInfoVar. obs_scan_var: Count = 2 Length = 5080 ObservationScan ::= { obj-handle: 1 (SPO2) attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 61441 attribute-value: '00(5056 bytes) 00'0 } }</pre>					
		<ol> <li>Check the response of the PHG under test.</li> <li>The simulated PHD sends a confirmed fixed event report with one measurement.</li> <li>Check the response of the PHG under test.</li> </ol>					
Pass/Fail crit	eria	• 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/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	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 0x190.		
Test procedu	Ire	<ol> <li>The simulated PHD sends a confirmed variable event report to change the Attribute- Value-Map configuration of handle 1 (SpO<sub>2</sub> 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</li> </ol>		
		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.	
Coverage Spec		[ISO/IEEE 11073-10404]	
	Testable items	SpO2NumObjAttr 10;M	
Spec		[b-ITU-T H.810 (2015)]	
	Testable items	Communication 9; M	
Test purpos	se	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	<ol> <li>Send a confirmed variable format event report for handle 1 using a measurement in % and for handle 10 using a measurement in BPM.</li> <li>The simulated BUD usits until it reacting a confirmation.</li> </ol>
	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 <sub>2</sub> — Standard configuration 0x191		
Coverage Spec [ISO/IEEE 11073-10404]		[ISO/IEEE 11073-10404]		
	Testable items	Spo2StandConf 1;C		
Test purpose	e	Check that:		
		For SpO2 numeric Object the and for Dev-Configuration-Id to 0x191 the Supplemental-Types attribute shall contain a single entry in its SupplementalTypeList, and its value shall be MDC_MODALITY_SPOT.		
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 0x191.		
Test procedure		<ol> <li>The simulated PHD sends a confirmed fixed format event report from handle 1 (SpO<sub>2</sub> Object) that matches the Attribute-Value-Map order of MDC_ATTR_NU_VAL_OBS_BASIC.</li> </ol>		
		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 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 Testable items		[ISO/IEEE 11073-10404]		
		PulseRateStandConf 1;C		
Test purpose		Check that:		

For Pulse Rate numeric Object the and for Dev-Configuration-Id to 0x191 the Sup Types attribute shall contain a single entry in its SupplementalTypeList, and its val MDC_MODALITY_SPOT.	
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 0x191.
Test procedure	<ol> <li>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.</li> </ol>
	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 applies the correct bytes to the correct attributes and Supplemental-Type for Object with handle 10 is MDC_MODALITY_SPOT (e.g., if there is a UI, verify that the measurement and date are displayed properly).
Notes	

TP Id TP label		TP/PLT/PHG/CLASS/PO/BV-011		
		Special values. Not a numb	er – 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 NaN 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		<ol> <li>The simulated PHD sends a confirmed fixed event report for handle 1 (SpO<sub>2</sub> Object) and handle 10 (Pulse Rate Object) containing an observation value set to the value for NaN ([exponent 0, mantissa +(2**11 –1) = 0x07FF]).</li> </ol>		
		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/PO/BV-012
TP label		Special values. Not a number – variable format
Coverage	Spec	[ISO/IEEE 11073-10404]

	Testable items	Sp	O2NumObjAttr 16; C	PulseRateNumObjAttr 33; C	
Test purpose	•	Ch	eck that:		
		The	e PHG receives a NaN valu	ue (variable format event report) b	out it does not use this value.
Applicability		C_	MAN_OXP_000 AND C_M	AN_OXP_026	
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedu	ire	1.	<ol> <li>The simulated PHD sends a confirmed variable event report for handle 1 (SpO<sub>2</sub> Object) and handle 10 (Pulse Rate Object) containing an observation value set to the value for NaN ([exponent 0, mantissa +(2**11 -1) = 0x07FF]).</li> </ol>		
		2.	2. The simulated PHD waits until it receives a confirmation from the PHG under test.		om the PHG under test.
Pass/Fail criteria		<ul> <li>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).</li> </ul>		verify that the measurement is	
Notes This test case has been considered as an implicit test case		dered as an implicit test case.			

TP ld		TP/PLT/PHG/CLASS/PO/BV-013		
TP 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 va	lue (fixed format event report) but i	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.		
Test procedure		<ol> <li>The simulated PHD sends a confirmed fixed event report for handle 1 (SpO<sub>2</sub> Object) and handle 10 (Pulse Rate Object) containing an observation value set to the value for NRes ([exponent 0, mantissa –(2**11) = 0x0800]).</li> </ol>		
		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/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:	Check that:		
Applicability		The PHG receives NRes value (variable format event report) but it does not use this value. C_MAN_OXP_000 AND C_MAN_OXP_026			
Other PICS					
Initial condition		The simulated PHD and configuration.	the PHG under test are in the Operating state using the standard		
Test procedure		and handle 10 (Puls	sends a confirmed variable event report for handle 1 (SpO <sub>2</sub> Object) e Rate Object) containing an observation value set to the value for mantissa $-(2^{**}11) = 0x0800$ ]).		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		if they were an actua	under test is able to accept the data, but does not use the values as al measurement (e.g., if there is a UI, verify that the measurement is orm that indicates it is not a measurement).		
Notes This test case has been considered as an implicit test case.		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		<ol> <li>The simulated PHD sends a confirmed fixed event report for handle 1 (SpO<sub>2</sub> 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]).</li> </ol>		
		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/PO/BV-016
TP label Special values. Positive infinity -		Special values. Positive infinity – variable format
Coverage Spec		[ISO/IEEE 11073-10404]

	Testable items	SpO2NumObjAttr 16; C	PulseRateNumObjAttr 33; 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_026				
Other PICS						
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.				
Test procedu	ire	<ol> <li>The simulated PHD sends a confirmed variable event report for handle 1 (SpO<sub>2</sub> 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]).</li> </ol>				
		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 co	onsidered as an implicit test case.			

TP Id TP label		TP/PLT/PHG/CLASS/PO/BV-017		
		Special values. Negative in	Special values. Negative infinity – fixed format	
Coverage	Spec	[ISO/IEEE 11073-10404]		
	Testable items	SpO2NumObjAttr 11; M	PulseRateNumObjAttr 28; M	
Test purpo	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 cond	ition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		<ol> <li>The simulated PHD sends a confirmed fixed event report for handle 1 (SpO<sub>2</sub> 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]).</li> </ol>		
		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/PO/BV-018
TP label	Special values. Negative infinity – variable format

Coverage Spec		[ISO/IEEE 11073-10404]			
	Testable items	SpO2NumObjAttr 16; C	PulseRateNumObjAttr 33; 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_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		<ol> <li>The simulated PHD sends a confirmed variable event report for handle 1 (SpO<sub>2</sub> 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]).</li> </ol>			
		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/PO/BV-019			
TP label		Special values. Reserved – fixed format			
Coverage	Spec	[ISO/IEEE 11073-10404]			
	Testable items	SpO2NumObjAttr 11; M	PulseRateNumObjAttr 28; 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_MAN_OXP_026			
Other PICS					
Initial condit	lion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test proced	ure	<ol> <li>The simulated PHD sends a confirmed fixed event report for handle 1 (SpO<sub>2</sub> 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]).</li> </ol>			
		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 co	nsidered as an implicit test case.		

TP Id TP label		TP/PLT/PHG/CLASS/PO/BV-020		
		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.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_026		
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 (SpO <sub>2</sub> 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 (BPM)

TP ld		TP/PLT/PHG/CLASS/BPM/BV-000				
TP label		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 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 (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 = 0x8000000)			
	[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			
	<pre>encoding-rules= '10000000000000'B</pre>			
	nomenclature-version = '100000000000000000000000000000000000			
	functional-units = '00000000000000000000000000000000000			
	system-type = '0000000100000000000000000000000'B			
	$\Box$ dev-config-id = 16437			
	□ data-rep-mode-capab =			
	• data_req_mode_flags= '000000000000001'B			
	<pre>• data_req_init_agent_count = 1</pre>			
	$\square$ 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.	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.	enc	oding-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)

	ј.	system-id
		□ field- type = OCTET STRING
		□ field-length = 8 bytes
		field-value = (EUI-64 manufacturer and device)
	k.	dev-config-id
		□ field- type = Configld
		$\Box  field-length = 2 \text{ bytes}$
		□ field-value = 0x00 0x00 (manager-config-response)
	Ι.	data-req-mode-flags (DataReqModeCapab)
		□ field- type = DataReqModeFlags
		$\Box  field-length = 2 \text{ bytes}$
		□ 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
		$\Box  field-length = 1 \text{ byte}$
		□ field-value = 0x00
	n.	data-req-init-manager-count (DataReqModeCapab)
		□ field- type = INT-U8
		$\Box  field-length = 1 \text{ byte}$
		□ 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 label		TP/PLT/PHG/CLASS/BPM/BV-001		
		Configuration Event Report. Blood Pressure Meter standard configuration		
Coverage	Spec	[ISO/IEEE 11073-10407]		
	Testable items	MDSEvents 8;M		
	Spec	[ISO/IEEE 11073-20601-2015A] and [ISO/IE	EEE 11073-20601-2016C]	
	Testable items	ConfEventRep 18;M		
Test purpose		Check that:		
		A blood pressure monitor PHG shall respond [Confirmed] event report response.	d to an [MDS-Configuration-Event] using a	
		The Response shall include the event-reply-info [ConfigReportRsp]		
		[AND]		
		A PHG that supports one (or more) of the IS standards shall be able to accept all the star profiles listed in conformance Table 23 under	ndard device configurations specified for the	
			D to send the standard configuration in order to utes from the MDS object prior to final acceptance	

Applicability	C_MAN_OXP_000 AND C_MAN_OXP_020		
Other PICS	C_MAN_OXP_085		
Initial condition	The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure	<ol> <li>The simulated PHD sends an association request to the PHG under test with dev-config id set to 0x02 0xBC (Blood Pressure Meter).</li> </ol>		
	2. The PHG under test responds with an association response, the field of interest is:		
	a. Result		
	□ field- type = INT-U16		
	$\Box  field-length = 2 \text{ bytes}$		
	□ 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 0x02 0xBC		
	4. The PHG under test must respond with:		
	a. APDU Type		
	$\Box  field-length = 2 \text{ bytes}$		
	□ field-value = 0xE7 0x00 (PrstApdu)		
	b. Invoke-id		
	□ field- type = INT-U16		
	$\Box  field-length = 2 \text{ bytes}$		
	field-value= it must be the same as the invoke-id of the simulated PHD's message.		
	c. Obj-Handle:		
	□ field- type = HANDLE		
	$\Box  field-length = 2 \text{ bytes}$		
	$\Box  field-value = 0x00 \ 0x00$		
	d. Event-time:		
	□ field- type = INT-U32		
	$\Box  field-length = 4 \text{ bytes}$		
	□ 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 th 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-li 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	
	<ul> <li>obs_scan_fixed: Sys-Diast-MAP 120-90-100 mmHg and pulse rate 60 BPM</li> </ul>	
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		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	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		<ol> <li>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</li> </ol>		
		2. The simulated PHD waits until it receives a confirmation.		
		<ol> <li>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.</li> </ol>		
		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" than
	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		Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map		
Coverage Spec [ISO/IEEE 11073-10407]		[ISO/IEEE 11073-10407]		
	Testable items	SystDiast_23;M		
Test purpos	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_CMPD_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_ABS		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_020 AND C_MAN_BPM_001		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration. (Non-invasive blood pressure Compound Numeric standard configuration Unit code attribute is set to millimetres of mercury (MDC_DIM_MMHG)).		
Test procedure		<ol> <li>The simulated PHD sends a confirmed variable event report to change the Attribute- Value-Map configuration of handle 1 (Non-invasive blood pressure) to set the values to: 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 map to: MDC_ATTR_MSMT_STAT, MDC_ATTR_NU_VAL_OBS_BASIC, MDC_ATTR_UNIT_CODE, then MDC_ATTR_TIME_STAMP_ABS.</li> </ol>		
		2. The simulated PHD waits until it receives a confirmation.		

Notes	<ul> <li>In steps 4 and 6, verify that the PHG under test uses kilopascals and beats per minute at the unit codes for the measurement reports.</li> </ul>
	• 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).
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).
	6. The simulated PHD waits until it receives a confirmation.
	5. The simulated PHD sends a confirmed variable event report with handle 1 reporting just a MDC_ATTR_NU_CMPD_VAL_OBS_BASIC attribute and handle 2 just a MDC_ATTR_NU_VAL_OBS_BASIC.
	4. 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 of handle 1, use MDC_DIM_KILO_PASCAL (3843), for handle 2, use MDC_DIM_BEAT_PER_MIN (2720).

TP Id TP label		TP/PLT/PHG/CLASS/BPM/BV-005         Unit-Code. Change from default millimetres of mercury (mmHg) to kilopascals (kPa) – fixed format observation.		
	Testable items	SystDiast_21;M		
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	Communication 9; M		
Test purpo	se	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	y	C_MAN_OXP_000 AND C_MAN_OXP_020 AND C_MAN_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		<ol> <li>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).</li> <li>NOTE – No need to change handle 2 (pulse), since the only option is beats/minute.</li> </ol>		
		2. The simulated PHD waits until it	receives a confirmation.	
		<ol> <li>Send a confirmed fixed format ev (e.g., 16 kPa is 120 mmHg and 7 and for handle 2 using a measur stamp.</li> </ol>	0 kPa is 80 mmHg) follow	ved 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.
		<ul> <li>The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.</li> </ul>
	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 Id TP label		TP/PLT/PHG/CLASS/BPM/BV-005_A		
		Unit-Code. Do not change from default millimetres of mercury (mmHg) to kilopascals (kPa) – fixed format observation.		
Coverage	Spec	[ISO/IEEE 11073-10407]		
	Testable items	SystDiast_21;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_MMHG		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_020 AND (NOT(C_MAN_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		<ol> <li>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).</li> <li>NOTE – No need to change handle 2 (pulse), since the only option is beats/minute.</li> </ol>		
		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,		

	somehow designated as 'unsupported' data.
	• In step 5, verify that measurements do not appear, or if they do appear, they are
	• 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.
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.
	5. If the PHG has sent a confirmation in step 4, ask to the operator if the measurements have been properly received and displayed.
	release association or rorj message or TO cer-mds expires.

TP Id TP label		TP/PLT/PHG/CLASS/BPM/BV-006		
		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 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_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		<ol> <li>Send a confirmed variable format event report for handle 1 using a measurement in mmHg and for handle 2 using a measurement in BPM.</li> </ol>		
		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 Testable items Spec		[ISO/IEEE 11073-10407]		
		SystDiast_21;M		
		[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 condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure	<ol> <li>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.</li> </ol>
	2. The simulated PHD waits until it receives a confirmation.
	<ol> <li>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).</li> </ol>
	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
	<ul> <li>The simulated PHD sends the confirmed configuration event report with the standard configuration.</li> </ul>
	<ul> <li>The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.</li> </ul>
	<ol> <li>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.</li> </ol>
	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 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).
	<ul> <li>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).</li> </ul>
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	<ol> <li>The simulated PHD sends a confirmed variable event report for handle 1 (non-invasive blood pressure object) containing an observation with the compound field values (SFLOAT) set to (120.0, 80.0, 93.3) and for handle 2 containing an observation (SFLOAT) of 60.0.</li> </ol>
	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 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	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		<ol> <li>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).</li> </ol>			
		<ol> <li>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.</li> </ol>			
		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					

TP ld		TP/PLT/PHG/CLASS/BPM/BV-010		
TP label		Metric-id-list. Id order change – 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 condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		<ol> <li>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_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, 110.0) along with a known time stamp.</li> </ol>		
		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 systolic = 110.0, diastolic = 74.0, MAP = 86.0.		
Notes				

TP Id TP label		TP/PLT/PHG/CLASS/BPM/BV-011		
		Metric-id-list. Reduced ids – 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.		
Applicabilit	у	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		<ol> <li>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}.</li> </ol>		
		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 condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		<ol> <li>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).</li> </ol>			
		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 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 ld		TP/PLT/PHG/CLASS/BPM/BV-013	
TP label		Maximum APDU size: Blood Pressure Meter	
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_020			
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:			
	$\Box$ Count = 2			
	□ Length = 856			
	ObservationScan ::= {			
	obj-handle: 1			
	<pre>attributes: AttributeList ::= {     AVA-Type ::= {</pre>			
	attribute-id: 61441			
	attribute-value: '00(824 bytes) 00'0			
	}			
	}			
	}			
	ObservationScan ::= {			
	<pre>obj-handle: 1 attributes: AttributeList ::= {</pre>			
	AVA-Type ::= {			
	attribute-id: 2677			
	(MDC_ATTR_NU_CMPD_VAL_OBS_BASIC)			
	attribute-value: (130 / 85 / 100)			
	}			
	I I			
	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/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	<ol> <li>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.</li> </ol>				
	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-015				
TP label         Special values. Not a number – variable format						
Coverage	Spec	[ISO/IEEE 11073-104	407]			
	Testable items	SystDiast_45; C	PulsRat_42; M			
Test purpos	5e	Check that: The PHG receives a	NaN value (variable format event report)	but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 A	ND C_MAN_OXP_020			
Other PICS						
Initial condi	tion	The simulated PHD a configuration.	and the PHG under test are in the Operati	ng state using the standard		
Test proced	lure	<ol> <li>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]).</li> </ol>				
		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		This test case has be	en considered as an implicit test case.			

TP Id TP/PLT/PHG/CLASS/BPM/BV-016			-016	
TP label Special values. Not at this resolution – fixed format			lution – fixed format	
Coverage	Spec	[ISO/IEEE 11073-10407]		
	Testable items	SystDiast_23; M	PulsRat_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_020					
Other PICS						
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.					
Test procedure	<ol> <li>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.</li> </ol>					
	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-	017		
TP label		Special values. Not at this resolution – variable format				
Coverage	Spec	[ISO/IEEE 11073-104	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		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		<ol> <li>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]).</li> </ol>				
		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 bee	en consid	ered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/BPM/BV	-018	
TP label Special values. Positive infinity – fixed format			r – fixed format	
Coverage	Spec	[ISO/IEEE 11073-10407]	1	
	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_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	<ol> <li>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.</li> </ol>
	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-019				
TP label		Special values. Positive infinity – variable format				
Coverage	Spec	[ISO/IEEE 11073-1040	07]			
	Testable items	SystDiast_45; C	PulsRat_42; M			
Test purpose		Check that: The PHG receives a +INFINITY value (variable format event report) but it does not use this				
Applicabilit	y	value. 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		<ol> <li>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]).</li> </ol>				
		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.			ase.			

TP Id TP/PLT/PHG/CLASS/BPM/BV-020		TP/PLT/PHG/CLASS/BPM/BV-020
TP label Special values. Negative infinity – fixed format		Special values. Negative 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_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		<ol> <li>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.</li> </ol>				
		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-021				
TP label		Special values. Negat	ive infinity – variable format			
Coverage	Spec	[ISO/IEEE 11073-104	07]			
	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		<ol> <li>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]).</li> </ol>				
		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 bee	en considered as an implicit test case.			

TP ld		TP/PLT/PHG/CLASS	TP/PLT/PHG/CLASS/BPM/BV-022			
TP label		Special values. Rese	rved – fixed format			
Coverage	Spec	[ISO/IEEE 11073-104	407]			
	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.				
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		<ol> <li>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.</li> </ol>				
		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	07]		
	Testable items	SystDiast_45; C	PulsRat_42; 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_020			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		<ol> <li>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]).</li> </ol>			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		<ul> <li>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</li> </ul>			

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

## A.6 Subgroup 2.3.5: Thermometer (TH)

TP ld		TP/PLT/PHG/CLASS/TH/BV-003				
TP label		Association procedure PHG TH				
Coverage	Spec	[ISO/IEEE 11073-10408]				
	Testable	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 purpos	e	Check that:				
		associating and, optionally, to i	determine the identity of the the mplement a simple access restr			
		[AND]	e filled in with a PhdAssociatior	Information structure		
		[AND]				
			ge protocol shall be set to proto	ocol-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., s	ystem-type = 0x80000000)		
		[AND]				
		The fields data-req-mode-capab, data-req-init-agent, data-req-init-manager-count shall be 0. If the PHD supports only the thermometer specialization data-req-init-agent-count shall be 1.				
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_025				
Other PICS						
Initial condi	tion	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 = '00	000000100000000000000000000000000000000	000000'B		

			dev-config-id = 16447
			data-rep-mode-capab =
			• data_req_mode_flags= '000000000000001'B
			<pre>•data_req_init_agent_count = 1</pre>
			data_req_init_manager_count = 0
			option-list.length= 0
2.	The		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	
			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 (DataProtoId) 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	oding-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.	non	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. 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
	$\Box  field-length = 2 \text{ bytes}$
	□ field-value = 0x00 0x00 (manager-config-response)
	I. data-req-mode-flags (DataReqModeCapab)
	field- type = DataReqModeFlags
	$\Box  field-length = 2 \text{ bytes}$
	□ 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/TH/BV-004			
TP label		Configuration Event Report. Thermometer standard configuration			
Coverage Spec [ISO/IEEE 1		[ISO/IEEE 11073-20601-2015/	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 acce profiles listed in conformance T	ept all the standard device config able 23 under Gen-4.	urations specified for the	

	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_MAN_OXP_085		
Initial condition	The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure	1. The simulated PHD sends an association request to the PHG under test with dev-config- id set to 0x03 0x20 (Thermometer).		
	2. The PHG under test responds with an association response, the field of interest is:		
	a. Result		
	□ field- type = INT-U16		
	$\Box  field-length = 2 \text{ bytes}$		
	□ 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 0x03 0x20.		
	4. The PHG under test must respond with:		
	a. APDU Type		
	$\Box  field-length = 2 \text{ bytes}$		
	□ field-value = 0xE7 0x00 (PrstApdu)		
	b. Invoke-id		
	□ field- type = INT-U16		
	$\Box  field-length = 2 \text{ bytes}$		
	field-value= it must be the same as the invoke-id of the simulated PHD's message.		
	c. Obj-Handle:		
	□ field- type = HANDLE		
	$\Box  field-length = 2 \text{ bytes}$		
	$\Box  field-value = 0x00 \ 0x00$		
	d. Event-time:		
	□ field- type = INT-U32		
	$\Box  field-length = 4 \text{ bytes}$		
	□ field-value: 0xXX 0xXX		
	e. Event-type:		
	$\Box  field-length = 2 \text{ bytes}$		
	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:		

Notes	
	<ul> <li>message or to the Configuration Event Report with an "accepted-config".</li> <li>The measurement is correctly presented.</li> </ul>
Pass/Fail criteria	• The PHG under test must respond either to the association request with an "accepted"
	6. The simulated PHD sends a fixed event report with one measurement.
	Wait until the Operating state is reached in both cases.
	c. Once in the Operating state the 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.

TP ld		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 condit	ion	The PHG under test is in the Operating state.				
Test procedu	ıre	1. The simulated PHD sends a Confirmed variable event report:				
		a. ScanReportInfoVar. obs_scan_var:				
		$\Box$ 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         attributes: AttributeList ::= {             AVA-Type ::= {                 AVA-Type ::= {                   AVA-Type ::= {                         AVA-Type ::= {</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	

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TP ld		TP/PLT/PHG/CLASS/TH/BV-006				
TP label		Attribute-Value-Map. Order change.				
Coverage Spec		[ISO/IEEE 11073-10408]				
	Testable items	Nun	n Objec Temp17;M			
Test purpos	е	Che	eck that:			
		the		e [Attribute-Value-Map] attribute ute shall be MDC_ATTR_NU_V BS		
Applicability	,	C_N	/AN_OXP_000 AND C_MA	N_OXP_025		
Other PICS						
Initial condit	ion		simulated PHD and the PH	IG under test are in the Operati	ng state using the standard	
Test proced	ure	<ol> <li>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.</li> </ol>				
		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 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.				
		<ol> <li>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).</li> </ol>				
		6. The simulated PHD waits until it receives a confirmation.				
		7. The simulated PHD sends an association release request (normal).			(normal).	
		8. The simulated PHD waits until there is an association release response.			ase response.	
		9. The simulated PHD sends an association request using the same standard configurat that was used previously.				
		<ol> <li>If the PHG under test responds with association request response with "accepted- unknown-config", then</li> </ol>				
			• The simulated PHD se configuration.	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_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	<ul> <li>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).</li> </ul>
	<ul> <li>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).</li> </ul>
	<ul> <li>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).</li> </ul>
	<ul> <li>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.</li> </ul>
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 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_ABS		
Applicability		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 the standard configuration. (Body Temperature Numeric standard configuration Unit code attribute is set to MDC_DIM_DEGC).		
Test procedure		<ol> <li>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.</li> </ol>		
		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.		
		<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC attribute.</li> </ol>		
		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).		

	<ul> <li>In steps 4 and 6, verify that the PHG under test uses Fahrenheit degrees as the unit code for the measurement reports.</li> </ul>
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 11073-10408]			
	Testable items	Num Objec Temp15;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_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 A	ND C_MAN_TH_001		
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		<ol> <li>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).</li> </ol>			
		2. The simulated PHD waits until it receives a	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.			
		<ol> <li>If the PHG under test responds with assoc unknown-config", then</li> </ol>	siation request response with "accepted-		
		The simulated PHD sends the confirm configuration.	ned configuration event report with the standard		
		<ul> <li>The simulated PHD waits until it receir configuration event report just sent.</li> </ul>	ves a confirmation from the confirmed		
		<ol> <li>The simulated PHD sends a fixed event re followed by date and time stamp.</li> </ol>	port with an observation in Celsius degrees		
		10. The simulated PHD waits until it receives a	a confirmation.		
Pass/Fail criteria			able to accept the data properly and applies g., if there is a UI, verify that the measurement		

Notes		
	•	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).
		and date are displayed properly even if they are converted to a different set of units).

TP ld		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]		[ISO/IEEE 11073-10408]		
	Testable items	Num Objec Temp15;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_DEGC		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_025 AND (NOT(C_MAN_TH_001))		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		<ol> <li>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).</li> </ol>		
		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.		
		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		<ul> <li>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.</li> </ul>		
		<ul> <li>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.</li> </ul>		
		<ul> <li>In step 5, verify that measurements do not appear, or if they do appear, they are somehow designated as 'unsupported' data.</li> </ul>		
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 purpos	e	Check that:		
		For [Standard-Configuration] t	he [Unit-Code] attribute shall be	present
		The value of the [Unit-Code] a	ttribute shall be MDC_DIM_DEG	SC
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_025		
Other PICS				
Initial condition		The simulated PHD and the P configuration.	HG under test are in the Operati	ng state using the standard
Test procedure		1. 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		degrees to the observation	r test is able to accept the data p n (e.g., if there is a UI, verify tha en if they are converted to a diffe	t the measurement and date
Notes				

TP ld		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]		
	Testable items	Num Objec Temp15;M		
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	Communication 9; 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_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		
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 to set the unit code to Fahrenheit degrees MDC_DIM_FAHR (4416) for handle 1 (Body Temperature Object) and a measurement in Fahrenheit degrees.
	2.	The simulated PHD waits until it receives a confirmation.
	3.	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).
	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 Celsius degrees followed by date and time stamp (i.e., do not send the unit-code attribute it should be set to Celsius degrees 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 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 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 ld		TP/PLT/PHG/CLASS/TH/BV-011		
TP label		Special values. Not a number – fixed format		
Coverage Spec [ISO/IEEE 11073-10408]		[ISO/IEEE 11073-10408]		
	Testable items	Num Objec Temp17; 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_025		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		<ol> <li>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.</li> </ol>		
		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 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 purpose		Check that: The PHG receives a NaN value (variable format event report) but it does not use this value.		
Applicability	у	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		<ol> <li>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]).</li> </ol>		
		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
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.

Test procedure	<ol> <li>The simulated PHD sends a confirmed fixed event report for handle 1 (Body Temperature Object) containing an observation value set to the value for NRes ([exponent 0, mantissa –(2**11) = 0x0800]) and a time stamp.</li> </ol>
	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-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.		
Applicabilit	у	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		<ol> <li>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]).</li> </ol>		
		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 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_025
Other PICS		

Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure	<ol> <li>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.</li> </ol>
	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.

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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	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_025		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		<ol> <li>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]).</li> </ol>		
		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-017		
TP label		Special values. Negative 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 (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_025		

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Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure	<ol> <li>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.</li> </ol>
	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	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_025				
Other PICS						
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.				
Test procedure		<ol> <li>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]).</li> </ol>				
		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-019				
TP label		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 use this value.	for future use value (fixed forma	at event report) but it does not		

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	<ol> <li>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.</li> </ol>			
	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						
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.				
Test procedure		<ol> <li>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]).</li> </ol>				
		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.7 Subgroup 2.3.6: Cardiovascular (CV)

TP ld		TP/PLT/PHG/CLASS/CV/BV-002
TP label		Association procedure PHG CV
Coverage	Spec	[ISO/IEEE 11073-10441]

1	<b>Festable</b>	AssocResp1;M	AssocResp2;M	AssocResp3;M				
i	tems	AssocResp4;M	AssocResp5;M	AssocResp6;M				
		AssocResp7;M	AssocResp8;M	AssocResp9;M				
		AssocResp10;M	AssocResp11;M	AssocResp12;M				
Test purpose		Check that:						
		In the association response me						
		The result field shall be set to a P11073-20601.	an appropriate response from th	nose defined in ISO/IEEE				
		[AND]						
		In the DataProtoList structure e	element, the data protocol ident	ifier shall be set to data-proto-				
		[AND]						
		The data-proto-info field shall b	e filled in with a PhdAssociatio	nInformation structure				
		[AND]						
		The version of the data exchar version = 0x80000000)	ge protocol shall be set to prot	ocol-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-capat	shall be 0					
		[AND]						
		The fields data-req-init-*-count	snall be u					
Applicability		C_MAN_OXP_000 AND (C_M	AN_OXP_023)					
Other PICS								
Initial condition	n	The PHG is in the Unassociate	d state.					
Test procedure	e	1. The simulated PHD sends	an association request to the I	PHG under test, with the fields:				
		protocol-version	= '100000000000000000000000	00000000'B				
		encoding-rules=	1000000000000000'B					
		nomenclature-ve	rsion = '10000000000000000000	00000000000000'B				
		functional-units =	000000000000000000000000000000000000000	00000000'B				

-			
			system-type = '000000001000000000000000000000000000
			dev-config-id = 16438
			data-rep-mode-capab =
			data_req_mode_flags= '0000000000000001'B
			<pre>data_req_init_agent_count = 1</pre>
			data_req_init_manager_count = 0
			option-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.
			<ul> <li>If association is rejected-no-common-parameter, field-value= 0x00 0x05.</li> </ul>
			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.	data	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.	non	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

Notes	Value fo	r protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].
Pass/Fail criteria	All chec	ked values are as specified in the test procedure.
		□ field-value = 0x00
		$\Box  field-length = 1 \text{ byte}$
		□ 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
		$\Box  field-length = 2 \text{ bytes}$
		field- type = DataReqModeFlags
	١.	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)
		□ field-length = 8 bytes
		field- type = OCTET STRING
	j.	system-id
		<ul> <li>□ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)</li> </ul>
		□ field-length = 4 bytes (BITS-32)
		<ul> <li>field- type = SystemType</li> </ul>
	i.	system type
		The rest of the bits must not be set
		<ul><li>Bit 0 must be 0</li><li>Bits 1 and 2 may be set</li></ul>
		□ field-value =
		field-length = 4 bytes (BITS-32) field-value

TP ld		TP/PLT/PHG/CLASS/CV/BV-003			
TP label		Maximum APDU size: Cardiovascular			
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 error (roer) code of protocol-vice	at is larger than the PHG's receivelation.	ve buffer, it shall reply with an	

	The PHG's receive buffer shall be at least as large as the largest buffer specified in th specializations the PHG supports. The buffer size limitiations in this bullet and the nex apply to all APDUs regardless of whether a standard or extended configuration is beir		
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_023 AND NOT(C_MAN_CV_030)		
Other PICS			
Initial condition	The PHG under test is in the Operating state.		
Test procedure	<ol> <li>The simulated PHD sends a Confirmed variable event report:</li> <li>a. ScanReportInfoVar. obs_scan_var:</li> </ol>		
	$\Box$ Count = 2		
	<pre> D Length = 64472 ObservationScan ::= {     obj-handle: 1     attributes: AttributeList ::= {         AVA-Type ::= {             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)</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	<ul> <li>In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".</li> <li>In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".</li> </ul>		
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 items	StrenAssocRes 1;M	StrenAssocRes 2;M	StrenAssocRes 3;M		
		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]
	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.
	[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-config-response (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	1. The simulated PHD sends an association request to the PHG under test, with the fields:
	protocol-version = '1000000000000000000000000000000'B
	encoding-rules= '10000000000000'B
	nomenclature-version = '100000000000000000000000000000000000
	functional-units = '00000000000000000000000000000000000
	system-type = '0000000100000000000000000000000'B
	dev-config-id = 16445
	data-rep-mode-capab =
	data_req_mode_flags= '000000000000001'B

			<pre>data_req_init_agent_count = 1</pre>
			data_req_init_manager_count = 0
			option-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 (DataProtoId) and data- to-info(defined by data-proto-id))
	d.	data	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.	enc	oding-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.	non	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.	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
		$\Box  field-length = 2 \text{ bytes}$
		□ field-value = 0x00 0x00 (manager-config-response)
	Ι.	data-req-mode-flags (DataReqModeCapab)
		field- type = DataReqModeFlags
		$\Box  field-length = 2 \text{ bytes}$
		□ 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
		$\Box  field-length = 1 \text{ byte}$
		$\Box  field-value = 0x00$
	n.	data-req-init-manager-count (DataReqModeCapab)
		□ field- type = INT-U8
		$\Box  field-length = 1 \text{ byte}$
		□ 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/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 th error (roer) code of protocol-violation.	an the PHG's receive buffer, it shall reply with an		
		The PHG's receive buffer shall be at least a specializations the PHG supports. The buffer	is large as the largest buffer specified in the er size limitiations in this bullet and the next on standard or extended configuration is being used.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_022	2		

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:
	$\Box  \text{Count} = 2$
	□ Length = 64472
	ObservationScan ::= {
	<pre>obj-handle: 1 attributes: AttributeList ::= {</pre>
	AVA-Type ::= {
	attribute-id: 61441
	attribute-value: '00(64448 bytes)
	00'0
	}
	}
	ObservationScan ::= {
	obj-handle: 1
	<pre>attributes: AttributeList ::= {     AVA-Type ::= {</pre>
	attribute-id: 2633
	(MDC ATTR ENUM OBS VAL SIMP OID)
	attribute-value: 284 (MDC_MUSC_HEAD_FACIAL)
	}
	}
	ſ
	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".
	<ul> <li>In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".</li> </ul>
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 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			
	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	1. The simulated PHD sends an association request to the PHG under test, with the fields:			
	protocol-version = '10000000000000000000000000000000000'B			
	encoding-rules= '10000000000000'B			
	nomenclature-version = '100000000000000000000000000000000000			
	□ functional-units = '00000000000000000000000000000000000			
	□ system-type = '00000000000000000000000000000000000			
	dev-config-id = 16441			
	data-rep-mode-capab =			
	• data_req_mode_flags= '000000000000001'B			
	data_req_init_agent_count = 1			
	data_req_init_manager_count = 0			
	$\Box$ 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.		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.	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	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.	sys	stem type
		field- type = SystemType
		field-length = 4 bytes (BITS-32)
		field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
j.	sys	stem-id
		field- type = OCTET STRING
		field-length = 8 bytes

		□ field-value = (EUI-64 manufacturer and device)
	k.	dev-config-id
		□ field- type = Configld
		$\Box  field-length = 2 \text{ bytes}$
		□ field-value = 0x00 0x00 (manager-config-response)
	١.	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 cher	ked values are as specified in the test procedure.
Notes	Value for	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 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.				
		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.				
Applicabilit	У	C_MAN_OXP_000 AND C_MAN_OXP_021				
Other PICS						
Initial cond	ition	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</pre>				

	attributes: AttributeList ::= {
	AVA-Type ::= {
	attribute-id: 61441
	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
	attribute-value: 0x80 0x00 0x00 0x00
	}
	ſ
	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	<ul> <li>In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".</li> </ul>
	• 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	se	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 condition		The simulated PHD and the PHG under test are in the Unassociated state.			
Test procedure		1. The simulated PHD sends an association request to the PHG under test with dev-config- id 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			

	1			
				field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)
	lf th	ne res	sult c	of the association response was "accepted-unknown-config"
	3.	The 0x2		ulated PHD sends a configuration event report with config-report-id set to 0x1c
	4.	The	PH	G under test must respond with:
		a.	API	ОU Туре
				field-length = 2 bytes
				field-value = 0xE7 0x00 (PrstApdu)
		b.	Invo	bke-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	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	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_M/	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	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 the Operating state the PHG is forced to enable the scanner object.
	Wa	it unt	til the	e 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		[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]				
	Testable items	ConfEv	entRep 18;M			
Test purpose		standar profiles Alternat enter th	hat: that supports one (or more) of the ISO/IEEE 11073-104xx device specialization ds shall be able to accept all the standard device configurations specified for the listed in conformance Table 23 under Gen-4. tively, the PHG may request the PHD to send the standard configuration in order to e Configuring state and check attributes from the MDS object prior to final acceptance ction) of the PHD.			
Applicability		C_MAN	OXP_000 AND C_MAN_OXP_016			
Other PICS		C_MAN	LOXP_085			
Initial conditi	on	The sim	nulated PHD and the PHG under test are in the Unassociated state.			
Test procedu	re		e simulated PHD sends an association request to the PHG under test with dev-config- set to 0x1c 0x21 (MedicalMonitor).			
		a. If the re 3. The 0x2	<ul> <li>a PHG under test responds with an association response, the field of interest is:</li> <li>Result <ul> <li>field-type = INT-U16</li> <li>field-length = 2 bytes</li> <li>field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)</li> </ul> </li> <li>sult of the association response was "accepted-unknown-config" <ul> <li>a simulated PHD sends a configuration event report with config-report-id set to 0x1c 21.</li> </ul> </li> <li>a PHG under test must respond with: <ul> <li>APDU Type</li> <li>field-length = 2 bytes</li> <li>field-length = 2 bytes</li> <li>field-value = 0xE7 0x00 (PrstApdu)</li> </ul> </li> <li>Invoke-id <ul> <li>field-type = INT-U16</li> <li>field-length = 2 bytes</li> </ul> </li> <li>b field-length = 2 bytes</li> <li>field-length = 2 bytes</li> </ul> <li>b field-value = it must be the same as the invoke-id of the simulated PHD's message.</li> <li>Obj-Handle: <ul> <li>field-type = HANDLE</li> <li>field-length = 2 bytes</li> </ul> </li> <li>c field-upth = 2 bytes</li> <li>field-length = 2 bytes</li> <li>field-length = 4 bytes</li> <li>field-type = INT-U32</li> <li>field-length = 4 bytes</li> <li>field-value: 0xXX 0xXX</li>			

	□ 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 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/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 purpose	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	ion	The simulated PHD and the PHG under test are in the Unassociated state.				
Test procedure		1. The simulated PHD sends an association request to the PHG under test with dev-config- id 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				
		$\Box  field-length = 2 \text{ bytes}$				
		□ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)				

	lf th	ne result	t of the association response was "accepted-unknown-config"
	3.		mulated PHD sends a configuration event report with config-report-id set to 0x1c
	0.	0x22.	
	4.	The P	HG under test must respond with:
		a. A	PDU Type
			field-length = 2 bytes
			field-value = 0xE7 0x00 (PrstApdu)
		b. In	voke-id
			I field- type = INT-U16
			field-length = 2 bytes
			I field-value= it must be the same as the invoke-id of the simulated PHD's message.
		c. O	bj-Handle:
			field- type = HANDLE
			field-length = 2 bytes
			field-value = 0x00 0x00
		d. E	vent-time:
			i field- type = INT-U32
			field-length = 4 bytes
			field-value: 0xXX 0xXX
		e. E	vent-type:
			field-length = 2 bytes
			l field-value= MDC_NOTI_CONFIG
		f. Th	ne following six bytes indicate:
			Event-replay-info.length (2 bytes)
			I 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_N	MAN_OXP_085 THEN:
		rc	he PHG under test moves to Configuring/Sending GetMDS substate and issues piv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list et to 0 to indicate all attributes.
		at	he simulated PHD responds with a rors-cmip-get service message in which the ttribute-list contains a list of all implemented attributes of the MDS object and the ids-time-mgr-set-time bit is not set.
		c. O	nce in the Operating state the PHG is forced to enable the scanner object.
	Wa	it until t	he Operating state is reached in both cases.
	6.	The si	mulated PHD sends a fixed event report with one measurement.
Pass/Fail criteria	•		HG under test must respond either to the association request with an "accepted" age or to the Configuration Event Report with an "accepted-config".
	•		easurement is correctly presented.

TP ld		TP/PLT/PHG/CLASS/AM/BV-003						
TP label		Configuration Event Report. Adherence Monitor standard configuration 7203						
Coverage	Spec	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]						
	Testable items	ConfEventRep 18;M						
Test purpos	e	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	ion	The simulated PHD and the PHG under test are in the Unassociated state.						
Test proced	ure	<ol> <li>The simulated PHD sends an association request to the PHG under test with dev-config- id set to 0x1c 0x23 (MedicalMonitor).</li> </ol>						
		<ol> <li>The PHG under test responds with an association response, the field of interest is:</li> </ol>						
		a. Result						
		□ field- type = INT-U16						
		$\Box  field-length = 2 \text{ bytes}$						
		□ 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						
		$\Box  field-length = 2 \text{ bytes}$						
		□ field-value = 0xE7 0x00 (PrstApdu)						
		b. Invoke-id						
		□ field- type = INT-U16						
		$\Box  field-length = 2 \text{ bytes}$						
		field-value= it must be the same as the invoke-id of the simulated PHD's message.						
		c. Obj-Handle:						
		□ field- type = HANDLE						
		$\Box  field-length = 2 \text{ bytes}$						
		□ field-value = 0x00 0x00						
		d. Event-time:						
		□ field- type = INT-U32						
		$\Box  \text{field-length} = 4 \text{ bytes}$						
		□ 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 Operating state is reached in both cases.
	5. IF C_MAN_OXP_085:
	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	<ul> <li>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".</li> </ul>
	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/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	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.				
		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.				
Applicabilit	y	C_MAN_OXP_000 AND C_MAN_OXP_016				
Other PICS						
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:				
		$\Box$ Count = 2				
		<pre>Length = 984 ObservationScan ::= {     obj-handle: 1     attributes: AttributeList ::= {         AVA-Type ::= {         AVA-Type ::= {         }     } }</pre>				

<pre>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 } } 2. Check the response of the PHG under test. 3. The simulated PHD sends a Confirmed fixed event report with one measurement.</pre>		
<pre>} } } 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.</pre>		
<pre>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.</pre>		attribute-value: '00(960 bytes) 00'0
<pre>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.</pre>		}
<pre>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.</pre>		}
<pre>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.</pre>		ObservationScan ::= {
<pre>AVA-Type ::= {     attribute-id: 2636 (MDC_ATTR_NU_VAL_OBS_BASIC)     attribute-value: 3     } } 2. Check the response of the PHG under test.</pre>		
<pre>attribute-id: 2636 (MDC_ATTR_NU_VAL_OBS_BASIC) attribute-value: 3 } 2. Check the response of the PHG under test.</pre>		attributes: AttributeList ::= {
attribute-value: 3		
<ul> <li>}</li> <li>2. Check the response of the PHG under test.</li> </ul>		
		attribute-value: 3
		}
		}
3. The simulated PHD sends a Confirmed fixed event report with one measurement.		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.		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".	Pass/Fail criteria	• In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".
<ul> <li>In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".</li> </ul>		
Notes	Notes	

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	e	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	,	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		<ol> <li>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.</li> </ol>					
		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.					

Notes	
	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.
	• 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).
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).
	12. The simulated PHD waits until it receives a confirmation.
	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.
	• The simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	The simulated PHD sends the confirmed configuration event report with the standard configuration.
	10. If the PHG under test responds with association request response with "accepted- unknown-config", then
	9. The simulated PHD sends an association request using the same standard configuration that was used previously.

TP ld		TP/PLT/PHG/CLASS/AM/BV-006			
TP label		Attribute-Value-Map. Order change. (0x1c23)			
Coverage	Spec	[ISO/IEEE 11073-10472]			
	Testable items	VarDosage12; M	UserFeedback12; M	StatReporter12; M	
Test purpos	e	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_STAMP_ABS    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 configuration (0x1c23).	the PHG under test are in the O	perating state using the standard	

Test procedure	1. 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
	<ul> <li>MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_NU_CMPD_VAL_OBS_BASIC for User Feedback Object</li> </ul>
	<ul> <li>MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR for Status Reporter Object</li> </ul>
	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 (Variable Dosage Medication Object), of handle 4 (User Feedback objec) and of handle 3 (Status Reporter Object) to reverse the values to
	<ul> <li>MDC_ATTR_NU_VAL_OBS_BASIC then MDC_ATTR_TIME_STAMP_ABS for Variable Dosage Medication Object</li> </ul>
	<ul> <li>MDC_ATTR_NU_CMPD_VAL_OBS_BASIC then MDC_ATTR_TIME_STAMP_ABS for User Feedback Object</li> </ul>
	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.
	5. 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.
	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 (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 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 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 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	<ul> <li>have occurred sometime in the past).</li> <li>When automated, it is necessary to be careful about sending these messages back since the ability to look at things like an UI may require that there be paused.</li> </ul>

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 purpos	e	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		<ol> <li>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>).</li> </ol>		
		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 Id TP label		TP/PLT/PHG/CLASS/AM/BV-008 Metric-id-list. Id order change – fixed format		
	Testable items	UserFeedback9; M		
Test purpos	se	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}		
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		<ol> <li>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).</li> </ol>		
		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]		
	Testable items	UserFeedback9; M		
Test purpos	se	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	y	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		<ol> <li>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.</li> </ol>		
		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 purpos	se	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		

Notes		
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.
	3.	The simulated PHD waits until it receives a confirmation from the PHG under test.
	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.
		MDC_ATTR_ATTRIBUTE_VAL_MAP to { MDC_ATTR_TIME_STAMP_ABS, 8, MDC_ATTR_NU_CMPD_VAL_OBS_BASIC, 6}.

TP ld		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 purpos	e	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	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 (0x1c23).		
Test procedure		<ol> <li>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).</li> </ol>		
		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 criteria		• 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-0	12	
TP label		Special values. Not a number -	- fixed format (0x1c20)	
Coverage	Spec	[ISO/IEEE 11073-10472]		
	Testable items	FixedDosage12; M		
Test purpose		Check that: The PHG receives a NaN value	e (fixed format event report) but	it does not use this value.
Applicability		C_MAN_OXP_000 AND C_MA	N_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	<ol> <li>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.</li> </ol>
	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-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	,	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		<ol> <li>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]).</li> </ol>		
		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-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	<ol> <li>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.</li> </ol>
	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-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.	
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 (0x1c20).	
Test procedure		<ol> <li>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]).</li> </ol>	
		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-0	16	
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.	Y value (fixed format event repor	t) but it does not use this

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	<ol> <li>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.</li> </ol>
	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/AM/BV-017
		Special values. Positive infinity – variable format(0x1c20)
Coverage	Spec	[ISO/IEEE 11073-10472]
	Testable items	FixedDosage22; 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_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		<ol> <li>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]).</li> </ol>
		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:

	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	<ol> <li>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.</li> </ol>
	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 purpos	se	Check that:		
		The PHG receives a –INFINITY 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 condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		<ol> <li>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]).</li> </ol>		
		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-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	<ol> <li>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.</li> </ol>	
	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-021	
		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		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		<ol> <li>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]).</li> <li>The simulated PHD write write reserves a confirmation from the PHC under text</li> </ol>	
Pass/Fail criteria		<ul> <li>2. The simulated PHD waits until it receives a confirmation from the PHG under test.</li> <li>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).</li> </ul>	
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 11073-10472]

	Testable items	VarDosage12; M	UserFeedback12; 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_016			
Other PICS						
Initial conditi	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).				
Test procedu	ire	<ol> <li>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).</li> </ol>				
		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-023				
TP label		Special values. Not a number – variable format (0x1c23)				
Coverage	Spec	[ISO/IEEE 11073-10472]	]			
	Testable items	VarDosage20; C	UserFeedback23; C			
Test purpos	е	Check that:				
		The PHG receives a Nat	N 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 condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).				
Test procedure		<ol> <li>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) = 0x007FFFF] for Variable Dosage Medication and [exponent 0, mantissa +(2**11 -1) = 0x07FF] for User Feedback).</li> </ol>				
		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	2]		
	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.			
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_016			
Other PICS					
Initial condi	ition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).			
Test procedure		<ol> <li>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).</li> </ol>			
		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-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 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_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		<ol> <li>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).</li> </ol>				
		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-026			
TP label		Special values. Positive infinity – fixed format (0x1c23)			
Coverage	Spec	[ISO/IEEE 11073-10472	2]		
	Testable items	VarDosage12; M	UserFeedback12; 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_016			
Other PICS					
Initial condi	ition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).			
Test procedure		<ol> <li>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) = 0x007FFFFE] for Variable Dosage Medication and [exponent 0, mantissa +(2**11 -2) = 0x07FE] for User Feedback).</li> </ol>			
		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 11073-104	72]			
	Testable items	VarDosage20; C	UserFeedback23; 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_016				
Other PICS						
Initial condi	ition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).				
Test procedure		<ol> <li>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 positive infinity (+INFINITY, [exponent 0, mantissa +(2**23 - 2) = 0x007FFFFE] for Variable Dosage Medication and [exponent 0, mantissa +(2**11 -2) = 0x07FE] for User Feedback).</li> </ol>				
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.				
Pass/Fail criteria		Verify that the PH	• 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	2]		
	Testable items	VarDosage12; M	UserFeedback12; M		
Test purpos	se	Check that:			
		The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.			
Applicabilit	y	C_MAN_OXP_000 AND C_MAN_OXP_016			
Other PICS					
Initial cond	ition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).			
Test procedure		<ol> <li>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).</li> </ol>			
		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)				
Coverage	Spec	[ISO/IEEE 11073-10472]	[ISO/IEEE 11073-10472]			
	Testable items	VarDosage20; C	UserFeedback23; 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_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		<ol> <li>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) =</li> </ol>				

	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-030			
TP label		Special values. Reserved – fixed format (0x1c23)			
Coverage Spec		[ISO/IEEE 11073-10472	2]		
	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 condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).			
Test procedure		<ol> <li>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).</li> </ol>			
		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]	[ISO/IEEE 11073-10472]			
	Testable items	VarDosage20; C UserFeedback23; 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_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	<ol> <li>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).</li> </ol>		
	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	Id TP/PLT/PHG/CLASS/AM/BV-032					
TP label		Association procedure PHG AM				
Coverage	Spec	[ISO/IEEE 11073-10472]				
	Testable items	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 purpos	se	Check that:				
		In the association respons	e 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 = '00000001000000000000000000000000'B
	□ 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
	$\Box$ option-list.length= 0
	2. The PHG under test sends an association response. The fields of interest are:
	a. APDU Type
	$\Box  field-length = 2 \text{ bytes}$
	□ field-value = 0xE3 0x00 (AareApdu)
	b. Result
	field- type = AssociateResult
	$\Box  field-length = 2 \text{ bytes}$
	□ 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))

data-proto-id
□ field- type = DataProtold
□ 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
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
nomenclature version
field- type = NomenclatureVersion
□ field-length = 4 bytes (BITS-32)
□ field-value= Bit 0 must be set (nom-version1)
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
system type
□ field- type = SystemType
□ field-length = 4 bytes (BITS-32)
□ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
system-id
□ field- type = OCTET STRING
□ field-length = 8 bytes
□ field-value = (EUI-64 manufacturer and device)
dev-config-id
□ field- type = ConfigId
$\Box  field-length = 2 \text{ bytes}$
□ field-value = 0x00 0x00 (manager-config-response)
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.
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 <a href="http://continua.plugfests.com/show_bug.cgi?id=786">http://continua.plugfests.com/show_bug.cgi?id=786</a> for further details.

## A.11 Subgroup 2.3.10: Insulin pump (IP)

TP ld		TP/PLT/PHG/CLASS/IP/BV-000				
TP label	label Association procedure PHG Insulin Pump					
Coverage	Spec	[ISO/IEEE 11073-10419	9]			
	Testable	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	se	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	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 = '0000000100000000000000000000000'B				
	$\Box  \text{dev-config-id} = 16440$				
	□ data-rep-mode-capab =				
	<ul> <li>data_req_mode_flags= '00000000000001'B</li> </ul>				
	<ul> <li>data_req_init_agent_count = 1</li> </ul>				
	<ul> <li>data_req_init_manager_count = 0</li> </ul>				
	<ul> <li>data_req_init_inanager_count = 0</li> <li>option-list.length= 0</li> </ul>				
	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				
	$\Box  field-length = 2 \text{ bytes}$				
	□ 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.				
	<ul> <li>If association is rejected –unsupported-assoc-version , field- value= 0x00 0x08.</li> </ul>				
	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
	□ 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
	$\Box$ 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 check	ed values are as specified in the test procedure.
Notes		

TP ld	P Id TP/PLT/PHG/CLASS/IP/BV-001						
TP label	Iabel         Configuration Event Report. Insulin Pump standard configuration			juration			
Coverage	Spec	[ISO/IEEE 11073-10419]					
	Testable items	ConfProcIP 4;M	ObjAccServIP 5;M				
	Spec	[ISO/IEEE 11073-20601-2016C]					
	Testable items	ConfEventRep 18;M	ConfEventRep 18;M				
Test purpos	e	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]					
		An Insulin pump 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 11073-104xx 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	y	C_MAN_OXP_000 AND C_MAN_OXP_071					
Other PICS		C_MAN_OXP_085					
Initial condi	tion	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		<ol> <li>The simulated PHD sends an Association Request to the PHG under test with dev- config-id set to 0x07 0x6C (Insulin Pump PHD – Std Config 1900)</li> </ol>					
		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 t	<sup>-</sup> the result of the Association Response was "accepted-unkown-config"		of the Association Response was "accepted-unkown-config"
	3.	The 0x0		ulated PHD sends a configuration event report with config-report-id set to 0x07
	4.	The	PH	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 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	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.	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.
		с.	Ond	ce in the Operating state the PHG is forced to enable the scanner object.
	Wa	it uni	il Op	perating state is reached in both cases
	6.	Sim	ulate	ed PHD sends a fixed event report with one Insulin Pump 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	me	asurement is correctly presented
Notes	_	_		

TP ld		TP/PLT/PHG/CLASS/IP/BV-002_A				
TP label	abel Maximum APDU size: Insulin Pump without PM-Store					
Coverage	Spec	[ISO/IEEE 11073-20601-2016C]				
	Testable items	CommonCharac 4; M				
	Spec	[ISO/IEEE 11073-10419]				
	Testable items	ComCharIP 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_071				
Other PICS						
Initial condit	ion	The PHG under test is in the Operating state.				
Initial condition Test procedure		<pre>The PHG under test is in the Operating state. 1. The simulated PHD sends a Confirmed variable event report:     a. ScanReportInfoVar.obs_scan_var:         Count = 2         Count = 2         Length = 7128         ObservationScan ::= {             obj-handle: 1             attributes: AttributeList ::= {             AVA-Type ::= {                 attribute-id: 61441                 attribute-value: '00(7104 bytes) 00'0         }         }         ObservationScan ::= {             obj-handle: 1             attributes: AttributeList ::= {                 AVA-Type ::= {                  attribute-id: 61441                 attribute-id: 61441                 attribute-id: 2636         (MDC_ATTR_NU_VAL_OBS_BASIC)</pre>				
Pass/Fail crit	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"				

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	ComCharlP 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	,	C_MAN_OXP_000 AND C_MAN_OXP_071 AND C_MAN_OXP_003			
Other PICS					
Initial condit	tion	The PHG under test is in the Operating state.			
Initial condition 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 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 } } Check the represent of the BHC under test </pre>			
		<ol> <li>Check the response of the PHG under test.</li> <li>The simulated PHD sends a Confirmed fixed event report with one measurement.</li> </ol>			
		<ol> <li>The simulated PHD sends a Confirmed fixed event report with one measurement.</li> <li>Check the response of the PHG under test.</li> </ol>			

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"

TP ld		TP/PLT/PHG/CLASS/IP/BV-003				
TP label		Bolus Delivered Attribute-Value-Map. Order change				
Coverage Spec		[ISO/IEEE 11073-10419]				
	Testable items	Bolu	sDer 22; M			
Test purpos	e	Che	ck that:			
		For	[Standard-Configuration] th	e [Attribute-Value-Map] attribute	e shall be present	
			value of the [Attribute-Valu C_ATTR_TIME_STAMP_B	e-Map] attribute shall be MDC_ O	ATTR_NU_VAL_OBS_BASIC	
Applicability	1	C_N	IAN_OXP_000 AND C_MA	N_OXP_071		
Other PICS						
Initial condit	tion		simulated PHD and the PH iguration.	IG under test are in the Operati	ng state using the standard	
Test proced	ure			a confirmed fixed format event of MDC_ATTR_NU_VAL_OBS P_BO		
		2.	The simulated PHD waits	until it receives a confirmation		
		<ol> <li>The simulated PHD sends a confirmed variable event report to change the Attribute- Value-Map configuration of handle 1 (Bolus Delivered Object) to reverse the values to: MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_NU_VAL_OBS_BASIC.</li> </ol>				
			4. The simulated PHD waits until it receives a confirmation			
			Send a confirmed fixed for Delivered value.	mat event report with the date f	irst followed by an Bolus	
		6.	The simulated PHD waits	until it receives a confirmation		
		7.	The simulated PHD sends	an Association Release Reque	st (normal)	
		8.	The simulated PHD waits	until there is a Association Relea	ase Response	
			The simulated PHD sends configuration that was use	an Association Request using t d previously	he same standard	
			If the PHG under test resp unknown-config", then	onds with association request re	esponse with "accepted-	
			• The simulated PHD se configuration	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	
			attribute-value-format (MD	a fixed event report following th C_ATTR_NU_VAL_OBS_BASI P_BO). The observation shou	C, then	
		12.	The simulated PHD waits	until it receives a confirmation.		
Pass/Fail criteria				hat the PHG under test is able to the correct attributes (e.g., if the displayed properly).		

	<ul> <li>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)</li> </ul>
	• 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).
	<ul> <li>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.</li> </ul>
Notes	

TP ld		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 condition		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		<ol> <li>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.</li> </ol>			
		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			
		<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC Attribute.</li> </ol>			
		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		<ol> <li>Send a confirmed variable format event report using a measurement in using MDC_DIM_INTL_UNIT units.</li> </ol>		
		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 different set of units).		
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		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_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		<ol> <li>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</li> </ol>		
		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-007		
TP label		Bolus Delivered Special values. Not a number - variable format (Std Config)		
Coverage	Spec	[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 44; M		
Test purpos	se	Check that:		
		The PHG receives a NaN value (variable format event report) but it does not use this value.		
Applicabilit	у	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		<ol> <li>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])</li> </ol>		
Pass/Fail criteria		<ul> <li>2. The simulated PHD waits until it receives a confirmation from the PHG under test</li> <li>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).</li> </ul>		
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.		
Applicabilit	у	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		<ol> <li>The Simulated PHD sends a confirmed fixed 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]) and a time stamp</li> <li>The simulated PHD waits until it receives a confirmation from the PHG under test</li> </ol>		
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	Spec	[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 44; M		
Test purpose		Check that: The PHG receives NRes 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 condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1900.		
Test procedure		<ol> <li>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])</li> <li>The simulated PHD waits until it receives a confirmation from the PHG under test</li> </ol>		
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-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 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_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		<ol> <li>The simulated PHD sends a confirmed fixed 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]) and a time stamp</li> </ol>		
		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	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.		
Applicabilit	у	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		<ol> <li>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])</li> <li>The simulated PHD waits until it receives a confirmation from the PHG under test</li> </ol>		
Pass/Fail criteria		<ul> <li>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).</li> </ul>		
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 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_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		<ol> <li>The simulated PHD sends a confirmed fixed 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]) and a time stamp</li> </ol>		
		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	Coverage Spec [ISO/IEEE 11073-10419]			
	Testable items	BolusDer 44; M		
Test purpose		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		<ol> <li>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])</li> </ol>		
		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 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_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 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 label		TP/PLT/PHG/CLASS/IP/BV-015 Bolus Delivered Special values. Reserved - variable format (Std Config)		
	Testable items	BolusDer 44; 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_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		<ol> <li>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])</li> </ol>		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test		
Pass/Fail criteria		<ul> <li>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).</li> </ul>		
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		
Applicabilit	у	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		<ol> <li>The simulated PHD sends a Current Basal Rate Setting 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</li> </ol>		
		2. The simulated PHD waits until it receives a confirmation		
		<ol> <li>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.</li> </ol>		

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	4. The simulated PHD waits until it receives a confirmation
	<ol> <li>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).</li> </ol>
	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
	<ol><li>The simulated PHD sends an Association Request using the same standard configuration that was used previously</li></ol>
	<ol> <li>If the PHG under test responds with association request response with "accepted- unknown-config", then</li> </ol>
	<ul> <li>The simulated PHD sends the confirmed configuration event report with the standard configuration</li> </ul>
	<ul> <li>The simulated PHD waits until there is a confirmation to the configuration event report that was sent.</li> </ul>
	<ol> <li>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.</li> </ol>
	12. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	<ul> <li>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).</li> </ul>
	<ul> <li>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)</li> </ul>
	• 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).
	<ul> <li>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.</li> </ul>
Notes	

TP ld		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		
Test purpos	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_BASIC   MDC_ATTR_TIME_STAMP_BO		
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_071	
Other PICS				

Initial condition	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)		
Test procedure	<ol> <li>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.</li> </ol>		
	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_PER_HR (5696).		
	4. The simulated PHD waits until it receives a confirmation		
	<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC Attribute.</li> </ol>		
	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)		
	<ul> <li>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</li> </ul>		
Notes			

TP Id TP label		TP/PLT/PHG/CLASS/IP/BV-018 Current Basal Rate Setting Unit-Code. Use default Current Basal Rate Setting units - variable format observation		
	Testable items	CurrBasRate 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_INTL_UNIT_PER_HR		
Applicabilit	у	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		<ol> <li>Send a confirmed variable format event report using a measurement using MDC_DIM_INTL_UNIT_PER_HR unit code</li> </ol>		
		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	Coverage Spec [ISO/IEEE 11073-10419]			
	Testable items	CurrBasRate 22;M		
Test purpos	se	Check that:		
		PHG receives a NaN value (fixed format event report) but it does not use this value.		
Applicabilit	у	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		<ol> <li>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</li> </ol>		
		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-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 purpos	se	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_071		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		<ol> <li>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</li> </ol>		
		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 label		TP/PLT/PHG/CLASS/IP/BV-021		
		Current Basal Rate Setting Special values. Positive infinity - fixed format (Std Config)		
Coverage	Spec	[ISO/IEEE 11073-10419]		
	Testable items	CurrBasRate 22;M		
Test purpose		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		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		<ol> <li>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</li> <li>The simulated PHD waits until it receives a confirmation from the PHG under test</li> </ol>		
Pass/Fail criteria		<ul> <li>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).</li> </ul>		
Notes		This test case has been considered as an implicit test case.		

TP Id TP label		TP/PLT/PHG/CLASS/IP/BV-022			
		Current Basal Rate Setting Special values. Negative infinity - fixed format (Std Config)			
Coverage	Spec	[ISO/IEEE 11073-10419]			
	Testable items	CurrBasRate 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_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		<ol> <li>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</li> </ol>			
		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 label		TP/PLT/PHG/CLASS/IP/BV-023			
		Current Basal Rate Setting Special values. Reserved - fixed format (Std Config)			
Coverage	Spec	[ISO/IEEE 11073-10419]			
	Testable items	CurrBasRate 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_071			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		<ol> <li>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</li> </ol>			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test			
Pass/Fail criteria		<ul> <li>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).</li> </ul>			
Notes		This test case has been considered as an implicit test case.			

TP Id TP label		TP/PLT/PHG/CLASS/IP/BV-024			
		Current Basal Rate Setting Special values. Not a number - variable 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 PHG under test are in the Operating state using the standard configuration.			
Test procedure		<ol> <li>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])</li> </ol>			
		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 label		TP/PLT/PHG/CLASS/IP/BV-025		
		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 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_071		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		<ol> <li>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])</li> </ol>		
		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 label		TP/PLT/PHG/CLASS/IP/BV-026			
		Current Basal Rate Setting Special values. Positive infinity - variable format (Std Config)			
Coverage Spec		[ISO/IEEE 11073-10419]			
	Testable items	CurrBasRate 44; 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_071			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		<ol> <li>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 positive infinity (+INFINITY [exponent 0, mantissa +(2**11 –2) = 0x07FE])</li> </ol>			
		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 label		TP/PLT/PHG/CLASS/IP/BV-027			
		Current Basal Rate Setting Special values. Negative infinity - variable format (Std Config)			
Coverage	Spec	[ISO/IEEE 11073-10419]			
	Testable items	CurrBasRate 44; 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_071			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		<ol> <li>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])</li> </ol>			
		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 label		TP/PLT/PHG/CLASS/IP/BV-028		
		Current Basal Rate Setting Special values. Reserved - variable format (Std Config)		
Coverage	Spec	[ISO/IEEE 11073-10419]		
	Testable items	CurrBasRate 44; 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_071		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		<ol> <li>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])</li> </ol>		
		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/IEEE 11073-10419]				
	Testable items	SchSto	preMeth 2; M	SchStoreMeth 5; M	SchStoreMeth 8; M	
Test purpos	e	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]				
		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]				
				ast the choice all-sched-segm le-Segment-Info method.	ents in the SegmSelection action-	
Applicability	/	C_MA	N_OXP_000 AND C_	MAN_IP_001		
Other PICS						
Initial condit	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 proced	Test procedure		<ol> <li>Make the PHG under test perform a [Get-Schedule-Segment-Info] action to recover the information of all the schedule-segments.</li> </ol>			
		2. Tł	ne simulated PHD rec	eives the message:		
		a.	APDU Type			
			$\Box  field-length = 2$	2 bytes		
			□ field-value = 0	xE7 0x00 (PrstApdu)		
		b.	invoke-id			
			field-type = Inv	vokeIDType		
			$\Box  field-length = 2$	2 bytes		
				nis value identifies the messag simulated PHD shall have the	ge; the confirmed response that will e same invoke-id.	
		C.	obj-handle			
			$\Box  \text{field-type} = HA$	NDLE		
			$\Box  field-length = 2$	2 bytes		
			□ field-value = <	Handle of an existing Schedul	le-Store>	
		d.	action-type (roiv-cr	nip-confirmed-action)		
			□ field-type = OI	D-Туре		
			$\Box  field-length = 2$	2 bytes		
			$\Box  field-value = 0$	x0C 0x24 (MDC_ACT_SCHEI	D_SEG_GET_INFO)	
		e.	action-info-args			
				election = all-sched-segments	(0)	
Pass/Fail criteria				Schedule-Segment-Info with a age must be the one specified	all-sched-segments choice and the	

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 11073-10419]					
	Testable items	SchStor	eMeth 2; M	SchStoreMeth 5; M	SchStoreMeth 9; O		
Test purpos	e	Check tl	nat:				
		roiv-cmi	invokes the [Get-Sche p-confirmed-action, the fo-args SchedSegmSe	edule-Segment-Info] method it Action-type MDC_ACT_SCH election.	shall use the operation type ED_SEG_GET_INFO and the		
		[AND]					
		For a 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]					
		The PHG may support the choice sched-segm-id-list in the SegmSelection action-info-args of the Get-Schedule-Segment-Info method.					
Applicability	y	C_MAN	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 proced	lure	<ol> <li>Make the PHG under test perform a [Get-Schedule-Segment-Info] action to recover the information of specific schedule-segments.</li> </ol>					
		2. The	simulated PHD receiv	es the message:			
		a.	APDU Type				
			$\Box$ field-length = 2 by	ytes			
			$\Box  field-value = 0xE$	7 0x00 (PrstApdu)			
		b.	invoke-id				
			□ field-type = Invok	eIDType			
			$\Box  field-length = 2 by$	ytes			
				value identifies the message; t nulated PHD shall have the sa	the confirmed response that wil me invoke-id.		
		c.	obj-handle				
			□ field-type = HAN	DLE			
			$\Box  field-length = 2 by$	/tes			
			□ field-value = <ha< td=""><td>ndle of an existing Schedule-S</td><td>Store&gt;</td></ha<>	ndle of an existing Schedule-S	Store>		
		d.	action-type (roiv-cmip	-confirmed-action)			
			□ field-type = OID-7	Гуре			
			$\Box$ field-length = 2 by	vtes			
			$\Box  field-value = 0x00$	C 0x24 (MDC_ACT_SCHED_S	SEG_GET_INFO)		
		e.	action-info-args				
				ction = sched-segm-id-list			

	SchedSegmIdList = <list instance<br="" of="" schedule-segments'="" selected="" the="">numbers&gt;</list>
Pass/Fail criteria	If the PHG supports Get-Schedule-Segment-Info action with sched-segm-id-list choice, the format of the received message must be the one specified.
Notes	

TP ld		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	SchStor	reMeth 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] For a 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			
Applicability	,	mandatory C_MAN_OXP_000 AND C_MAN_IP_001			
Other PICS		C_MAN_OXP_000 AND C_MAN_IP_001			
Initial condition		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		<ol> <li>Make the PHG under test perform a [Get-Schedule-Segment-Id-List] action to recover a list of schedule-segments' instance numbers.</li> <li>The simulated PHD receives the message:         <ul> <li>APDU Type</li> <li>field-length = 2 bytes</li> <li>field-length = 2 bytes</li> <li>field-value = 0xE7 0x00 (PrstApdu)</li> <li>invoke-id</li> <li>field-type = InvokeIDType</li> <li>field-length = 2 bytes</li> <li>field-ulue= This value identifies the message; the confirmed response that will be sent by the simulated PHD shall have the same invoke-id.</li> <li>obj-handle</li> <li>field-length = 2 bytes</li> <li>field-length = 2 bytes</li> <li>field-length = 2 bytes</li> <li>field-length = 2 bytes</li> <li>field-type = HANDLE</li> <li>field-length = 2 bytes</li> <li>field-type = OID-Type</li> <li>field-length = 2 bytes</li> <li>field-ulength = 2 bytes</li> <li>field-length =</li></ul></li></ol>			

Notes	 message must be the one specified.
Pass/Fa	The PHG shall perform Get-Schedule-Segment-Id-List action, and the format of the received

TP ld		TP/PLT/PHG/CLASS/IP/BV-031				
TP label		Schedule-Store Class methods. Trig-Schedule-Segment-Data-Xfer				
Coverage	Spec	[ISO/IEEE 11073-10419]				
	Testable items	SchSto	reMeth 2; M	SchStoreMeth 15; M	SchedStoreTX 10; M	
Test purpos	e	Check that:				
		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]				
		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 condition		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 Proced	ure	1. Make the PHG under test perform a [Trig-Schedule-Segment-Data-Xfer] action.				
		2. The simulated PHD receives the message:				
		a. APDU Type				
			$\Box  \text{field-length} = 2 \text{ bytes}$			
		□ field-value = 0xE7 0x00 (PrstApdu)				
		b. invoke-id				
		field-type = InvokeIDType				
			$\Box  field-length = 2 by$	/tes		
				value identifies the message; th nulated PHD shall have the sam		
			obj-handle			
			□ field-type = HANI	DLE		
			$\Box  field-length = 2 b_1$	/tes		
			□ field-value = <ha< td=""><td>ndle of an existing Schedule-Sto</td><td>ore&gt;</td></ha<>	ndle of an existing Schedule-Sto	ore>	
		d.	action-type (roiv-cmip	-confirmed-action)		
			□ field-type = OID-	Гуре		
			$\Box  field-length = 2 by$	/tes		

	<ul> <li>field-value = 0x0C 0x26 (MDC_ACT_SCHED_SEG_TRIG_XFER)</li> <li>e. action-info-args</li> </ul>	
	TrigSchedSegmDataXferReq.seg-inst-no = <one existing="" of="" schedule-<br="" the="">segments´ instance number&gt;</one>	
Pass/Fail criteria	The PHG shall perform Trig-Schedule-Segment-Data-Xfer Action and the format of the received message 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 condition		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 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 0 must be set (first entry)				
		4. The 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&gt;</the>				
		sched-segm-evt-entry-count = <the by="" one="" previously="" sent="" simulated<br="" the="">PHD&gt;</the>				

	<ul> <li>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</li> </ul>
Pass/Fail criteria	The format of the received message must be the one specified.
Notes	

TP ld		TP/PLT/PHG/CLASS/IP/BV-032_B				
TP label		Schedule-Store Class methods. Segment-Data-Event 2				
Coverage Spec		[ISO/IEEE 11073-10419]				
	Testable items	SchedStoreEvent 3; M				
Test purpose		Check that: A PHG 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 condition		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 procedu	ire	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&gt;</the>				
		<ul> <li>sched-segm-evt-entry-count = <the by="" one="" previously="" sent="" simulated<br="" the="">PHD&gt;</the></li> </ul>				
		sched-segm-evt-status = Bits 4 and 8 must be set				
Pass/Fail crit	eria	The format of the received message must be the one specified.				

TP ld		TP/PLT/PHG/CLASS/IP/BV-033_A					
TP label		Schedule-Store Class. Metric data transfer 1					
Coverage	Spec	[ISO/IEEE 11073-10419]					
	Testable items	SchedStoreTX 1; O SchedStoreTX 3_A; M					
Test purpose		Check that: The PHG may query each schedule-store to determine the number of schedule-segments that exist within the schedule-store. [AND] The attribute-id-list shall be left empty to query for all attributes of the schedule-store object.					
Applicability		C_MAN_OXP_000 AND C_MAN_IP_001					
Other PICS							
Initial conditi	on	The PHG under test is in the Operating state. The simulated PHD has one Schedule-Store object.					
Initial condition Test procedure							
Pass/Fail crit	eria	The format of the received message in step 2 must be the one specified.					
Notes							

TP ld	TP/PLT/PHG/CLASS/IP/BV-033_B
TP label	Schedule-Store Class. Metric data transfer 2

Coverage	[ISO/IEEE 11073-10419]								
	Testable items	Scł	nedS	toreTX 23;M	SchedStoreTX 24;M				
Fest purpose	e	Che	Check that:						
		res sch [AN	pons ied-s ID]	e that shall contain egm-evt-entry-inde>	event report, it shall reply with a the same schedule-store-handle, a, and sched-segm-evt-entry-cour us, the PHG shall set the schsevts	sched-segm-instance number, nt.			
Applicability		C 1			MAN ID 001				
			C_MAN_OXP_000 AND C_MAN_IP_001						
Other PICS									
nitial condit	ion				e Operating state. The simulated Segment that contains data.	PHD has one Schedule-Store			
Γest procedι	ıre	1.	Ма	ke the PHG under te	est retrieve the information stored	in a Schedule-Segment			
		2.		e simulated PHD res gSchedSegmDataXf	ponds to the TrigSchedSegmDate erRsp message	aXferReq with an appropriate			
		3.	The	e simulated PHD ser	nds a ScheduleSegmentDataEve	nt to the PHG			
		4.		e PHG under test mu ds of interest are:	ust respond with a ScheduleSegn	nentDataResult message, the			
			a.	APDU Type					
				$\Box  field-length = 2$	2 bytes				
				$\Box  field-value = 0$	xE7 0x00 (PrstApdu)				
			b.	invoke-id					
				□ field-type = Inv	vokeIDType				
				□ field-length= 2	bytes				
				□ field-value= <	The same of the sent ScheduleSe	egmentDataEvent>			
			c.	CHOICE:					
				□ field-value= 0x	k02 0x01 (rors-cmip-confirmed-ev	vent-report)			
			d.	Obj-Handle:					
				$\Box  field-type = HA$	ANDLE				
				field-lengt	th = 2 bytes				
				field-value	e = <the of="" same="" sched<="" sent="" td="" the=""><td>uleSegmentDataEvent&gt;</td></the>	uleSegmentDataEvent>			
			e.	CurrentTime					
				□ field-type = Re	elativeTime				
				$\Box  field-length = 4$	4 bytes				
				□ field-value = <	Not relevant for this test>				
			f.	Event-type					
				□ field-type = OI	D-Туре				
				$\Box  field-length = 2$	2 bytes				
				$\Box  field-value = 0$	x0C 0x27 (MDC_NOTI_SCHED_	SEGMENT_DATA)			
			g.	ScheduleSegment	DataResult SchedSegmDataEve	ntDescr = SEQUENCE:			
				$\Box  field-length = 2$	12 bytes				
				□ field-value =					
				• sched-segm	-instance = <the of="" same="" ser<="" td="" the=""><td>nt ScheduleSegmentDataEvent&gt;</td></the>	nt ScheduleSegmentDataEvent>			

Notes	The format of the received message in step 4 must be the one specified.
Pass/Fail criteria	• sched-segm-evt-status = Bit 8 (schsevtsta-manager-confirm)  The format of the received message in step 4 must be the one specified.
	<ul> <li>sched-segm-evt-entry-count = <the of="" same="" sent<br="" the="">ScheduleSegmentDataEvent&gt;</the></li> </ul>
	<ul> <li>sched-segm-evt-entry-index = <the li="" of="" same="" sent<="" the=""> <li>ScheduleSegmentDataEvent&gt;</li> </the></li></ul>

TP ld		TΡ	TP/PLT/PHG/CLASS/IP/BV-034				
TP label		Schedule-Store Class. Specific attributes query					
Coverage Spec			[ISO/IEEE 11073-10419]				
	Testable items	Scł	nedS	toreTX 3_B; O			
Test purpos	e	Ch	eck t	hat:			
		Specific attributes of a Schedule-Store object may be queried by listing the desired attribute IDs found in Table E.1.					
Applicability	,	C_I	MAN	_OXP_000 AND C_MAN	_IP_001		
Other PICS							
Initial condit	ion	The obj		G under test is in the Ope	rating state. The simula	ted PHD has one Schedule-Store	
Test proced	ure	1.	<ol> <li>Make the PHG under test perform a GET request to a specific list of Schedule-Store attributes</li> </ol>				
		2.	Re	ceived message by the sir	mulated PHD must be:		
			a.	APDU Type			
				□ field-length = 2 byte	S		
				□ field-value = 0xE7 0	x00 (PrstApdu)		
			b.	invoke-id			
				□ field-type = Invokel	ОТуре		
				□ field-length= 2 bytes	3		
				□ field-value= <not re<="" td=""><td>levant for this test&gt;</td><td></td></not>	levant for this test>		
			c.	CHOICE:			
				□ field-value= 0x01 0>	03 (roiv-cmip-get)		
			d.	Obj-Handle:			
				□ field-type = HANDL	E		
				□ field-length = 2 byte	s		
				□ field-value = <the h<="" td=""><td>andle of the Schedule-S</td><td>Store&gt;</td></the>	andle of the Schedule-S	Store>	
			e.	Attribute-Id-List:			
				□ field-type = Attribute	eldList		
					ntains one attribute or m	ore>	
				field-value = <attrib attributes (Table E.<sup>2</sup>)</attrib 		defined for Schedule-Store	
Pass/Fail cri	teria	The	e forr	nat of the received messa	age in step 2 must be the	e one specified.	

Notes
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TP ld		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 purpos	e	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 condition		The PHG under test is in the Operating state and the simulated PHD has at least one Schedule-Segment with data.				
Test proced	ure	<ol> <li>Make the PHG under test perform a [Trig-Schedule-Segment-Data-Xfer] action to retrieve data from a Schedule-Segment.</li> </ol>				
		<ol> <li>The simulated PHD sends a response including TrigSchedSegmXferRsp = tschsxr- successful(0) (the request can be honored)</li> </ol>				
		<ol> <li>The PHD does no send any ScheduleSegmentDataEvent for at least a period of time equal to [Schedule-Segment-Transfer-Timeout]</li> </ol>				
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)

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 purpos	se	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	The simulated PHD and the PHG under test are in the Unassociated state.						
Test procedure	1. The simulated PHD sends an association request to the PHG under test with dev-config- id 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						
	$\Box  field-length = 2 \text{ bytes}$						
	☐ 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						
	$\Box  field-length = 2 \text{ bytes}$						
	field-value = 0xE7 0x00 (PrstApdu)						
	b. Invoke-id						
	□ field- type = INT-U16						
	$\Box  field-length = 2 \text{ bytes}$						
	field-value = it must be the same as the invoke-id of the simulated PHD's message.						
	c. Obj-Handle:						
	□ field- type = HANDLE						
	$\Box  field-length = 2 \text{ bytes}$						
	$\Box  field-value = 0x00 \ 0x00$						
	d. Event-time:						
	□ field- type = INT-U32						
	$\Box  field-length = 4 \text{ bytes}$						
	□ field-value: 0xXX 0xXX						
	e. Event-type:						
	$\Box  field-length = 2 \text{ bytes}$						
	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.						

	Vait until the Operating state is reached in both cases.		
	6. The simulated PHD sends a fixed event report with one measurement.		
Pass/Fail criteria	<ul> <li>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".</li> <li>The measurement is correctly presented.</li> </ul>		
Notes	The PHG can request Get MDS while they are in the Associated state.		

TP ld		TP/PLT/PHG/CLASS/PF/BV-001					
TP label		Maximum APDU size: Peak Flow					
Coverage	Spec	SO/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_018					
Other PICS							
Initial condit	ion	The PHG under test is in the Operating state.					
Initial condition Test procedure		<pre>The PHG under test is in the Operating state. 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 ::= {             AVA-Type ::= {                attribute-value: '00(1970 bytes) 00'0             }         }         ObservationScan ::= {             obj-handle: 1             attributes: AttributeList ::= {                 AVA-Type ::= {                   attribute.id: 61441                  attribute-value: '00(1970 bytes) 00'0             }         }         ObservationScan ::= {             obj-handle: 1             attributes: AttributeList ::= {                 AVA-Type ::= {</pre>					
		3. The simulated PHD sends a Confirmed fixed event report with one measurement.					
		4. Check the response of the PHG under test.					

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".

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 purpos	e	Check that:	i		
		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]			
		present. The value of	uration, Personal Best object] the the [Attribute-Value-Map] attribute m MDC_ATTR_TIME_STAMP_AE	[Attribute-Value-Map] attribute shall be e shall be value MDC_ATTR_NU_ 3S	
		[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]			
		present. The value of	uration, Reading status] the [Attrib the [Attribute-Value-Map] attribute L_OBS_BASIC_BIT_STRING, the		
Applicability	/	C_MAN_OXP_000 AND C_MAN_OXP_018			
Other PICS					
Initial condit	tion	The simulated PHD a configuration (0x0834		Operating state using the standard	
Test proced	ure	<ol> <li>The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of:</li> </ol>			
		<ul> <li>MDC_ATTR_NU_VAL_OBS_SIMP then MDC_ATTR_TIME_STAMP_ABS for PEF Object</li> </ul>			
		<ul> <li>MDC_ATTR_NU_VAL_OBS_SIMP then MDC_ATTR_TIME_STAMP_ABS for Personal Best Object</li> </ul>			
		<ul> <li>MDC_ATTR_NU_VAL_OBS_SIMP then MDC_ATTR_TIME_STAMP_ABS for FEV1 Object</li> </ul>			
		<ul> <li>MDC_ATTR_NU_VAL_OBS_BASIC_BIT_STRING then MDC_ATTR_TIME_STAMP_ABS for Reading status Object</li> </ul>			
		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:			
		<ul> <li>MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_NU_VAL_OBS_SIMP for PEF Object</li> </ul>			
		MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_NU_VAL_OBS_SIMP for			

	Personal Best Object
	<ul> <li>MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_NU_VAL_OBS_SIMP for FEV1 Object</li> </ul>
	<ul> <li>MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_NU_VAL_OBS_BASIC_BIT_STRING for Reading status Object</li> </ul>
	4. The simulated PHD waits until it receives a confirmation.
	5. 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.
	<ol> <li>If the PHG under test responds with association request response with "accepted- unknown-config", then</li> </ol>
	• 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.
	<ol> <li>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.</li> </ol>
	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 ld		TP/PLT/PHG/CLASS/PF/BV-003			
TP label		Special values. Not a number – fixed format			
Coverage Spec		[ISO/IEEE 11073-10421]			
	Testable items	PEF12; M PersBest12; M FEV1S12; M		FEV1S12; M	
· · · · · · · · · · · · · · · · · · ·		Check that: The PHG receives a NaN value	e (fixed format event report) but	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	<ol> <li>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]).</li> </ol>	
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.	
Pass/Fail criteria	<ul> <li>Verify that the PHG under test is able to accept the data, but does not use the values 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 "—" or blanking the display area).</li> </ul>	
Notes	This test case has been considered as an implicit test case.	

TP ld		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	FEV1	S20; C
Test purpos	e	Check that:			
		The PHG receives a	NaN value (variable format e	vent report) but it d	oes not use this value.
Applicability	/	C_MAN_OXP_000 A	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		<ol> <li>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]).</li> </ol>			
		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	c [ISO/IEEE 11073-10421]			
Testable items		PEF12; M	PersBest12; M	FEV1S12; 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_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	<ol> <li>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]).</li> </ol>
	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 ld		TP/PLT/PHG/CLASS/PF/BV-006		
TP label		Special values. Not at this resolution – variable format		
Coverage Spec		[ISO/IEEE 11073-10	0421]	
	Testable items	PEF20; C	PersBest20; C	FEV1S20; C
Test purpos	6e	Check that: The PHG receives N	NRes value (variable format event r	eport) bu it does not use this value.
Applicabilit	у	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 variable event report for handle 1(PE (Personal Best) and handle 3 (FEV1) containing an observation value set to NRes ([exponent 0, mantissa +(2**23) = 0x00800000]).         2. The simulated PHD waits until it receives a confirmation from the PHG under		n observation value set to the value for 000]).		
<ul> <li>Verify that the PHG under test is able to accept the data, but does not use th if they were an actual measurement (e.g., if there is a UI, verify that the mea displayed in some form that indicates it is not a measurement).</li> </ul>		e data, but does not use the values as is a UI, verify that the measurement is		
Notes This test case has been considered as an implicit test case.			case.	

TP ld		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 condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x0834).
Test procedure	<ol> <li>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]).</li> <li>The simulated PHD waits until it receives a confirmation from the PHG under test.</li> </ol>
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/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 purpos	se	Check that:			
		The PHG receives a value.	a +INFINITY value (variable format eve	ent report) but it does not use this	
Applicability	у	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		<ol> <li>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]).</li> </ol>			
		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.		e.			

TP ld		TP/PLT/PHG/CLASS/PF/BV-009				
TP label		Special values. Negative 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) but 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	<ol> <li>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]).</li> </ol>
	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/PF/BV-010					
TP label		Special values. Ne	Special values. Negative infinity – variable format				
Coverage	Spec	[ISO/IEEE 11073-7	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	у	C_MAN_OXP_000 AND C_MAN_OXP_018					
Other PICS							
Initial condi	ition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x0834).					
Test procedure		<ol> <li>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 negative infinity (–INFINITY, [exponent 0, mantissa –(2**23 – 2) = 0x00800002]).</li> </ol>					
		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/PF/BV-011			
TP label		Special values. Reserved – fixed format			
Coverage Spec Testable items		[ISO/IEEE 11073-10421]			
		PEF12; M	PersBest12; M	FEV1S12; 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_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	<ol> <li>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]).</li> </ol>
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	<ul> <li>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).</li> </ul>
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/PF/BV-012				
TP label		Special values. Res	served – variable format			
Coverage	Spec	[ISO/IEEE 11073-1	ISO/IEEE 11073-10421]			
	Testable items	PEF20; C	PersBest20; C	FEV1S20; C		
Test purpose		Check that: The PHG receives not use this value.	a Reserved for future use value (v	variable format event report) but it does		
Applicability	y	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		<ol> <li>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]).</li> </ol>				
		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		

ite	ems	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				
Fest purpose		Check that:						
		In the association response	e message sent by the PHG:					
		The result field shall be set P11073-20601.	to an appropriate response fro	m those defined in ISO/IEEE				
		[AND]						
		In the DataProtoList structu id-20601	ure element, the data protocol i	dentifier shall be set to data-proto-				
		[AND]						
		The data-proto-info field sh	all be filled in with a PhdAssoc	iationInformation structure				
		[AND]						
		The version of the data exc version = 0x80000000)	change protocol shall be set to	protocol-version1 (i.e., protocol-				
		[AND]	[AND]					
			h a single selected encoding ruses and the selected support at least the MDER encoded and the selected	ile that is supported by both PHD oding rules				
		[AND]						
		The version of the nomenc version = 0x80000000)	lature used shall be set to nom	-version1 (i.e., nomenclature-				
		[AND]						
		The field functional-units sh Association.	hall have all bits reset except fo	r those relating to a Test				
		[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-ca	apab shall be 0					
		[AND]						
		The fields data-req-init-*-co	ount shall be 0					
Applicability		C_MAN_OXP_000 AND C	_MAN_OXP_016					
Other PICS								
nitial condition		The PHG is in the Unassoc	ciated state.					
Test procedure		1. The simulated PHD sends an association request to the PHG under test, with the fields:						
		protocol-vers	ion = '100000000000000000000	0000000000000'B				
		encoding-rule	es= '100000000000000'B					
			e-version = '100000000000000	00000000000000000000000000000000000000				
		functional-uni	its = '00000000000000000000000000000000000	000000000000'B				
		system-type =	= '0000000010000000000000	000000000'B				

			dev-config-id = 16481
			data-rep-mode-capab =
			•data_req_mode_flags= '0000000000000001'B
			data_req_init_agent_count = 1
			data_req_init_manager_count = 0
			option-list.length= 0
2.	The	PHO	G under test sends an association response. The fields of interest are:
			DU Type
			field-length = 2 bytes
			field-value = 0xE3 0x00 (AareApdu)
	b.	Res	
			field- type = AssociateResult
			field-length = 2 bytes
			field-value = One of the following:
			<ul> <li>If association is accepted, field-value= 0x00 0x00.</li> </ul>
			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.
			<ul> <li>If association is rejected-no-common-protocol, field-value= 0x00 0x04.</li> </ul>
			If association is rejected-no-common-parameter, field-value= 0x00 0x05.
			<ul> <li>If association is rejected–unknown = 0x00 0x06.</li> </ul>
			If association is rejected-unauthorized, field-value= 0x00 0x07.
			<ul> <li>If association is rejected–unsupported-assoc-version, field-value= 0x00 0x08.</li> </ul>
	C.		cted-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data- o-info(defined by data-proto-id))
	d.	-	a-proto-id
			field- type = DataProtold
			field-length = 2 bytes
			field-value= 0x50 0x79 (20601)
	e.	prot	ocol-version
			field- type = Protocol Version
			field-length = 4 bytes (BITS-32)
			field-value= 0x80 0x00 0x00 0x00
	f.	enc	oding-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.	nom	nenclature version
			field- type = NomenclatureVersion
			field-length = 4 bytes (BITS-32)
			field-value= Bit 0 must be set (nom-version1)
	h.	func	ctional units
			field-type = FunctionalUnits
			field-length = 4 bytes (BITS-32)

	□ field-value =
	<ul> <li>Bit 0 must be 0</li> </ul>
	Bits 1 and 2 may be set
	The rest of the bits must not be set
	i. system type
	□ field- type = SystemType
	$\Box  field-length = 4 \text{ bytes (BITS-32)}$
	□ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
	j. system-id
	field- type = OCTET STRING
	$\Box  field-length = 8 \text{ bytes}$
	field-value = (EUI-64 manufacturer and device)
	k. dev-config-id
	field- type = ConfigId
	□ field-length = 2 bytes
	□ field-value = 0x00 0x00 (manager-config-response)
	I. data-req-mode-flags (DataReqModeCapab)
	field- type = DataReqModeFlags
	□ field-length = 2 bytes
	$\Box  field-value = 0x00 \ 0x00$
	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
	$\Box  field-value = 0x00$
	n. data-req-init-manager-count (DataReqModeCapab)
	$\Box$ field- type = INT-U8
	$\Box  \text{field-length} = 1 \text{ byte}$
	$\Box  \text{field-value} = 0 \times 00$
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 <a href="http://continua.plugfests.com/show_bug.cgi?id=787">http://continua.plugfests.com/show_bug.cgi?id=787</a> for further details.

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

TP ld		TP/PLT/PHG/CLASS/BCA/BV-000		
TP label		Configuration Event Report. Body Composition Analyser standard configuration 2000		
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_027				
Other PICS	C_MAN_OXP_085				
Initial condition	The simulated PHD and the PHG under test are in the Unassociated state.				
Test procedure	<ol> <li>The simulated PHD sends an association request to the PHG under test with dev-config- id set to 0x07D0 (BCA).</li> </ol>				
	2. The PHG under test responds with an association response, the field of interest is:				
	a. Result				
	□ field- type = INT-U16				
	$\Box  field-length = 2 \text{ bytes}$				
	☐ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)				
	If the result of the association response was "accepted-unknown-config"				
	<ol> <li>The simulated PHD sends a configuration event report with config-report-id set to 0x07D0.</li> </ol>				
	4. The PHG under test must respond with:				
	a. APDU Type				
	$\Box  field-length = 2 \text{ bytes}$				
	field-value = 0xE7 0x00 (PrstApdu)				
	b. Invoke-id				
	□ field- type = INT-U16				
	$\Box  field-length = 2 \text{ bytes}$				
	field-value = it must be the same as the invoke-id of the simulated PHD's message.				
	c. Obj-Handle:				
	□ field- type = HANDLE				
	$\Box  field-length = 2 \text{ bytes}$				
	$\Box  field-value = 0x00 \ 0x00$				
	d. Event-time:				
	□ field- type = INT-U32				
	$\Box  field-length = 4 \text{ bytes}$				
	□ field-value: 0xXX 0xXX				
	e. Event-type:				
	$\Box  field-length = 2 \text{ bytes}$				
	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:				

	<ul> <li>accepted-config: 0x00 0x00</li> </ul>	
	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 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			
Coverage Spec		[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 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_027			
Other PICS					
Initial condition		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 = 7696         ObservationScan ::= {             obj-handle: 1             attributes: AttributeList ::= {                AVA-Type ::= {                   attribute-id: 61441</pre>			
		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
	}
	}
	}
	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/C	LASS/BCA/BV	-002	
TP label		Attribute-Value-Map. Order change			
Coverage	Spec	[ISO/IEEE 11073-10420]			
	Testable items	WeightNumClas	ss 21; M	BodyHeight22; M	BodyFat23; M
Test purpos	e	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			
		[AND]			
		For [Standard-Configuration, Body Height] 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.			
		[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 F configuration.	PHD and the PI	HG under test are in the Opera	ting state using the standard
Test procedure		<ol> <li>The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of:</li> </ol>			
			ATTR_NU_VA t Object	L_OBS_SIMP then MDC_ATT	R_TIME_STAMP_ABS for Body
			ATTR_NU_VA	L_OBS_SIMP then MDC_ATT	R_TIME_STAMP_ABS for Body
		MDC_A     Fat Ob		L_OBS_SIMP then MDC_ATT	R_TIME_STAMP_ABS for Body

	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:
	<ul> <li>MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_NU_VAL_OBS_SIMP for Body Weight Object</li> </ul>
	<ul> <li>MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_NU_VAL_OBS_SIMP for Body Height Object</li> </ul>
	<ul> <li>MDC_ATTR_TIME_STAMP_ABS then MDC_ATTR_NU_VAL_OBS_SIMP for Body Fat Object</li> </ul>
	<ol> <li>The simulated PHD waits until it receives a confirmation.</li> </ol>
	<ol> <li>Send a confirmed fixed format event report with the date (absolute-time-stamp) by a measurement data for every object.</li> </ol>
	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.
	<ol> <li>The simulated PHD sends an association request using the same standard configuratio that was used previously.</li> </ol>
	<ol> <li>If the PHG under test responds with association request response with "accepted- unknown-config", then</li> </ol>
	<ul> <li>The simulated PHD sends the confirmed configuration event report with the standa configuration.</li> </ul>
	• The simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	<ol> <li>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.</li> </ol>
	12. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	<ul> <li>In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly ar applies the correct bytes to the correct attributes (e.g., if there is a UI, verify that the measurement and date are displayed properly).</li> </ul>
	<ul> <li>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).</li> </ul>
	<ul> <li>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).</li> </ul>
	<ul> <li>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.</li> </ul>
Notes	

TP ld	PId 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:		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	<ol> <li>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.</li> </ol>
	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.
	<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_SIMP attribute.</li> </ol>
	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).
	<ul> <li>In steps 4 and 6, verify that the PHG under test uses pounds as the unit code for the measurement reports.</li> </ul>
Notes	

TP ld		TP/PLT/PHG/CLASS/BCA/BV-004		
TP label Unit-Code Body Weight. Change from default kilograms to pounds – fixed form		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 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 C_MAN_OXP_000 AND C_MAN_OXP_027 AND C_MAN_BCA_001		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		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.
	<ul> <li>The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.</li> </ul>
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.
•	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).
	<ol> <li>3.</li> <li>4.</li> <li>5.</li> <li>6.</li> <li>7.</li> <li>8.</li> <li>9.</li> <li>10.</li> </ol>

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 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_KILO_G.		
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_027 AND (NOT(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		<ol> <li>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).</li> </ol>		
		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.		

	In step 5, verify that measurements do not appear, or if they do appear, they are somehow designated as 'unsupported' data.
	• 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.
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.
	5. If the PHG has sent a confirmation in step 4, ask to the operator if the measurements have been properly received and displayed.

TP ld		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 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		
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 configuration.		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test proced	lure	1. Send a confirmed variable format event report using a measurement in kilograms.		
		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 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		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_MA	N_OXP_027 AND C_MAN_BC	A_001
Other PICS				

Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure	<ol> <li>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.</li> </ol>
	2. The simulated PHD waits until it receives a confirmation.
	<ol> <li>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).</li> </ol>
	4. The simulated PHD waits until it receives a confirmation.
	5. The simulated PHD sends an association release request (normal).
	5. 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.
	<ol><li>If the PHG under test responds with association request response with "accepted- unknown-config", then</li></ol>
	<ul> <li>The simulated PHD sends the confirmed configuration event report with the standard configuration.</li> </ul>
	<ul> <li>The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.</li> </ul>
	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	<ul> <li>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).</li> </ul>
	<ul> <li>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).</li> </ul>
Notes	

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	overage 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 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		<ol> <li>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).</li> <li>The simulated PHD waits until it receives a confirmation.</li> </ol>		

	Send a confirmed fixed format event report using a measu date and time stamp.	rement in inches followed by
	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 re	elease response.
	The simulated PHD sends an association request using th used initially.	e same configuration that was
	If the PHG under test responds with association request re unknown-config", then	esponse with "accepted-
	<ul> <li>The simulated PHD sends the confirmed configuration configuration.</li> </ul>	n event report with the standard
	<ul> <li>The simulated PHD waits until it receives a confirmation configuration event report just sent.</li> </ul>	on from the confirmed
	The simulated PHD sends a fixed event report with an obs followed by date and time stamp.	ervation in centimetres
	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 inches to the observation (e.g., if there is a UI, verify that the displayed properly even if they are converted to a different	he measurement and date are
	In step 10, verify that the PHG under test is able to accept centimetres to the observation (e.g., if there is a UI, verify date are displayed properly even if they are converted to a	that the measurement and
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 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_CENTI_M			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_027 AND (NOT(C_MAN_BCA_002))			
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 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	<ul> <li>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.</li> </ul>
	• 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.
	<ul> <li>In step 5, verify that measurements do not appear, or if they do appear, they are somehow designated as 'unsupported' data.</li> </ul>
Notes	

TP ld		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]		
	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	y	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		<ol> <li>Send a confirmed variable format event report using a measurement in centimetres.</li> <li>The simulated PHD waits until it receives a confirmation.</li> </ol>		
Pass/Fail criteria		<ul> <li>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).</li> </ul>		
Notes				

TP ld		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	se	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_MA	AN_OXP_027 AND C_MAN_BC	A_002
Other PICS				

<ul> <li>(i.e., do not transmit the unit-code attribute in the event report).</li> <li>4. The simulated PHD waits until it receives a confirmation.</li> <li>5. The simulated PHD sends an association release request (normal).</li> <li>6. The simulated PHD waits until it receives an association release response.</li> <li>7. The simulated PHD sends an association request using the same configuration that we used initially.</li> <li>8. If the PHG under test responds with association request response with "accepted-unknown-config", then         <ul> <li>The simulated PHD sends the confirmed configuration event report with the standar configuration.</li> <li>The simulated PHD waits until it receives a confirmation from the confirmed configuration.</li> <li>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).</li> </ul> </li> <li>Pass/Fail criteria         <ul> <li>In steps 2 and 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 ar date are displayed properly even if they are converted to a different set of units).</li> <li>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 the centimetres to the observation (e.g., if there is a UI, verify that the measurement and the centimetres to the observation (e.g., if there is a UI, verify that the measurement and the centimetres to the observation (e.g., if there is a UI, verify that the measurement and the centimetres to the observation (e.g., if there is a UI, verify that the measurement and the centimetres to the observation (e.g., if there is a UI, verify that the me</li></ul></li></ul>	Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
<ul> <li>Send a second confirmed variable format event report with just a measurement in inch (i.e., do not transmit the unit-code attribute in the event report).</li> <li>The simulated PHD waits until it receives a confirmation.</li> <li>The simulated PHD waits until it receives an association release response.</li> <li>The simulated PHD waits until it receives an association release response.</li> <li>The simulated PHD sends an association request using the same configuration that wa used initially.</li> <li>If the PHG under test responds with association request response with "accepted-unknown-config", then</li> <li>The simulated PHD sends the confirmed configuration event report with the standar configuration.</li> <li>The simulated PHD sends an 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).</li> <li>The simulated PHD waits until it receives a confirmation.</li> <li>The simulated PHD waits until it receives a confirmation.</li> </ul>	Test procedure	MDC_DIM_INCH (1376) for handle 2 (Body Height Object) and a measurement in		
<ul> <li>(i.e., do not transmit the unit-code attribute in the event report).</li> <li>4. The simulated PHD waits until it receives a confirmation.</li> <li>5. The simulated PHD sends an association release request (normal).</li> <li>6. The simulated PHD waits until it receives an association release response.</li> <li>7. The simulated PHD sends an association request using the same configuration that we used initially.</li> <li>8. If the PHG under test responds with association request response with "accepted-unknown-config", then         <ul> <li>The simulated PHD sends the confirmed configuration event report with the standar configuration.</li> <li>The simulated PHD waits until it receives a confirmation from the confirmed configuration.</li> <li>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).</li> </ul> </li> <li>Pass/Fail criteria         <ul> <li>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 ar date are displayed properly even if they are converted to a different set of units).</li> <li>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).</li> </ul> </li> </ul>		2. The simulated PHD waits until it receives a confirmation.		
<ul> <li>5. The simulated PHD sends an association release request (normal).</li> <li>6. The simulated PHD waits until it receives an association release response.</li> <li>7. The simulated PHD sends an association request using the same configuration that wa used initially.</li> <li>8. If the PHG under test responds with association request response with "accepted-unknown-config", then <ul> <li>The simulated PHD sends the confirmed configuration event report with the standar configuration.</li> <li>The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.</li> </ul> </li> <li>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).</li> <li>10. The simulated PHD waits until it receives a confirmation.</li> </ul> <b>Pass/Fail criteria</b> <ul> <li>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 ar date are displayed properly even if they are converted to a different set of units).</li> <li>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 the applies inches to the observation (e.g., if there is a UI, verify that the measurement and the properly even if they are converted to a different set of units).</li> </ul>				
<ul> <li>6. The simulated PHD waits until it receives an association release response.</li> <li>7. The simulated PHD sends an association request using the same configuration that wa used initially.</li> <li>8. If the PHG under test responds with association request response with "accepted-unknown-config", then <ul> <li>The simulated PHD sends the confirmed configuration event report with the standar configuration.</li> <li>The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.</li> </ul> </li> <li>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.</li> <li>Pass/Fail criteria</li> <li>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).</li> </ul>		4. The simulated PHD waits until it receives a confirmation.		
<ul> <li>7. The simulated PHD sends an association request using the same configuration that we used initially.</li> <li>8. If the PHG under test responds with association request response with "accepted-unknown-config", then <ul> <li>The simulated PHD sends the confirmed configuration event report with the standar configuration.</li> <li>The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.</li> </ul> </li> <li>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).</li> <li>10. The simulated PHD waits until it receives a confirmation.</li> </ul> <b>Pass/Fail criteria</b> <ul> <li>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 ar date are displayed properly even if they are converted to a different set of units). <ul> <li>In step 10, verify that the PHG under test is able to accept the data properly and applied centimetres to the observation (e.g., if there is a UI, verify that the measurement and the unit should be set on the observation (e.g., if there is a UI, verify that the measurement and the unit should be units). </li> </ul></li></ul>		5. The simulated PHD sends an association release request (normal).		
<ul> <li>used initially.</li> <li>8. If the PHG under test responds with association request response with "accepted-unknown-config", then <ul> <li>The simulated PHD sends the confirmed configuration event report with the stands configuration.</li> <li>The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.</li> </ul> </li> <li>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).</li> <li>10. The simulated PHD waits until it receives a confirmation.</li> </ul> <b>Pass/Fail criteria</b> <ul> <li>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 ar date are displayed properly even if they are converted to a different set of units).</li> <li>In step 10, verify that the PHG under test is able to accept the data properly and applied applies inches to the observation (e.g., if there is a UI, verify that the measurement and the centimetres to the observation (e.g., if there is a UI, verify that the measurement and the centimetres to the observation (e.g., if there is a UI, verify that the measurement and the centimetres to the observation (e.g., if there is a UI, verify that the measurement and the centimetres to the observation (e.g., if there is a UI, verify that the measurement and the centimetres to the observation (e.g., if there is a UI, verify that the measurement and the centimetres to the observation (e.g., if there is a UI, verify that the measurement and the centimetres to the observation (e.g., if there is a UI, verify that the measurement and the centimetres to the observation (e.g., if there is a UI, verify that the measurement and the centimetres to the observation (e.g., if there is a UI, verify that the measurement and the centimetres to the</li></ul>		6. The simulated PHD waits until it receives an association release response.		
<ul> <li>unknown-config", then</li> <li>The simulated PHD sends the confirmed configuration event report with the standar configuration.</li> <li>The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.</li> <li>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).</li> <li>The simulated PHD waits until it receives a confirmation.</li> </ul> Pass/Fail criteria <ul> <li>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 ar date are displayed properly even if they are converted to a different set of units). <ul> <li>In step 10, verify that the PHG under test is able to accept the data properly and applie 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).</li></ul></li></ul>				
<ul> <li>configuration.</li> <li>The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.</li> <li>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).</li> <li>10. The simulated PHD waits until it receives a confirmation.</li> <li>Pass/Fail criteria</li> <li>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 ar date are displayed properly even if they are converted to a different set of units).</li> <li>In step 10, verify that the PHG under test is able to accept the data properly and applie centimetres to the observation (e.g., if there is a UI, verify that the measurement and action at the observation (e.g., if there is a UI, verify that the measurement and applies centimetres to the observation (e.g., if there is a UI, verify that the measurement and applies centimetres to the observation (e.g., if there is a UI, verify that the measurement and centimetres to the observation (e.g., if there is a UI, verify that the measurement and centimetres to the observation (e.g., if there is a UI, verify that the measurement and centimetres to the observation (e.g., if there is a UI, verify that the measurement and centimetres to the observation (e.g., if there is a UI, verify that the measurement and centimetres to the observation (e.g., if there is a UI, verify that the measurement and centimetres to the observation (e.g., if there is a UI, verify that the measurement and centimetres to the observation (e.g., if there is a UI, verify that the measurement and centimetres to the observation (e.g., if there is a UI, verify that the measurement and centimetres to the observation (e.g., if there is a UI, verify that the measurement and ce</li></ul>				
<ul> <li>configuration event report just sent.</li> <li>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).</li> <li>10. The simulated PHD waits until it receives a confirmation.</li> <li>Pass/Fail criteria</li> <li>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 ar date are displayed properly even if they are converted to a different set of units).</li> <li>In step 10, verify that the PHG under test is able to accept the data properly and applie centimetres to the observation (e.g., if there is a UI, verify that the measurement and applies inches to the observation (e.g., if there is a UI, verify that the measurement and applies centimetres to the observation (e.g., if there is a UI, verify that the measurement and applies centimetres to the observation (e.g., if there is a UI, verify that the measurement and applies centimetres to the observation (e.g., if there is a UI, verify that the measurement and the observation (e.g., if there is a UI, verify that the measurement and the observation (e.g., if there is a UI, verify that the measurement and the observation (e.g., if there is a UI, verify that the measurement and the observation (e.g., if there is a UI, verify that the measurement and the observation (e.g., if there is a UI, verify that the measurement and the observation (e.g., if there is a UI, verify that the measurement and the observation (e.g., if there is a UI, verify that the measurement and the observation (e.g., if there is a UI, verify that the measurement and the observation (e.g., if there is a UI, verify that the measurement and the observation (e.g., if there is a UI, verify that the measurement and the observation (e.g., if there is a UI, verify that the measure</li></ul>		<ul> <li>The simulated PHD sends the confirmed configuration event report with the standard configuration.</li> </ul>		
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 ar 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 applie centimetres to the observation (e.g., if there is a UI, verify that the measurement and continue 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 continue 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 continue 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 continue 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 continue 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 continue 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 continue 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 continue test is able to accept the data properly and applies centimetres to the observation (e.g., if there is a UI, verify that the measurementest is able to accept the				
<ul> <li>Pass/Fail criteria</li> <li>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 ar date are displayed properly even if they are converted to a different set of units).</li> <li>In step 10, verify that the PHG under test is able to accept the data properly and applie centimetres to the observation (e.g., if there is a UI, verify that the measurement and applied to the observation (e.g., if there is a UI, verify that the measurement and applied to the observation (e.g., if there is a UI, verify that the measurement and applied to the observation (e.g., if there is a UI, verify that the measurement and applied to the observation (e.g., if there is a UI, verify that the measurement and applied to the observation (e.g., if there is a UI, verify that the measurement and applied to the observation (e.g., if there is a UI, verify that the measurement and applied to the observation (e.g., if there is a UI, verify that the measurement and the test is able to accept the data properly and applied to the observation (e.g., if there is a UI, verify that the measurement and the test is able to accept the data properly and applied to the observation (e.g., if there is a UI, verify that the measurement and the test is able to accept the data properly applied to the observation (e.g., if there is a UI, verify that the measurement and the test is able to accept the data properly applied to the observation (e.g., if there is a UI, verify that the measurement and the test is able to accept the data properly applied to the observation (e.g., if there is a UI, verify that the measurement and the test is able to accept the data properly applied to the test is able to accept the data properly applied to the test is able to accept the data properly applied to the test is able to accept the data properly applied to the test is able to accept the data properly applied to the test is able to accept the data</li></ul>		centimetres followed by date and time stamp (i.e., do not send the unit-code attribute it		
<ul> <li>applies inches to the observations (e.g., if there is a UI, verify that the measurement ar date are displayed properly even if they are converted to a different set of units).</li> <li>In step 10, verify that the PHG under test is able to accept the data properly and applie centimetres to the observation (e.g., if there is a UI, verify that the measurement and</li> </ul>		10. The simulated PHD waits until it receives a confirmation.		
centimetres to the observation (e.g., if there is a UI, verify that the measurement and	Pass/Fail criteria	applies inches to the observations (e.g., if there is a UI, verify that the measurement and		
Notes	Notes			

TP Id TP label		TP/PLT/PHG/CLASS/BCA/BV-012         Unit-Code Body Fat. Change from default % to kilograms/pounds – fixed format observation		
	Testable items	BodyFat21; 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_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		<ol> <li>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).</li> </ol>		
		2. The simulated PHD waits until it receives a confirmation.		

	3. 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.
	7. 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).
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TP ld		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]		
	Testable items	BodyFat21; 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_PERCENT		
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_027 AND (NOT(C_MA	N_BCA_003))
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 variable event report to change the Unit-Code of handle 3 (Body Fat Object) to kilograms nomenclature code MDC_DIM_KILO_G (1731).
		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 ld		TP/PLT/PHG/CLASS/BCA/BV-014		
TP label	Image:			
Coverage Spec		[ISO/IEEE 11073-10420]		
	Testable items	BodyFat21; 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_PERCENT		
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 proced	ure	1. Send a confirmed variable format event report using a measurement in centimetres.		
		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 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-015		
TP label		Unit-Code Body Fat. Change from default % to kilograms/pounds – variable format observation		
Coverage	Spec	[ISO/IEEE 11073-10420]		
Testable BodyFat21; M items				

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	<ol> <li>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.</li> </ol>				
	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.				
	<ol> <li>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.</li> </ol>				
	6. The simulated PHD waits until it receives a confirmation.				
	<ol> <li>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).</li> </ol>				
	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 criteria	• 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 ld	TP/PLT/PHG/CLASS/BCA/BV-016
TP label	Special values. Not a number – fixed format

Coverage	Spec	[ISO/IEEE 11073-10420]			
	Testable items	WeightNumClass 21; M	BodyHeight22; M	BodyFat23; M	
Test purpose		Check that:	alue (fixed format event room	art) but it doos not use this value	
		The FIG receives a main v		ort) but it does not use this value.	
Applicability	у	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		<ol> <li>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.</li> </ol>			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
			neasurement (e.g., if there is	data, but does not use the values as a UI, verify that the measurement is asurement such as "—" or blanking	
Notes This test case has been considered as an implicit test case.				ase.	

TP ld		TP/PLT/PHG/CLASS/BCA/BV-017				
TP label		Special values. Not a number – variable format				
Coverage	Spec	[ISO/IEEE 11073-10420]	[ISO/IEEE 11073-10420]			
	Testable items	WeightNumClass 26; M	BodyHeight38; M	BodyFat39; M		
Test purpos	e	Check that:				
		The PHG receives a NaN value	e (variable format event report) I	out it does not use this value.		
Applicability	,	C_MAN_OXP_000 AND C_M	AN_OXP_027			
Other PICS						
Initial condit	ion	The simulated PHD and the P configuration.	HG under test are in the Operation	ng state using the standard		
Test procedure1. The simulated PHD sends a confirmed variable event report handle 2 (Body Height) and handle 3 (Body Fat) containing for NaN ([exponent 0, mantissa +(2**23 –1) = 0x007FFFFF		g an observation with the value F]).				
Pass/Fail criteria •		<ul> <li>2. The simulated PHD waits until it receives a confirmation from the PHG under test.</li> <li>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).</li> </ul>				
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]			
	Testable items	WeightNumClass 21; M	BodyHeight22; M	BodyFat23; M	
Test purpos	6e	Check that: The PHG receives NRes va	alue (fixed format event report) but	it does not use this value.	
Applicability	y	C_MAN_OXP_000 AND C	_MAN_OXP_027		
Other PICS					
Initial condi	tion	The simulated PHD and the configuration.	e PHG under test are in the Operat	ting state using the standard	
Test procedure       1. The simulated PHD sends a confirmed fixed event report for handle 1 (Boo handle 2 (Body Height) and handle 3 (Body Fat) containing an observation for NRes ([exponent 0, mantissa +(2**23) = 0x00800000]) and a time stam			ng an observation with the value		
		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, bu if they were an actual measurement (e.g., if there is a UI, ve 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-019			
		TP/PLT/PHG/CLASS/BCA/BV-019			
TP label	1	Special values. Not at this r	esolution – variable format		
Coverage	Spec	ec [ISO/IEEE 11073-10420]			
	Testable items	WeightNumClass 26; M	BodyHeight38; M	BodyFat39; M	
Test purpos	6e	Check that: The PHG receives NRes va	alue (variable format event report)	) but it does not use this value.	
Applicability	y	C_MAN_OXP_000 AND C_	_MAN_OXP_027		
Other PICS					
Initial condi	tion	The simulated PHD and the configuration.	PHG under test are in the Opera	ating state using the standard	
Test proced	lure	<ol> <li>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 val for NRes ([exponent 0, mantissa +(2**23) = 0x00800000]).</li> <li>The simulated PHD waits until it receives a confirmation from the PHG under test.</li> </ol>			
Pass/Fail criteria         • Verify that the PHG under test is all if they were an actual measurement displayed in some form that indicated in the provided in		neasurement (e.g., if there is a U	I, verify that the measurement is		
Notes This test case has been considered as an implicit test case.					

TP ld TP label		TP/PLT/PHG/CLASS/BCA/BV-020		
		Special values. Positive infinity – fixed format		
Coverage	Spec	[ISO/IEEE 11073-10420]		
	Testable items	WeightNumClass 21; M	BodyHeight22; M	BodyFat23; M
Test purpos	se	Check that:		
		The PHG receives a +INFI value.	NITY value (fixed format event repo	ort) but it does not use this
Applicabilit	у	C_MAN_OXP_000 AND C	_MAN_OXP_027	
Other PICS				
Initial condi	ition	The simulated PHD and the configuration.	e PHG under test are in the Operati	ing state using the standard
Test procedure		<ol> <li>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.</li> </ol>		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
if they were an actual measure		der test is able to accept the data, measurement (e.g., if there is a UI, n that indicates it is not a measuren	verify that the measurement is	
Notes This test case has been considered as an implicit test case.				

TP Id TP/PLT/PHG/CLASS/BCA			BV-021		
TP label		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 +INFIN value.	NITY value (variable format event r	eport) but it does not use this	
Applicabilit	у	C_MAN_OXP_000 AND C_	MAN_OXP_027		
Other PICS					
Initial condi	ition	The simulated PHD and the configuration.	PHG under test are in the Operat	ing state using the standard	
Test procedure		<ol> <li>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]).</li> </ol>			
		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			nsidered as an implicit test case.		

TP Id TP/PLT/PHG/CLASS/BCA/BV-022			/BV-022	
TP label	<b>FP label</b> Special values. Negative infinity – fixed format			
Coverage	Coverage Spec [ISO/IEEE 11073-10420]			
	Testable items	WeightNumClass 21; M	BodyHeight22; M	BodyFat23; M
Test purpos	e	Check that:		
		The PHG receives a –INFII value.	NITY value (fixed format event repo	rt) but it does not use this
Applicability	1	C_MAN_OXP_000 AND C	_MAN_OXP_027	
Other PICS				
Initial condi	tion	The simulated PHD and the configuration.	e PHG under test are in the Operati	ing state using the standard
Test procedure       1. The simulated PHD sends a confirmed fixed event report for handle 1 (Body handle 2 (Body Height) and handle 3 (Body Fat) containing an observation w for negative infinity (–INFINITY, [exponent 0, mantissa –(2**23 –2) = 0x00800 time stamp.			g an observation with the value	
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
<ul> <li>Pass/Fail criteria</li> <li>Verify that the PHG under test is able to accept the data, b if they were an actual measurement (e.g., if there is a UI, v displayed in some form that indicates it is not a measurement</li> </ul>		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-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		<ol> <li>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]).</li> </ol>			
		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/BCA/BV-024			
TP label		Special values. Reserved – 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 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					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		<ol> <li>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.</li> </ol>			
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		<ul> <li>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).</li> </ul>			
Notes		This test case has been considered 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]			
	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.			
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	<ol> <li>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]).</li> </ol>	
	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).	
<b>Notes</b> 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 items	ManProcAsResp1; M	ManProcAsResp2; M	ManProcAsResp3; M	
		ManProcAsResp4; M	ManProcAsResp5; M	ManProcAsResp6; M	
		ManProcAsResp7; M	ManProcAsResp8; M	ManProcAsResp9; M	
		ManProcAsResp10; M	ManProcAsResp11; M	ManProcAsResp12; M	
		ManProcAsResp13; C			
Test purpos	e	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)				version1 (i.e., nomenclature-	
[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 sha valid EUI-64 type identifier			e PHG device, which shall be a		

	AND]
	he field dev-config-id shall be manager-config-response (0)
	AND]
	he field data-req-mode-capab shall be 0
	AND]
	he 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	<ul> <li>The simulated PHD sends an association request to the PHG under test, with the fields:</li> <li>protocol-version = '100000000000000000000000000000000000</li></ul>
	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.
	-
	d. data-proto-id
	□ field- type = DataProtold
	□ field-length = 2 bytes

		field-value= 0x50 0x79 (20601)
e		ocol-version
		field- type = Protocol Version
		field-length = 4 bytes (BITS-32)
		field-value= 0x80 0x00 0x00 0x00
f.	enco	oding-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		enclature version
		field- type = NomenclatureVersion
		field-length = 4 bytes (BITS-32)
		field-value= Bit 0 must be set (nom-version1)
h	func	tional 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.	syst	em type
		field- type = SystemType
		field-length = 4 bytes (BITS-32)
		field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
j.	syst	em-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)
Ι.	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		-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.14 Subgroup 2.3.13: Basic electrocardiograph (ECG)

TP ld		TP/PLT/PHG/CLASS/ECG/BV-000			
<b>TP label</b> Configuration Event Report. Basic ECG specialization/Heart Rate profile standard configuration 600					
Coverage	Spec	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
	Testable items	ConfEventRep 18;M			
Test purpos	e	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_029			
Other PICS		C_MAN_OXP_085			
Initial condi	tion	The simulated PHD and the PHG under test are in the Unassociated state.			
Other PICS Initial condition Test procedure		<ol> <li>The simulated PHD sends an association request to the PHG under test with dev-configid set to 0x0258 (HR).</li> <li>The PHG under test responds with an association response, the field of interest is:         <ul> <li>a. Result</li> <li>field- type = INT-U16</li> <li>field-length = 2 bytes</li> <li>field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)</li> </ul> </li> <li>If the result of the association response was "accepted-unknown-config"</li> <li>The simulated PHD sends a configuration event report with config-report-id set to 0x0258.</li> <li>The PHG under test must respond with:         <ul> <li>APDU Type</li> <li>field-length = 2 bytes</li> <li>c. Obj-Handle:</li> <li>field-type = HANDLE</li> </ul> </li> </ol>			

		$\Box  field-length = 2 bytes$
		□ field-value = 0x00
	d.	Event-time:
		□ field- type = INT-U32
		$\Box  field-length = 4 \text{ bytes}$
		□ 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 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/ECG/BV-001					
TP label		Maximum APDU size: Basic ECG specialization/Heart Rate 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:			
		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 use	d.		

F

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	1. The simulated PHD sends a Confirmed variable event report:
	a. ScanReportInfoVar. obs_scan_var:
	$\Box  \text{Count} = 2$
	$\Box  \text{Length} = 1248$
	<pre>ObservationScan ::= {     obj-handle: 1     attributes: AttributeList ::= {         AVA-Type ::= {             attribute-id: 61441             attribute-value: '00(1224 bytes) 00'0         }     }     ObservationScan ::= {         obj-handle: 1         dttribute-table: 1</pre>
	<pre>attributes: AttributeList ::= {     AVA-Type ::= {         attribute-id: 2636 (2646 (MDC_ATTR_NU_VAL_OBS_BASIC)         attribute-value: 79         }     } }</pre>
	<ol> <li>Check the response of the PHG under test.</li> <li>The simulated PHD sends a Confirmed fixed event report with one measurement.</li> <li>Check the response of the PHG under test.</li> </ol>
Pass/Fail criteria	<ul> <li>In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".</li> <li>In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".</li> </ul>
Notes	

TP Id TP/P		TP/PLT/PHG/CLASS/ECG/BV-	-002		
TP label		Maximum APDU size: Basic E0	CG specialization/ Simple ECG p	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:
	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	1. 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'C         }     }     ObservationScan ::= {         obj-handle: 9         attributes: AttributeList ::= {             AVA-Type ::= {                 AVA-Type ::= {</pre>
	<ol> <li>Check the response of the PHG under test.</li> <li>The simulated PHD sends a Confirmed variable event report with one attribute update.</li> </ol>
	<ol> <li>The simulated FHD sends a Commed variable event report with one attribute update.</li> <li>Check the response of the PHG under test.</li> </ol>
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-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 conditi	on	The PHG under test is in the Operating state.		
Test procedu	ire	1. The simulated PHG sends a Confirmed variable event report:		
		a. ScanReportInfoVar. obs_scan_var:		
		$\Box$ 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 ::= {                 AVA-Type ::= {                          AVA-Type ::= {</pre>		
		<ol> <li>Check the response of the PHG under test.</li> <li>The simulated PHD sends a confirmed fixed format event report with one measurement.</li> </ol>		
		4. Check the response of the PHG under test.		
Pass/Fail crit	eria	• 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-004		TP/PLT/PHG/CLASS/ECG/BV-004	
TP label Maximum APDU size: Basic ECG/Simple E		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	e	Check that:		
		If a PHG receives an APDU the error (roer) code of protocol-vice	at is larger than the PHG's recei plation.	ve buffer, it shall reply with an
		specializations the PHG suppo	be at least as large as the large rts. The buffer size limitations in of whether a standard or extend	this bullet and the next on
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_003 AND C_MAN_OX	P_030
Other PICS				
Initial conditi	ion	The PHG under test is in the O	perating state.	
Test procedı	ure	1. The simulated PHD sends	a Confirmed variable event rep	ort:
		a. ScanReportInfoVar. o	bs_scan_var:	
		□ Count = 2		
		AVA-Type attribu attribu 00'0 } } ObservationSo obj-handle attributes AVA-Type attribu attribu } }	: 9 : AttributeList ::= { ::= { ute-id: 61441 ute-value: '00(64 can ::= { : 9 : AttributeList ::= { ::= { ute-id: 2454 (MDC_ATTR ute-value: 2194 (MDC_I	R_UNIT_CODE)
		<ol> <li>Check the response of the</li> <li>The simulated PHD sends</li> <li>Check the response of the</li> </ol>	a Confirmed variable event rep	ort with one attribute update.
Pass/Fail crit	teria		est must respond with a "rors-cm	

TP ld		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] t	he [Attribute-Value-Map] attribute	e shall be present
		The value of the [Attribute-Val then MDC_ATTR_TIME_STA	ue-Map] attribute shall be MDC_ MP_REL	ATTR_NU_VAL_OBS_BASIC,
Applicability		C_MAN_OXP_000 AND C_M	AN_OXP_029	
Other PICS				
Initial conditi	on	The simulated PHD and the P configuration.	HG under test are in the Operatir	ng state using the standard
Test procedu	re	1. The simulated PHD sends Attribute-Value-Map orde	s a confirmed fixed format event r of:	report that matches the
		MDC_ATTR_NU_VA Heart Rate Object	L_OBS_BASIC then MDC_ATTF	R_TIME_STAMP_REL for
		2. The simulated PHD waits	until it receives a confirmation.	
			s a confirmed variable event repo of handle 1 (Heart Rate Object) to	
		MDC_ATTR_TIME_S Heart Rate Object	STAMP_REL then MDC_ATTR_N	NU_VAL_OBS_BASIC for
		4. The simulated PHD waits	until it receives a confirmation.	
		5. Send a confirmed fixed for measurement data for He	rmat event report with the date (r art Rate Object.	relative-time-stamp) by a
		6. The simulated PHD waits	until it receives a confirmation.	
		7. The simulated PHD sends	s an association release request	(normal).
		8. The simulated PHD waits	until there is an association relea	ase response.
		<ol> <li>The simulated PHD sends that was used previously.</li> </ol>	s an association request using th	e same standard configuration
		10. If the PHG under test resp unknown-config", then	oonds with association request re	esponse with "accepted-
		The simulated PHD s     configuration.	ends the confirmed configuration	n event report with the standard
		The simulated PHD v report that was sent.	vaits until there is a confirmation	to the configuration event
		attribute-value-format (MI	s a fixed event report following th DC_ATTR_NU_VAL_OBS_BASI /IP_REL). The observations shou	C then
		12. The simulated PHD waits	until it receives a confirmation.	
Pass/Fail crit	eria		that the PHG under test is able to the correct attributes (e.g., if the displayed properly).	
			that the PHG under test uses be proper value after conversion to	
			r that if the PHG utilizes a date / t n the observation's time stamp (i. in the past).	
			cessary to be careful about sendi ok at things like an UI may requi	
Notes				

TP Id TP label		TP/PLT/PHG/CLASS/ECG/BV-006		
		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	se	Check that:		
		The PHG receives a NaN 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		<ol> <li>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.</li> </ol>		
		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/ECG/BV-007		
TP label		Basic ECG Specialization/Heart Rate profile. Special values. Not a number – variable format (Std Config 600)		
Coverage	Spec	[ISO/IEEE 11073-10406]		
	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.		
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		<ol> <li>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]).</li> </ol>		
		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.
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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)		
Coverage	Spec	[ISO/IEEE 11073-10406]		
	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.		
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		<ol> <li>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.</li> </ol>		
		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/PLT/PHG/CLASS/ECG/BV-009		
	Basic ECG Specialization/Heart Rate profile. Special values. Not at this resolution – variable format (Std Config 600)		
Spec	[ISO/IEEE 11073-10406]		
Testable items	HeartRate44; M		
se	Check that:		
	The PHG receives NRes value (variable format event report) but it does not use this value.		
y	C_MAN_OXP_000 AND C_MAN_OXP_029		
ition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 600.		
dure	<ol> <li>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]).</li> </ol>		
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
riteria	• 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		
	y ition		

	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-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	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_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		<ol> <li>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.</li> </ol>	
		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-011
		Basic ECG Specialization/Heart Rate profile. Special values. Positive infinity – variable format (Std Config 600)
Coverage	Spec	[ISO/IEEE 11073-10406]
	Testable items	HeartRate44; M
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_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		<ol> <li>The simulated PHD sends a confirmed 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]).</li> </ol>
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.

Pass/Fail criteria	<ul> <li>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).</li> </ul>
Notes	This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/ECG/BV-012		
TP label		Basic ECG Specialization/Heart Rate profile. Special values. Negative infinity – fixed format (Std Config 600)		
Coverage	Spec	[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.		
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		<ol> <li>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.</li> </ol>		
		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/ECG/BV-013		
TP label		Basic ECG Specialization/Heart Rate profile. Special values. Negative infinity – variable format (Std Config 600)		
Coverage	Coverage Spec [ISO/IEEE 11073-10406]			
	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 Ph configuration 600.	HG under test are in the Operatir	ng state using the standard
Test procedure			a confirmed variable event repo ervation value set to the value fo	

	[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 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]		[ISO/IEEE 11073-10406]		
	Testable items	HeartRate22; 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.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_029		
Other PICS				
Initial cond	ition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 600.		
Test procedure		<ol> <li>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.</li> <li>The simulated PHD waits until it receives a confirmation from the PHG under test.</li> </ol>		
Pass/Fail criteria		<ul> <li>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).</li> </ul>		
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 HeartRate44; M items			
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_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	<ol> <li>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]).</li> </ol>	
	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/ECG/BV-016			
TP label		Association procedure PHG ECG			
Coverage Spec		[ISO/IEEE 11073-10406]			
	Testable items	ManProcAsResp1; M	ManProcAsResp2; M	ManProcAsResp3; M	
	literine	ManProcAsResp4; M	ManProcAsResp6; M	ManProcAsResp7; M	
		ManProcAsResp8; M	ManProcAsResp9; M	ManProcAsResp10; M	
		ManProcAsResp11; M	ManProcAsResp12; M	ManProcAsResp13; M	
		ManProcAsResp14; C			
Test purpos	е	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 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 = 0x8000000) [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	1. The simulated PHD sends an association request to the PHG under test, with the fields:		
	$\square protocol-version = '010000000000000000000000000000000000$		
	<ul> <li>encoding-rules= '1000000000000'B</li> </ul>		
	<ul> <li>Inomenclature-version = '100000000000000000000000000000000000</li></ul>		
	system-type = '00000001000000000000000000000'B		
	$\Box  \text{dev-config-id} = 16481$		
	data-rep-mode-capab =		
	<ul> <li>data_req_mode_flags= '00000000000001'B</li> </ul>		
	data_req_init_agent_count = 1		
	data_req_init_manager_count = 0		
	$\Box$ option-list.length= 0		
	2. The PHG under test sends an association response. The fields of interest are:		
	a. APDU Type		
	$\Box  field-length = 2 \text{ bytes}$		
	□ field-value = 0xE3 0x00 (AareApdu)		
	b. Result		
	field- type = AssociateResult		
	$\Box  field-length = 2 \text{ bytes}$		
	□ 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.		
	<ul> <li>If association is rejected-unauthorized, field-value= 0x00 0x07.</li> </ul>		
	If association is rejected-unsupported-assoc-version, field-value= 0x00 0x08.		
	<ul> <li>selected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data- proto-info(defined by data-proto-id))</li> </ul>		
	d. data-proto-id		

	□ field- type = DataProtold
	$\Box  field-length = 2 \text{ bytes}$
	□ 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)
	field-value= depends on the encoding rules supported/selected, but only one can be supported at a time
g.	nomenclature version
	□ field- type = Nomenclature Version
	□ 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 = ConfigId
	□ 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)
	ield- type = INT-U8
	□ field-length = 1 byte
	□ field-value = 0x00

	<ul> <li>n. data-req-init-manager-count (DataReqModeCapab)</li> <li>field- type = INT-U8</li> <li>field-length = 1 byte</li> <li>field-value = 0x00</li> </ul>	
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 ld		TP/PLT/PHG/CLASS/INR/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	
		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	e	Check that:			
		The result field shall be set to P11073-20601.	an appropriate response from th	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 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 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.
Initial condition Test procedure	<ul> <li>1. The simulated PHD sends an association request to the PHG under test, with the fields:</li> <li>protocol-version = '010000000000000000000000000000000000</li></ul>
	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
a	nomenclature version
g.	□ field- type = NomenclatureVersion
	<ul> <li>☐ field-length = 4 bytes (BITS-32)</li> </ul>
	<ul> <li>field-value= Bit 0 must be set (nom-version1)</li> </ul>
h.	functional units
	<ul> <li>field-type = FunctionalUnits</li> </ul>
	<ul> <li>☐ field-length = 4 bytes (BITS-32)</li> </ul>
	<ul> <li>field-value =</li> </ul>
	Bit 0 must be 0
	<ul> <li>Bits 1 and 2 may be set</li> <li>The rost of the bits must not be set</li> </ul>
:	The rest of the bits must not be set
i.	system type
	field-type = SystemType field longth = 4 bytes (BITS 22)
	□ field-length = 4 bytes (BITS-32)
	□ field-value = 0x80 0x00 0x00 0x00 (sys-type-manager)
j.	
	□ field-type = OCTET STRING
	□ field-length = 8 bytes
ι.	□ 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 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	d TP/PLT/PHG/CLASS/INR/BV-001					
TP label		Configuration Event Report. INR monitor standard configuration 1800				
Coverage	Spec	[ISO/IEEE 11073-10418C]				
	Testable items	ConfPro	c 4;M	MDSEvents 2;M	ObjAccServ 5;M	
	Spec	[ISO/IEE	E 11073-20601-2015	A] and [ISO/IEEE 11073-20601-	2016C]	
	Testable items	ConfEve	ntRep 18;M			
Test purpos	e	Check th	at:			
		Respons	e   Confirmed Event F	onfiguration notification message Report" data message with an M ucture for the event-info field .		
		[AND]				
		A PHG s	hall support both sing	e-person and multi-person even	t 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 12						
Test procedure		<ol> <li>The simulated PHD sends an association request to the PHG under test with dev-config- id set to 0x07 0x08 (INR monitor – Std Config 1800)</li> </ol>				
		2. The PHG under test responds with an association response, the field of interest is:				
		a.	Result			
			□ field- type = INT-			
			$\Box  \text{field-length} = 2 \text{ b}$			
		lf the res		0 0x00 (accepted) or 0x00 0x03		
		<ul><li>If the result of the association response was "accepted-unknown-config"</li><li>3. The simulated PHD sends a configuration event report with config-report-id set to 0x07</li></ul>				
		0x08.				
			PHG under test must	respond with:		
		a.	APDU Type			
			$\Box  field-length = 2 b$	-		
			□ field-value = 0xE	7 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:
			General field- type = HANDLE
			□ field-length = 2 bytes
			□ field-value = 0x00 0x00
		d.	Event-time:
			□ field- type = INT-U32
			$\Box  field-length = 4 \text{ bytes}$
			□ 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:
			<ul> <li>accepted-config: 0x00 0x00</li> </ul>
	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	ait uni	til the Operating state is reached in both cases.
	6.	The	e 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" ssage or to the Configuration Event Report with an "accepted-config".
	•	The	e measurement is correctly presented.
Notes			

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 11073-20601-2015/		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_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 1801.						
Test procedure	<ol> <li>The simulated PHD sends an association request to the PHG under test with dev-config- id set to 0x07 0x09 (INR monitor – Std Config 1801).</li> </ol>						
	2. The PHG under test responds with an association response, the field of interest is:						
	a. Result						
	□ field- type = INT-U16						
	$\Box  field-length = 2 \text{ bytes}$						
	□ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)						
	If the result of the association response was "accepted-unknown-config"						
	<ol> <li>The simulated PHD sends a configuration event report with config-report-id set to 0x06 0xA5.</li> </ol>						
	4. The PHG under test must respond with:						
	a. APDU Type						
	$\Box  field-length = 2 \text{ bytes}$						
	□ field-value = 0xE7 0x00 (PrstApdu)						
	b. Invoke-id						
	□ field- type = INT-U16						
	$\Box  field-length = 2 \text{ bytes}$						
	field-value = it must be the same as the invoke-id of the simulated PHD's message.						
	c. Obj-Handle:						
	field- type = HANDLE						
	$\Box  field-length = 2 \text{ bytes}$						
	□ field-value = 0x00 0x00						
	d. Event-time:						
	□ field- type = INT-U32						
	$\Box  field-length = 4 \text{ bytes}$						
	□ 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.
	Wa	ait unti	I the Operating state is reached in both cases.
	6.		simulated PHD sends a fixed event report with one INR measurement and other devent report with Control Solution 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.
Notes			

TP ld		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]			
	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.			
		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 us	ed.		
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		<ol> <li>The simulated PHD sends a Confirmed variable event report:</li> <li>a. ScanReportInfoVar. obs_scan_var:</li> </ol>			

$\Box  \text{Count} = 2$
□ 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)
attribute-value: 1
}
}
}
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.
• 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".

TP ld		TP/PLT/PHG/CLASS/INR/BV-004		
TP label		Maximum APDU size: INR monitor with PM-Store		
Coverage	Spec	[ISO/IEEE 11073-20601-2015A] 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.		
		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_067 AND C_MAN_OXP_003		
Other PICS				
Initial condition The PHG under test is in the Operating state.		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)
	}
	}
	}
	ObservationScan ::= { obj-handle: 1
	attributes: AttributeList ::= {
	AVA-Type ::= {
	attribute-id: 2636 (MDC_ATTR_NU_VAL_OBS_BASIC) attribute-value: 1
	}
	}
	2. Check the response of the PHG under test.
	3. The simulated PHD sends a confirmed fixed format event report with one measurement.
	<ol> <li>Check the response of the PHG under test.</li> </ol>
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-005			
TP label		INR Attribute-Value-Map. Order change			
Coverage	Spec	[ISO/IEEE 11073-10418C]			
	Testable items	INR 10; 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_067			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		<ol> <li>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.</li> </ol>			
		2. The simulated PHD waits until it receives a confirmation.			

	<ol> <li>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.</li> </ol>
	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.
	10. If the PHG under test responds with association request response with "accepted- unknown-config", then
	<ul> <li>The simulated PHD sends the confirmed configuration event report with the standard configuration.</li> </ul>
	• 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/IN	IR/BV-006	
TP label		INR Attribute-Value-Map	o. Adding additional attri	butes to the Attribute-Value-Map
Coverage	Spec	[ISO/IEEE 11073-10418	3C]	
	Testable items	INR 10;M		
Test purpose		Check that:		
		For [Standard-Configura	ation] the [Attribute-Value	e-Map] attribute shall be present
		The value of the [Attribu MDC_ATTR_TIME_STA		shall be MDC_ATTR_NU_VAL_OBS_BASIC
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	<ol> <li>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.</li> </ol>
	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.
	<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC attribute.</li> </ol>
	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 ld		TP/PLT/PHG/CLASS/INR/BV-007		
TP label		INR Unit-Code. Use default INR units – variable format observation		
Coverage	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		
Applicabilit	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 proced	lure	1. 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/PLT/PHG/CLASS/INR/BV-008		
TP label		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.		
Applicabilit	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		<ol> <li>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.</li> </ol>		
		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-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	se	Check that:	
		The PHG receives a NaN value (variable format event report) but it does not use this value.	
Applicabilit	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		1. 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	6e	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_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		<ol> <li>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.</li> <li>The simulated PHD waits until it receives a confirmation from the PHG under test.</li> </ol>
Pass/Fail criteria		<ul> <li>2. The simulated PHD waits until it receives a confirmation from the PHG under test.</li> <li>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).</li> </ul>
Notes		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 purpos	e	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_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		<ol> <li>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]).</li> </ol>	
		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 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 1800.		
Test procedure		<ol> <li>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.</li> </ol>		
		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-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.
Applicabilit	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		<ol> <li>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]).</li> </ol>
		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-014	
TP label		Special values. Negative infinity – 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 –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		<ol> <li>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.</li> </ol>	
		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-015	
TP label		Special values. Negative 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		<ol> <li>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]).</li> </ol>	
		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-016		
TP label		Special values. Reserved – fixed format (Std Config 1800)		
Coverage Spec [ISO/IEEE 11073-10418C]		[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		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		<ol> <li>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.</li> </ol>		
		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-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 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 condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1800.		
Test procedure		<ol> <li>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]).</li> </ol>		
		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.
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TP ld		TP/PLT/PHG/CLASS/INR/BV-018		
TP label		Control Calibration Attribute-Value-Map. Order change		
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.		
Test procedure		<ol> <li>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.</li> </ol>		
		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 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. 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 INR units INR observation.		
		12. The simulated PHD waits until it receives a confirmation.		
Pass/Fail crit	teria	• 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		

Notes	
	<ul> <li>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.</li> </ul>
	a time stamp derived from the observation's time stamp (i.e., the actual observation may have occurred sometime in the past).

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		<ol> <li>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.</li> </ol>		
		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.		
		<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC attribute.</li> </ol>		
		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).		
		<ul> <li>In steps 4 and 6, verify that the PHG under test uses INR units as the unit code for the measurement reports.</li> </ul>		
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 purpose		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		
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 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)		
Coverage Spec		[ISO/IEEE 11073-10418C]		
	Testable items	CtrlCal 7; 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_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		<ol> <li>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.</li> <li>The simulated PHD waits until it receives a confirmation from the PHG under test.</li> </ol>		
Pass/Fail criteria		<ul> <li>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).</li> </ul>		
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 purpos	e	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_067		
Other PICS				
Initial condition		The simulated PHD and the configuration 1801.	PHG under test are in the Operati	ng state using the standard
Test procedure		Calibration Object) cont 0,	ids a confirmed fixed event report f aining an observation value set to 0800]) and a time stamp.	,
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		if they were an actual m	ler test is able to accept the data, b easurement (e.g., if there is a UI, v that indicates it is not a measurem	verify that the measurement is
Notes		This test case has been cor	sidered 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 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_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		<ol> <li>The simulated PHD sends a confirmed fixed 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]) and a time stamp.</li> </ol>		
		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/INR/BV-024	
		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		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		<ol> <li>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.</li> </ol>	
		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/INR/BV-025 Special values. Reserved – fixed format (Std Config 1801)		
	Testable items	CtrlCal 7; 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		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		<ol> <li>The simulated PHD sends a confirmed fixed 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]) and a time stamp.</li> </ol>		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		<ul> <li>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).</li> </ul>		

Notes This test case has been considered as an implicit test case.
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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 purpos	se	Check that:		
		The PHG receives a NaN value (variable format event report) but it does not use this value.		
Applicabilit	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		<ol> <li>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]).</li> </ol>		
		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 purpos	se	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_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		<ol> <li>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]).</li> </ol>		
		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.
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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 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_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		<ol> <li>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]).</li> </ol>	
		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/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.		
Applicabilit	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		<ol> <li>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]).</li> </ol>		
		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-030		
TP label		Special values. Reserved – variable format (Std Config 1801)		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	CtrlCal 13; R		
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_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		<ol> <li>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]).</li> </ol>		
		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		TP/PLT/PHG/CLASS/SABTE/BV-000			
TP label		Association procedure PHG SABTE			
Coverage Spec		[ISO/IEEE 11073-10424]			
	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 purpos	se	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= '10000000000000'B		
	nomenclature-version = '100000000000000000000000000000000000		
	□ functional-units = '00000000000000000000000000000000000		
	system-type = '000000010000000000000000000000'B		
	dev-config-id = 16440		
	data-rep-mode-capab =		
	<ul> <li>data_req_mode_flags= '00000000000001'B</li> </ul>		
	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.
		<ul> <li>If association is rejected –unsupported-assoc-version , field- value= 0x00 0x08.</li> </ul>
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.	enc	oding-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.	non	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.	sys	tem-id
		field- type = OCTET STRING

	1	
		□ field-length = 8 bytes
		□ field- value = ( EUI-64 manufacturer and device )
	k.	dev-config-id
		□ field- type = Configld
		$\Box  field-length = 2 \text{ bytes}$
		□ field- value = 0x00 0x00 (manager-config-response)
	١.	data-req-mode-flags (DataReqModeCapab)
		field- type = DataReqModeFlags
		$\Box  field-length = 2 \text{ bytes}$
		$\Box  field- value = 0x00 \ 0x00$
		PHG response to data-req-mode-flags is always 0.
	m.	data-req-init-agent-count (DataReqModeCapab)
		□ field- type = INT-U8
		$\Box  field-length = 1 byte$
		$\Box  \text{field- value} = 0x00$
	n.	data-req-init-manager-count (DataReqModeCapab)
		□ field- type = INT-U8
		$\Box  field-length = 1 byte$
		$\Box  \text{field- value} = 0x00$
Pass/Fail criteria	All chec	ked values are as specified in the test procedure.
Notes		
INDICS		eless] Value for protocol-version has been modified according to 20601-2015A.

TP Id TP label		TP/PLT/PHG/CLASS/SABTE/BV-001         Configuration Event Report. SABTE standard configuration 2400			
	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 purpos	se	Check that:			
		Response   Confirmed E		nessage using a "Remote Operation th an MDC_NOTI_CONFIG event 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	<ol> <li>The simulated PHD sends an Association Request to the PHG under test with dev- config-id set to 0x09 0x60 (SABTE – Std Config 2400)</li> </ol>		
	2. The PHG under test responds an Association Response, the field of interest is:		
	a. Result		
	□ field- type = INT-U16		
	$\Box  field-length = 2 \text{ bytes}$		
	□ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unkown-config)		
	IF the result of the Association Response was "accepted-unkown-config"		
	<ol> <li>The simulated PHD sends a configuration event report with config-report-id set to 0x07 0x08</li> </ol>		
	4. The PHG under test must respond with:		
	a. APDU Type		
	□ field-length = 2 bytes		
	□ field-value = 0xE7 0x00 (PrstApdu)		
	b. Invoke-id		
	$\Box  \text{field-type} = INT-U16$		
	$\Box  field-length = 2 \text{ bytes}$		
	field- value= it must be the same that the invoke-id of the simulated PHD's message.		
	c. Obj-Handle:		
	□ field- type = HANDLE		
	$\Box  field-length = 2 \text{ bytes}$		
	□ field-value = 0x00 0x00		
	d. Event-time:		
	□ field- type = INT-U32		
	$\Box  field-length = 4 \text{ bytes}$		
	□ field-value: 0xXX 0xXX		
	e. Event-type:		
	$\Box  field-length = 2 \text{ bytes}$		
	□ 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:		
	<ul> <li>accepted-config: 0x00 0x00</li> </ul>		
	5. IF C_MAN_OXP_085 THEN:		

1		
	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 SABTE measurement	
Pass/Fail criteria	<ul> <li>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"</li> </ul>	
	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 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
	Testable items	CommonCharac 4;M			
	Spec	[ISO/IEEE 11073-10424]			
	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	1. The simulated PHD sends a Confirmed variable event report:			
		a. ScanReportInfoVar. obs_scan_var:			
		$\Box$ Count = 2			
		□ Length = 64472			
		<pre>ObservationScan ::= {     obj-handle: 1         attributes: AttributeList ::= {             AVA-Type ::= {                 attribute-id: 61441                 attribute-value: '00(64448 bytes) 00'0</pre>			

	ObservationScan ::= {
	obj-handle: 1
	attributes: AttributeList ::= {
	AVA-Type ::= {
	attribute-id: 2636
	(MDC_ATTR_NU_VAL_OBS_BASIC)
	attribute-value: 1
	}
	}
	}
	2. Check the response of the PHG under test
	3. Simulated PHD sends a confirmed fixed format event report with one measurement.
	4. Check the response of the PHG under test
Pass/Fail criteria	<ul> <li>In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report"</li> </ul>
	In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report"
Notes	

TP ld		TP/PLT/PHG/CLASS/SABTE/BV-003			
TP label		Attribute-Value-Map. Order change			
Coverage	Spec	[ISO/IEEE 11073-10424]			
	Testable	DPU 10; M	DFG 10; M	DevMode 8; M	
	items	TherMode 8; M			
Test purpos	se	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	y	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		<ol> <li>The simulated PHD sends a confirmed fixed format event report with that matches the Attribute-Value-Map order of:</li> </ol>			
		a. MDC_ATTR_NU_VA Duration of Patient U	L_OBS_BASIC then MDC_ATT	R_TIME_STAMP_BO for	

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 there to be pauses for operator verification.
	•	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).
	•	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)
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).
	12.	The simulated PHD waits until it receives a confirmation
	10	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.
	11.	report that was sent. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (Observed value defined for every object, then
		The simulated PHD waits until there is a confirmation to the configuration event
		The simulated PHD sends the confirmed configuration event report with the standard configuration
	10.	If the PHG under test responds with association request response with "accepted- unknown-config", then
	9.	The simulated PHD sends an Association Request using the same standard configuration that was used previously
	8.	The simulated PHD waits until there is a Association Release Response
	7.	The simulated PHD sends an Association Release Request (normal)
	6.	The simulated PHD waits until it receives a confirmation
	5.	Send a confirmed fixed format event report with the date first followed by a value for every object.
	4.	The simulated PHD waits until it receives a confirmation
		d. MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_ENUM_OBS_VAL_SIMP_OID for Therapy Mode Set Object.
		c. MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_ENUM_OBS_VAL_SIMP_OID for Device Mode Set Object.
		<ul> <li>MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_NU_VAL_OBS_SIMP for Duration of Flow Generation Object.</li> </ul>
		<ul> <li>MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_NU_VAL_OBS_BASIC for Duration of Patient Use Object.</li> </ul>
	3.	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:
	2.	The simulated PHD waits until it receives a confirmation
		d. MDC_ATTR_ENUM_OBS_VAL_SIMP_OID, then MDC_ATTR_TIME_STAMP_BO for Therapy Mode Set.
		c. MDC_ATTR_ENUM_OBS_VAL_SIMP_OID, then MDC_ATTR_TIME_STAMP_BO for Device Mode Set
		<ul> <li>MDC_ATTR_NU_VAL_OBS_SIMP then MDC_ATTR_TIME_STAMP_BO for Duration of Flow Generation Object</li> </ul>

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]			
	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 condition		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		<ol> <li>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.</li> </ol>			
		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_MIN (2208).			
		4. The simulated PHD waits until it receives a confirmation			
		<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC Attribute.</li> </ol>			
		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 ld		TP/PLT/PHG/CLASS/SABTE/BV-005		
TP label		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] 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	<ol> <li>Send a confirmed variable format event report using a measurement in minutes</li> <li>The simulated PHD waits until it receives a confirmation</li> </ol>				
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 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		
Applicabilit	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.		
Test procedure		<ol> <li>Send a confirmed variable format event report using a measurement in minutes.</li> <li>The simulated PHD waits until it receives a confirmation.</li> </ol>		
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 ld		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_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	<ol> <li>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</li> </ol>		
	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/SABTE/BV-008			
TP label		Special values. Not a number – variable format (Std Config 2400)			
Coverage Spec		[ISO/IEEE 11073-10	0424]		
	Testable items	DPU 12; M	DFG 12; M		
Test purpose		Check that: The PHG receives a	a NaN value (variable format event repor	rt) but it does not use this value.	
Applicability	1	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		<ol> <li>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</li> <li>The simulated PHD waits until it receives a confirmation from the PHG under test</li> </ol>			
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			
<b>TP label</b> Special values. Not at this resolution - fixed format (Std Config 2400)				Std Config 2400)	
Coverage	Spec	[ISO/IEEE 11073-10	[ISO/IEEE 11073-10424]		
	Testable items	DPU 10; R	DFG 10; R		
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_069		
Other PICS		
Initial condition	The simulated PHD and PHG under test are in the Operating state using the standard configuration 2400.	
Test procedure	<ol> <li>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])</li> </ol>	
	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 11073-104	424]		
	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.			
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_069			
Other PICS					
Initial condi	ition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2400.			
Test procedure		<ol> <li>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])</li> </ol>			
		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. Positive infinity - 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 +INFINITY value (fixed format event report) but it does not use this value.				
Applicability		C_MAN_OXP_000 AND C_MA	AN_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		<ol> <li>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) = 0x007FFFFE for Duration of Flow Generation]) and a time stamp</li> </ol>				
		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-012			
TP label		Special values. Positive infinity - variable format (Std Config 2400)			
Coverage Spec		[ISO/IEEE 11073-1042	24]		
	Testable items	DPU 12; R	DFG 12; 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_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		<ol> <li>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])</li> </ol>			
		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. Negative infinity - fixed format (Std Config 2400)			
Coverage	Spec	[ISO/IEEE 11073-104	424]		
	Testable items	DPU 10; M	DFG 10; N	1	
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_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		<ol> <li>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</li> </ol>			
		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 label		TP/PLT/PHG/CLASS/SABTE/BV-014			
		Special values. Negative infinity - variable format (Std Config 2400)			
Coverage Spec		[ISO/IEEE 11073-104	[ISO/IEEE 11073-10424]		
	Testable items	DPU 12; R	DFG 12; R		
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_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		<ol> <li>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])</li> </ol>			
		<ol> <li>The simulated PHD waits until it receives a confirmation from the PHG under test</li> </ol>			

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 11073-1	10424]	,
	Testable items	DPU 10; M	DFG 10; M	
Test purpose		Check that: The PHG receives use this value.	a Reserved for future use value (fixed forma	at event report) but it does not
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		<ol> <li>The simulated PHD sends a confirmed fixed event report for handle 1 (Duration of Patien 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</li> <li>The simulated PHD waits until it receives a confirmation from the PHG under test</li> </ol>		
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/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 Reserved for future use 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 condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1800.		
Test procedure			a confirmed variable event repo andle 2 (Duration of Flow Gener	ĩ

	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 Subgroup 2.3.16: Continuous glucose monitor (CGM)

TP ld		TP/PLT/PHG/CLASS/CGM/BV-000			
TP label		Association procedure PHG Continuous Glucose Monitor			
Coverage Spec		[ISO/IEEE 11073-10425]			
	Testable items	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 purpos	e	Check that:			
		The result field shall be set 11073-20601-2016C].	to an appropriate response from	n 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 co valid EUI-64 type identifier	ontain the unique system id of th	e PHG device, which shall be a	
		[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	<ul> <li>1. The simulated PHD sends an Association Request to the PHG under test, with the fields:</li> <li>protocol-version = '010000000000000000000000000000000000</li></ul>	
	If association is rejected -unauthorized, field- value= 0x00 0x07.	
	<ul> <li>If association is rejected –unsupported-assoc-version, field- value= 0x00 0x08.</li> <li>c. selected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data-</li> </ul>	
	proto-info(defined by data-proto-id))	
	d. data-proto-id	
	field- type = DataProtold	
	$\Box  field-length = 2 \text{ bytes}$	

- □ 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)
  - □ field-value = depends on the encoding rules supported/selected, but only one can be supported at a time
- g. nomenclature version
  - □ field- type = NomenclatureVersion
  - $\Box \quad field-length = 4 \text{ bytes (BITS-32)}$
  - □ 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
  - $\Box$  field-length = 2 bytes
  - $\Box \quad field-value = 0x00 \ 0x00$
  - D 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
  - $\Box$  field- value = 0x00
- n. data-req-init-manager-count (DataReqModeCapab)
  - □ field- type = INT-U8

Notes	
Pass/Fail criteria	All checked values are as specified in the test procedure.
	$\Box  \text{field-value} = 0x00$
	□ field-length = 1 byte

TP ld		TP/PLT/PHG/CLASS/CGM/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 11073-20601-2016C]			
	Testable items	ConfEventRep 18;M			
Test purpose		Response   Confirmed Even	t Report" data message with a	sage using a "Remote Operation 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 Continuous Glucose 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 11073-104xx 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.			
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 procedure		config-id set to 0x09 0x	nds an Association Request to C4 (Continuous Glucose Moni sponds an Association Respon	tor PHD – Std Config 2500)	
			2 bytes	x03 (accepted-unkown-config) unkown-config"	

	3.	The simulated PHD sends a configuration event report with config-report-id set to 0x09 0xC4
	4.	The PHG under test must respond with:
		a. APDU Type
		$\Box  \text{field-length} = 2 \text{ bytes}$
		□ field-value = 0xE7 0x00 (PrstApdu)
		b. Invoke-id
		□ field- type = INT-U16
		$\Box  \text{field-length} = 2 \text{ bytes}$
		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
		$\Box  field-length = 4 \text{ bytes}$
		□ 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.
	Wai	t until the Operating state is reached in both cases
	6.	The simulated PHD sends a fixed event report with one CGM 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/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		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 conditi	ion	The PHG under test is in the Operating state.		
Initial condition Test procedure		<pre>1. The simulated PHD sends a Confirmed variable event report: a. ScanReportInfoVar. obs_scan_var:     Count = 2     Count = 2     Length = 856     ObservationScan ::= {         obj-handle: 1             attributes: AttributeList ::= {                 AVA-Type ::= {                      attribute-value: '00( 832 bytes) 00'0</pre>		
Pass/Fail crit	teria	<ul> <li>4. Check the response of the PHG under test</li> <li>In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report.</li> <li>In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report.</li> </ul>		

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	/	C_MAN_OXP_000 AND C_MAN_OXP_073 AND C_MAN_OXP_003		
Other PICS				
Initial condit	tion	The PHG under test is in the Operating state.		
Initial condition Test procedure		<pre>1. The simulated PHD sends a Confirmed variable event report: a. ScanReportInfoVar.obs_scan_var:</pre>		
		<ol> <li>Check the response of the PHG under test.</li> <li>The simulated PHD sends a Confirmed fixed event report with one measurement.</li> </ol>		
		4. Check the response of the PHG under test.		
Pass/Fail criteria		<ul> <li>In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report"</li> <li>In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report"</li> </ul>		

Notes	

TP ld		TP/PLT/PHG/CLASS/CGM/BV-003			
TP label		Glucose Attribute-Value-Map. Order change			
Coverage	Spec	[ISO/IEEE 11073-10425]			
	Testable items	ilucose 14; 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_BASIC, then MDC_ATTR_TIME_STAMP_BO			
Applicability	1	_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 proced	ure	1. 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 (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			
		5. 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			
		<ol> <li>The simulated PHD sends an Association Request using the same standard configuration that was used previously</li> </ol>			
		<ol> <li>If the PHG under test responds with association request response with "accepted- unknown-config", then:</li> </ol>			
		<ul> <li>Simulated PHD sends the confirmed configuration event report with the standard configuration</li> </ul>			
		<ul> <li>Simulated PHD waits until there is a confirmation to the configuration event report that was sent.</li> </ul>			
		<ol> <li>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.</li> </ol>			
		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			

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.
	<ul> <li>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).</li> </ul>
	another unit-code)

TP ld		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		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	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). (Glucose Numeric object [Unit-Code] attribute is set to MDC_DIM_MILLI_G_PER_DL)			
Test procedure		<ol> <li>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.</li> </ol>			
		2. The simulated PHD waits until it receives a confirmation			
		<ol> <li>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).</li> </ol>			
		4. The simulated PHD waits until it receives a confirmation			
		<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_NU_VAL_OBS_BASIC Attribute.</li> </ol>			
		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 ld	TP/PLT/PHG/CLASS/CGM/BV-005
TP label	Glucose Unit-Code. Use default Glucose units - variable format observation

Coverage	Spec	[ISO/IEEE 11073-10425]			
	Testable items	Glucose 12; 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_MILLI_G_PER_DL			
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		<ol> <li>Send a confirmed variable format event report using a measurement using MDC_DIM_MILLI_G_PER_DL units.</li> </ol>			
		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_MILLI_G_PER_DL 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 different set of 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 purpose		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_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		<ol> <li>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</li> <li>The simulated PHD waits until it receives a confirmation from the PHG under test</li> </ol>		
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	coverage Spec [ISO/IEEE 11073-10425]			
	Testable items	Glucose 18; M		
Test purpose		Check that: The PHG receives a NaN value (variable format event report) but it does not use this value.		
Applicabilit	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 standard configuration 2500.		
Test procedure		<ol> <li>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])</li> </ol>		
		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/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 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_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		<ol> <li>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</li> </ol>		
		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]		[ISO/IEEE 11073-10425]		
	Testable items	Glucose 18; 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_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		<ol> <li>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])</li> </ol>		
		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 label		TP/PLT/PHG/CLASS/CGM/BV-010 Glucose Special values. Positive infinity - fixed format (Std Config)					
							Coverage
	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		<ol> <li>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</li> </ol>					
		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 label		TP/PLT/PHG/CLASS/CGM/BV-011 Glucose Special values. Positive infinity - variable format (Std Config)					
							Coverage
	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.					
Applicabilit	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 standard configuration 2500.					
Test procedure		<ol> <li>The simulated PHD sends a confirmed variable 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])</li> </ol>					
		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-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		<ol> <li>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</li> </ol>				
		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 label		TP/PLT/PHG/CLASS/CGM/BV-013 Glucose Special values. Negative infinity - variable format (Std Config)					
							Coverage
	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		<ol> <li>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])</li> </ol>					
		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 label		TP/PLT/PHG/CLASS/CGM/BV-014 Glucose Special values. Reserved - fixed format (Std Config)					
							Coverage Spec
	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		<ol> <li>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</li> </ol>					
		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 label		TP/PLT/PHG/CLASS/CGM/BV-015 Glucose Special values. Reserved - variable format (Std Config)				
	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		<ol> <li>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])</li> </ol>				
		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	anProcAsPSM 10;M ManProcAsPSM 11;M ManProcAsPSM				
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							

	<u> </u>						
	[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					
	[AN	[AND]					
		The version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000)					
	[AN	[AND]					
		The field functional-units shall have all bits reset except for those relating to a Test Association.					
	[AN	[AND]					
	The	The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000)					
	[AN	[AND]					
		The System-Id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier					
	[AN	ID]					
	The	e fielo	d dev-config-id shall be manager-config-response (0)				
	[AN	ID]					
	The	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_1	C_MAN_OXP_000 AND (C_MAN_OXP_076 OR C_MAN_OXP_077)					
Other PICS							
Initial condition	PH	PHG is in the unassociated State					
Test procedure         1. Simulated PHI		Sim	nulated PHD sends an Association Request to the PHG under test, with the fields:				
			protocol-version = '1100000000000000000000000000000000'B				
			encoding-rules= '100000000000000'B				
			nomenclature-version = '100000000000000000000000000000000000				
			functional-units = '00000000000000000000000000000000000				
			system-type = '000000001000000000000000000000000000				
			dev-config-id = 16440				
			data-req-mode-capab =				
			<ul> <li>data_req_mode_flags= '000000000000001'B</li> </ul>				
			<ul> <li>data_req_init_agent_count = 1 (for standard configuration)</li> </ul>				
			data_req_init_manager_count = 0				
			option-list.length= 0				
	2.	PH	G 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				

		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
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.	sys	tem-id
		field- type = OCTET STRING
		field-length = 8 bytes
		field- value = (EUI-64 manufacturer and device)
k.	dev	r-config-id
		field- type = ConfigId

		□ field-length = 2 bytes
		□ field- value = 0x00 0x00 (manager-config-response)
	١.	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	cked values are as specified in the test procedure.
Notes		

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	C]		
	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		C_MAN_OXP_000 AND C_M	AN_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	<ol> <li>The simulated PHD sends an Association Request to the PHG under test with dev- config-id set to 0x0A 0x8C (Power Status Monitor PHD – Std Config 2700)</li> </ol>		
	2. PHG under test responds an Association Response, the field of interest is:		
	a. Result		
	□ field- type = INT-U16		
	$\Box  field-length = 2 \text{ bytes}$		
	☐ 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		
	$\Box  field-length = 2 \text{ bytes}$		
	□ field-value = 0xE7 0x00 (PrstApdu)		
	b. Invoke-id		
	□ field- type = INT-U16		
	$\Box  field-length = 2 \text{ bytes}$		
	field-value = it must be the same that the invoke-id of the simulated PHD's message.		
	c. Obj-Handle:		
	field- type = HANDLE		
	$\Box  field-length = 2 \text{ bytes}$		
	$\Box  field-value = 0x00 \ 0x00$		
	d. Event-time:		
	□ field- type = INT-U32		
	$\Box  field-length = 4 \text{ bytes}$		
	□ field-value = 0xXX 0xXX		
	e. Event-type:		
	$\Box  field-length = 2 \text{ bytes}$		
	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-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 Operating state PHG is forced to enable the scanner object.		

	Wait until Operating state is reached in both cases
	<ol> <li>Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object.</li> </ol>
Pass/Fail criteria	<ul> <li>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"</li> </ul>
	The measurements are correctly presented
Notes	

TP ld		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 11073-20601-20	016C]			
	Testable items	ConfEventRep 18;M				
Test purpos	se	Check that:				
		Response   Confirmed Eve	a configuration notification message using a "Remote Operation ent Report" data message with an MDC_NOTI_CONFIG event o structure for the event-info field	l		
		[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 (2701)				
Test procedure		<ol> <li>The simulated PHD sends an Association Request to the PHG under test with dev- config-id set to 0x0A 0x8C (Power Status Monitor PHD – Std Config 2701)</li> </ol>				
		2. PHG under test respon	nds an Association Response, the field of interest is:			
		a. Result				
		□ field- type = I	NT-U16			
		field-length =	•			
			0x00 0x00 (accepted) or 0x00 0x03 (accepted-unkown-config)			
		IF the result of the Associa	tion Response was "accepted-unkown-config"			

	3. Simulated PHD sends a configuration event report with config-report-id set to 0x0A 0	x8C
	4. PHG under test must respond with:	
	a. APDU Type	
	$\Box  field-length = 2 \text{ bytes}$	
	□ field-value = 0xE7 0x00 (PrstApdu)	
	b. Invoke-id	
	□ field- type = INT-U16	
	$\Box  field-length = 2 \text{ bytes}$	
	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	
	$\Box  field-length = 4 \text{ bytes}$	
	$\Box  \text{field-value} = 0 \text{xXX} 0 \text{xXX}$	
	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	of
	ConfigReportRsp.config-result: One of:	
	<ul> <li>accepted-config: 0x00 0x00</li> </ul>	
	5. IF C_MAN_OXP_085 THEN:	
	d. 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-ic set to 0 to indicate all attributes.	
	e. 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 th mds-time-mgr-set-time bit is not set.	
	f. Once in Operating state, PHG is forced to enable the scanner object.	
	Wait until Operating state is reached in both cases	
	<ol> <li>Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object</li> </ol>	
Pass/Fail criteria	<ul> <li>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"</li> </ul>	∍d"
	The measurements are correctly presented	

TP ld	TP/PLT/PHG/CLASS/PSM/BV-003
TP label	Configuration Event Report. Power Status Monitor standard configuration 2702

Coverage	Spec	[ISO/	IEEE 11073-10427]			
C	Testable		ProcPSM 4;M	MDSEventsPSM 2;M		
	items	Com				
	Spec	[ISO/	IEEE 11073-20601-2	2016C]		
	Testable items	Confl	EventRep 18;M			
Test purpose	е	Chec	k that:			
		Resp	onse   Confirmed Ev	o a configuration notification message ent Report" data message with an I sp structure for the event-info field		
		[AND	]			
			wer Status Monitor F ïrmed] event report r	HG shall respond to an [MDS-Conf response.	iguration-Event] using a	
		The F	Response shall inclue	de the event-reply-info [ConfigRepo	ortRsp]	
		[AND	]			
		stand	lards shall be able to	(or more) of the ISO/IEEE 11073-1 accept all the standard device cont nce Table 23 under Gen-4.		
		[AND	]			
		enter		ay request the PHD to send the star and check attributes from the MDS		
Applicability	,	C_M/	AN_OXP_000 AND (	C_MAN_OXP_076		
Other PICS		C_M/	AN_OXP_085			
Initial condit	ion			under test are in the unassociated us Monitor device specialization with		
Test procedu	ure	<ol> <li>The simulated PHD sends an Association Request to the PHG under test with dev- config-id set to 0x0A 0x8C (Power Status Monitor PHD – Std Config 2702)</li> </ol>				
		2. F	PHG under test respo	onds an Association Response, the	field of interest is:	
		a	a. Result			
			field- type =	INT-U16		
			G field-length	= 2 bytes		
			□ field-value =	0x00 0x00 (accepted) or 0x00 0x0	3 (accepted-unkown-config)	
		IF the result of the Association Response was "accepted-unkown-config"				
		3. 5	Simulated PHD send	s a configuration event report with c	config-report-id set to 0x0A 0x8C	
		4. F	PHG under test must	respond with:		
		a	a. APDU Type			
			field-length :	= 2 bytes		
			field-value =	0xE7 0x00 (PrstApdu)		
		t	o. Invoke-id			
			□ field- type =	INT-U16		
			field-length	= 2 bytes		
			field-value = message.	it must be the same that the invoke	e-id of the simulated PHD's	
		c	c. Obj-Handle:			
			field- type =	HANDLE		

		□ field-length = 2 bytes
		$\Box  \text{field-value} = 0x00 \ 0x00$
	c	. Event-time:
		□ field- type = INT-U32
		$\Box  field-length = 4 \text{ bytes}$
		$\Box  \text{field-value} = 0 \text{xXX} 0 \text{xXX}$
	e	. Event-type:
		$\Box  field-length = 2 \text{ bytes}$
		□ 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:
		<ul> <li>accepted-config: 0x00 0x00</li> </ul>
	5. I	C_MAN_OXP_085 THEN:
	g	<ul> <li>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.</li> </ul>
	ł	. 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.
	i.	Once in Operating state, PHG is forced to enable the scanner object.
	Wait	intil Operating state is reached in both cases
		imulated PHD sends a variable event report for each Battery Status and Battery apacity object.
Pass/Fail criteria		he PHG under test must respond either to the Association Request with an "accepted" ressage or to the Configuration Event Report with an "accepted-config"
	• 1	he measurements are correctly presented
Notes		

TP ld		TP/PLT/PHG/CLASS/PSM/BV-004				
TP label		Configuration Event Report. Power Status Monitor standard configuration 2703				
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:				
		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 (2703)		
Test procedure	<ol> <li>The simulated PHD sends an Association Request to the PHG under test with dev- config-id set to 0x0A 0x8C (Power Status Monitor PHD – Std Config 2703)</li> </ol>		
	2. PHG under test responds an Association Response, the field of interest is:		
	a. Result		
	□ field- type = INT-U16		
	$\Box  field-length = 2 bytes$		
	□ 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		
	$\Box  field-length = 2 \text{ bytes}$		
	□ field-value = 0xE7 0x00 (PrstApdu)		
	b. Invoke-id		
	□ field- type = INT-U16		
	$\Box  field-length = 2 \text{ bytes}$		
	field-value = it must be the same that the invoke-id of the simulated PHD's message.		
	c. Obj-Handle:		
	□ field- type = HANDLE		
	$\Box  field-length = 2 \text{ bytes}$		
	□ field-value = 0x00 0x00		
	d. Event-time:		
	□ field- type = INT-U32		
	$\Box  field-length = 4 \text{ bytes}$		
	$\Box  \text{field-value} = 0 \text{xXX} 0 \text{xXX}$		
	e. Event-type:		
	$\Box  \text{field-length} = 2 \text{ bytes}$		
	□ field-value = MDC_NOTI_CONFIG		

	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:
	<ul> <li>accepted-config: 0x00 0x00</li> </ul>
	5. IF C_MAN_OXP_085 THEN:
	j. 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.
	k. 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.
	I. Once in Operating state, PHG is forced to enable the scanner object.
	Wait until Operating state is reached in both cases
	<ol> <li>Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object.</li> </ol>
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		TP/PLT/PHG/CLASS/PSM/BV-005			
TP label		Configuration Event Report. Power Status Monitor standard configuration 2704			
Coverage Spec		[ISO/IEEE 11073-10427]			
	Testable items	ConfProcPSM 4;M	MDSEventsPSM 2;M		
	Spec	[ISO/IEEE 11073-20601-201	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 (2704)				
Test procedure	<ol> <li>The simulated PHD sends an Association Request to the PHG under test with dev- config-id set to 0x0A 0x8C (Power Status Monitor PHD – Std Config 2704)</li> </ol>				
	2. PHG under test responds an Association Response, the field of interest is:				
	a. Result				
	□ field- type = INT-U16				
	$\Box  field-length = 2 \text{ bytes}$				
	☐ 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				
	$\Box  field-length = 2 \text{ bytes}$				
	field-value = 0xE7 0x00 (PrstApdu)				
	b. Invoke-id				
	□ field- type = INT-U16				
	$\Box  field-length = 2 \text{ bytes}$				
	field-value = it must be the same that the invoke-id of the simulated PHD's message.				
	c. Obj-Handle:				
	□ field- type = HANDLE				
	$\Box  field-length = 2 \text{ bytes}$				
	$\Box  field-value = 0x00 \ 0x00$				
	d. Event-time:				
	□ field- type = INT-U32				
	$\Box  field-length = 4 \text{ bytes}$				
	$\Box  field-value = 0xXX \ 0xXX$				
	e. Event-type:				
	$\Box  field-length = 2 \text{ bytes}$				
	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:				
	<ul> <li>accepted-config: 0x00 0x00</li> </ul>				
	5. IF C_MAN_OXP_085 THEN:				
	m. 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.				
	<ul> <li>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.</li> </ul>				
	o. Once in Operating state PHG is forced to enable the scanner object.				

	Wait until Operating state is reached in both cases		
	<ol> <li>Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object.</li> </ol>		
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		TP/PLT/PHG/CLASS/PSM/BV-006				
TP label		Configuration Event Report. Power Status Monitor standard configuration 2705				
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	e	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	tion	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 proced	ure	<ol> <li>The simulated PHD sends an Association Request to the PHG under test with dev- config-id set to 0x0A 0x8C (Power Status Monitor PHD – Std Config 2705)</li> </ol>				
		2. PHG under test responds an Association Response, the field of interest is:				
		a. Result				
		□ field- type = INT-U16				
		□ field-length = 2 l	•			
		□ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unkown-config)				
		IF the result of the Association	n Response was "accepted-unko	wn-config"		

	3. Simulated PHD sends a configuration event report with config-report-id set to 0x0A 0x	x8C
	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	
	□ field-value = 0x00 0x00	
	d. Event-time:	
	□ field- type = INT-U32	
	$\Box  field-length = 4 \text{ bytes}$	
	□ 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	of
	ConfigReportRsp.config-result: One of:	
	<ul> <li>accepted-config: 0x00 0x00</li> </ul>	
	5. IF C_MAN_OXP_085 THEN:	
	p. 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-ic set to 0 to indicate all attributes.	
	q. 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 th mds-time-mgr-set-time bit is not set.	
	r. 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	<ul> <li>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"</li> </ul>	:d"
	The measurements are correctly presented	

TP ld	TP/PLT/PHG/CLASS/PSM/BV-007
TP label	Configuration Event Report. Power Status Monitor standard configuration 2706

Coverage	Spec	[ISO/I	EEE 11073-10427]				
	Testable items	ConfF	ProcPSM 4;M	MDSEventsPSM 2;M			
	Spec	[ISO/IEEE 11073-20601-2016C]					
	Testable items	ConfE	EventRep 18;M				
Test purpose		Checl	< that:				
		Resp	onse   Confirmed Eve	a configuration notification messa nt Report" data message with an structure for the event-info field	MDC_NOTI_CONFIG event		
		[AND]					
			ver Status Monitor PH irmed] event report re	IG shall respond to an [MDS-Cor sponse.	nfiguration-Event] using a		
		The R	esponse shall include	e the event-reply-info [ConfigRep	portRsp]		
		[AND]	l				
		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]	l				
		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	tion	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	ure	<ol> <li>The simulated PHD sends an Association Request to the PHG under test with dev- config-id set to 0x0A 0x8C (Power Status Monitor PHD – Std Config 2706)</li> </ol>					
			-	nds an Association Response, th			
		a		•			
			□ field- type = II	NT-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 = 0	0xE7 0x00 (PrstApdu)			
		b	. Invoke-id				
			□ field- type = II	NT-U16			
			□ field-length =	2 bytes			
			field-value = i message.	t must be the same that the invol	ke-id of the simulated PHD's		
		с	. Obj-Handle:				
		1	field- type = H				

	$\Box  field-length = 2 \text{ bytes}$
	□ field-value = 0x00 0x00
	d. Event-time:
	□ field- type = INT-U32
	$\Box  field-length = 4 \text{ bytes}$
	$\Box  \text{field-value} = 0 \text{xXX} 0 \text{xXX}$
	e. Event-type:
	$\Box  field-length = 2 \text{ bytes}$
	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:
	<ul> <li>accepted-config: 0x00 0x00</li> </ul>
	5. IF C_MAN_OXP_085 THEN:
	s. 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.
	t. 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.
	u. Once in Operating state, PHG is forced to enable the scanner object.
	Wait until Operating state is reached in both cases
	<ol> <li>Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object.</li> </ol>
Pass/Fail criteria	<ul> <li>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"</li> </ul>
	The measurements are correctly presented
Notes	

TP Id TP label		TP/PLT/PHG/CLASS/PSM/BV-008         Configuration Event Report. Power Status Monitor standard configuration 2707				
						Coverage
	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 (2707)			
Test procedure	<ol> <li>The simulated PHD sends an Association Request to the PHG under test with dev- config-id set to 0x0A 0x8C (Power Status Monitor PHD – Std Config 2707)</li> </ol>			
	2. PHG under test responds an Association Response, the field of interest is:			
	a. Result			
	$\Box  \text{field-type} = \text{INT-U16}$			
	$\Box  field-length = 2 \text{ bytes}$			
	□ 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			
	$\Box  field-length = 2 \text{ bytes}$			
	□ 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			
	$\Box  field-length = 2 \text{ bytes}$			
	$\Box  \text{field-value} = 0x00 \ 0x00$			
	d. Event-time:			
	□ field- type = INT-U32			
	$\Box  field-length = 4 \text{ bytes}$			
	$\Box  \text{field-value} = 0 \text{xXX} 0 \text{xXX}$			
	e. Event-type:			
	$\Box  field-length = 2 \text{ bytes}$			
	□ 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:
	<ul> <li>accepted-config: 0x00 0x00</li> </ul>
	5. IF C_MAN_OXP_085 THEN:
	<ul> <li>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.</li> </ul>
	w. 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.
	x. Once in Operating state, PHG is forced to enable the scanner object.
	Wait until Operating state is reached in both cases
	<ol> <li>Simulated PHD sends a variable event report for each Battery Status and Battery Capacity object.</li> </ol>
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		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 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.				
		The PHG's receive buffer shall be at least as large as the largest buffer specified in the specialization the PHG supports.				
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_076				
Other PICS						
Initial cond	ition	PHG under test is in Operating state				
Test proced	lure	1. Simulated PHD sends a Confirmed variable event report:				
		a. ScanReportInfoVar. obs_scan_var:				
		$\Box$ Count = 2				
		□ Length = 900				
		Observati obj-han	onScan ::= { dle: 1			

	<pre>attributes: AttributeList ::= {     AVA-Type ::= {         attribute-id: 61441         attribute-value: '00( 852 bytes) 00'0         }     }     ObservationScan ::= {         obj-bandle: 1     } }</pre>		
	<pre>obj-handle: 1     attributes: AttributeList ::= {     AVA-Type ::= {         attribute-id: 2460 (MDC_ATTR_NU_CMPD_VAL_OBS)         attribute-value: 100% and 100 min remaining      }     } }</pre>		
	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	<ul> <li>In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report.</li> <li>In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report.</li> </ul>		
Notes	Ntx is given by the formula Ntx(i) = $28 + (102 + S) \times i$ , 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 940 octets for implementations supporting eight batteries.		

TP ld		TP/PLT/PHG/CLASS/PSM/BV-009_B		
TP label		Maximum APDU size: Power Status Monitor with Advanced PSM profile		
Coverage Spec		[ISO/IEEE 11073-20601-2	016C]	
	Testable items	CommonCharac 4; M		
	Spec	[ISO/IEEE 11073-10427]		
	Testable items	ComCharPSM 2; M	AdvPSMProf 9; 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.		
		The PHG's receive buffer shall be at least as large as the largest buffer specified in the specialization the PHG supports.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_077		
Other PICS				
Initial condition		PHG under test is in Operating state		
Test procedure		1. Simulated PHD sends a Confirmed variable event report:		
		<ul><li>a. ScanReportInfoVar. obs_scan_var:</li><li>Count = 2</li></ul>		

	$\Box  \text{Length} = 1620$	
	<pre>ObservationScan ::= {     obj-handle: 1         attributes: AttributeList ::= {             AVA-Type ::= {                 attribute-id: 61441                 attribute-value: '00(1572 bytes) 00'0</pre>	
	<ol> <li>Check the response of the PHG under test</li> <li>Simulated PHD sends a Confirmed variable event report with one measurement.</li> <li>Check the response of the PHG under test</li> </ol>	
Pass/Fail criteria	<ul> <li>In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report.</li> <li>In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report.</li> </ul>	
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 Id TP/PLT/PHG/CLASS/PSM/BV-010		TP/PLT/PHG/CLASS/PSM/BV-010		
TP label		Battery Status Attribute-Value-Map. Order change. 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 condition The simulated PHD and PHG under test are in the Operating state using the st configuration 2700		The simulated PHD and PHG under test are in the Operating state using the standard configuration 2700		
Test procedure		<ol> <li>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</li> </ol>		
		2. The simulated PHD waits until it receives a confirmation		

(	
	<ol> <li>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.</li> </ol>
	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
	<ol> <li>The simulated PHD sends an Association Request using the same standard configuration that was used previously (2700)</li> </ol>
	<ol> <li>If the PHG under test responds with association request response with "accepted- unknown-config", then:</li> </ol>
	<ul> <li>Simulated PHD sends the confirmed configuration event report with the standard configuration 2700</li> </ul>
	• Simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	<ol> <li>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).</li> </ol>
	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.		
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		
		<ol> <li>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</li> </ol>		

	MDC_ATTR_TIME_STAMP_BO
	2. The simulated PHD waits until it receives a confirmation
	<ol> <li>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.</li> </ol>
	4. The simulated PHD waits until it receives a confirmation
	<ol><li>The simulated PHD sends a confirmed fixed format event report with the date first followed by a battery status value.</li></ol>
	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
	<ol> <li>The simulated PHD sends an Association Request using the same standard configuration that was used previously (2701)</li> </ol>
	<ol> <li>If the PHG under test responds with association request response with "accepted- unknown-config", then:</li> </ol>
	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.
	<ol> <li>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).</li> </ol>
	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).
	<ul> <li>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).</li> </ul>
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-012		
TP label Ba		Battery Status Attribute-Value-Map. Order change. Standard Configuration 2702.		
Coverage	Spec	[ISO/IEEE 11073-10427]         BattStatus 25; M		
	Testable items			
Test purpos	se	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 u configuration 2702	under test are in the Operating s	tate using the standard

Test procedure	<ol> <li>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</li> </ol>
	2. The simulated PHD waits until it receives a confirmation
	<ol> <li>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.</li> </ol>
	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 (2702)
	10. If the PHG under test responds with association request response with "accepted- unknown-config", then:
	<ul> <li>Simulated PHD sends the confirmed configuration event report with the standard configuration 2702</li> </ul>
	• Simulated PHD waits until there is a confirmation to the configuration event report that was sent.
	<ol> <li>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).</li> </ol>
	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 Configura		Configuration 2703.			
Coverage Spec		[ISO/IEEE 11073-10427]			
	Testable items	BattStatus 25; M			
Test purpos	se	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		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	<ol> <li>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</li> </ol>		
	2. The simulated PHD waits until it receives a confirmation		
	<ol> <li>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.</li> </ol>		
	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		
	<ol> <li>The simulated PHD sends an Association Request using the same standard configuration that was used previously (2703)</li> </ol>		
	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.		
	<ol> <li>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).</li> </ol>		
	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-014					
<b>TP label</b> Battery Status Attribute-Value-Map. Order change. Standard Configuration 2704.		onfiguration 2704.			
Coverage Spec		[ISO/IEEE 11073-10427]			
	Testable items	BattStatus 25; M			
Test purpos	e	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_		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 2704
Test procedure	<ol> <li>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</li> </ol>
	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
	<ol> <li>The simulated PHD sends an Association Request using the same standard configuration that was used previously (2704)</li> </ol>
	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.
	<ol> <li>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).</li> </ol>
	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-015         TP label       Battery Status Attribute-Value-Map. Order change. Standard Configuration 2 <sup>-1</sup>		TP/PLT/PHG/CLASS/PSM/BV-015	
		ue-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.	
			/alue-Map] attribute shall be 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 2705		
Test procedure	<ol> <li>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</li> </ol>		
	2. The simulated PHD waits until it receives a confirmation		
	<ol> <li>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.</li> </ol>		
	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		
	<ol> <li>The simulated PHD sends an Association Request using the same standard configuration that was used previously (2705)</li> </ol>		
	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 2705		
	• Simulated PHD waits until there is a confirmation to the configuration event report that was sent.		
	<ol> <li>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).</li> </ol>		
	12. The simulated PHD waits until it receives a confirmation.		
	13. Repeat steps 1-12 for each Battery Status object.		
Pass/Fail criteria	<ul> <li>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).</li> </ul>		
	<ul> <li>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).</li> </ul>		
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-016	
TP label Battery Status Attribute-Value-Map. Order change. Standard Configuration 270		der change. 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-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 2706		
Test procedure	<ol> <li>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</li> </ol>		
	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		
	<ol> <li>The simulated PHD sends an Association Request using the same standard configuration that was used previously (2706)</li> </ol>		
	10. If the PHG under test responds with association request response with "accepted- unknown-config", then:		
	<ul> <li>Simulated PHD sends the confirmed configuration event report with the standard configuration 2706</li> </ul>		
	<ul> <li>Simulated PHD waits until there is a confirmation to the configuration event report that was sent.</li> </ul>		
	<ol> <li>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).</li> </ol>		
	12. The simulated PHD waits until it receives a confirmation.		
	13. Repeat steps 1-12 for each Battery Status object.		
Pass/Fail criteria	<ul> <li>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).</li> </ul>		
	• 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-017	
TP Label Battery Status Attribute-Value-Map. Order change. Standard Configuration		der change. Standard Configuration 2707.	
Coverage Spec [ISO/IEEE 11073-10427]		[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 condition	The simulated PHD and PHG under test are in the Operating state using the standard configuration 2707		
Test procedure	<ol> <li>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</li> </ol>		
	2. The simulated PHD waits until it receives a confirmation		
	<ol> <li>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.</li> </ol>		
	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		
	<ol> <li>The simulated PHD sends an Association Request using the same standard configuration that was used previously (2707)</li> </ol>		
	10. If the PHG under test responds with association request response with "accepted- unknown-config", then:		
	<ul> <li>Simulated PHD sends the confirmed configuration event report with the standard configuration 2707</li> </ul>		
	• Simulated PHD waits until there is a confirmation to the configuration event report that was sent.		
	<ol> <li>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).</li> </ol>		
	12. The simulated PHD waits until it receives a confirmation.		
	13. Repeat steps 1-12 for each Battery Status object.		
Pass/Fail criteria	<ul> <li>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 the measurement and date are displayed properly).</li> </ul>		
	• 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 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-018		TP/PLT/PHG/CLASS/PSM/BV-018
<b>TP label</b> Battery Status Attribute-Value-Map. Adding additional attributes to the A		Battery Status Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map. Standard Configuration 2700.
Coverage Spec [ISO/IEEE 11073-10427]		[ISO/IEEE 11073-10427]

	Testable items	BattStatus 25; M		
Test purpose		Check that:		
		For [Standard-Configurations	2700] the [Attribute-Value-Map] a	attribute shall be present
		The value of the [Attribute-Va MDC_ATTR_ENUM_OBS_V	lue-Map] attribute shall be AL_BASIC_BIT_STR, then MDC_	ATTR_TIME_STAMP_BO
Applicability		C_MAN_OXP_000 AND C_M	IAN_OXP_076	
Other PICS				
Initial condition	on	The simulated PHD and PHG configuration (2700).	under test are in Operating State	e using the standard
Test procedure		<ol> <li>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.</li> </ol>		
		2. The simulated PHD waits	s until it receives a confirmation	
		3. The simulated PHD send layout.	s a confirmed fixed format event	report with the new data
		4. The simulated PHD waits	s until it receives a confirmation	
			ls a confirmed variable event repo S_VAL_BASIC_BIT_STR Attribut	
		6. The simulated PHD waits	s until it receives a confirmation	
		7. Repeat steps 1-6 for eac	h Battery Status Enumeration obj	ect
Pass/Fail criteria			PHG under test is able to accept t orrect attributes (e.g., if there is a roperly).	
			PHG under test is able to accept t orrect attributes (e.g., if there is a	
Notes				

TP ld TP label		TP/PLT/PHG/CLASS/PSM/BV-019	
		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 condition		The simulated PHD and PHG under test are configuration (2701).	in Operating State using the standard

Notes	
	• 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)
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).
	7. Repeat steps 1-6 for each Battery Status Enumeration object (handle 4)
	6. The simulated PHD waits until it receives a confirmation
	<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR Attribute.</li> </ol>
	4. 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.
	2. The simulated PHD waits until it receives a confirmation
Test procedure	<ol> <li>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.</li> </ol>

TP Id TP label		TP/PLT/PHG/CLASS/PSM/BV-020         Battery Status Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map. Standard Configuration 2702.		
	Testable items	BattStatus 25; M		
Test purpos	se	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		
Applicabilit	у	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		<ol> <li>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.</li> </ol>		
		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		
		<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR Attribute.</li> </ol>		
		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).
	<ul> <li>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)</li> </ul>
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		<ol> <li>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.</li> </ol>		
		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		
		<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR Attribute.</li> </ol>		
		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 ld	TP/PLT/PHG/CLASS/PSM/BV-022
	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 purpose	9	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 condition		The simulated PHD and PHG under test are in Operating state using the standard configuration (2704).	
Test procedure		<ol> <li>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.</li> </ol>	
		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	
		<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR Attribute.</li> </ol>	
		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		• 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-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		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 Other PICS		C_MAN_OXP_000 AND	`	

Initial condition	The simulated PHD and PHG under test are in Operating State using the standard configuration (2705).	
Test procedure	<ol> <li>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.</li> </ol>	
	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	
	<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR Attribute.</li> </ol>	
	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-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 (2706).		
Test procedure		<ol> <li>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.</li> </ol>		
		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		
		<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR Attribute.</li> </ol>		

Notes	
	• 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)
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).
	<ol> <li>Repeat steps 1-6 for each Battery Status Enumeration object (handles 4, 6, 8, 10, 12 and 14)</li> </ol>
	6. The simulated PHD waits until it receives a confirmation

TP ld		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]		
Tes iter		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 condition		The simulated PHD and PHG under test are in Operating State using the standard configuration (2707).		
Test procedure		<ol> <li>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.</li> </ol>		
		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		
		<ol> <li>The simulated PHD sends a confirmed variable event report with just MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR Attribute.</li> </ol>		
		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).		
		<ul> <li>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)</li> </ul>		
Notes				

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