

TELECOMMUNICATION STANDARDIZATION SECTOR OF ITU



### SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS

E-health multimedia 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

-01



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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 (2016) 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.

#### History

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#### 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.

<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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Biblic	ography		

**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.

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#### 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). 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]

#### **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 (2016)]. 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 Devices interface. 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)

<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 6: Device specializations. Personal Health Gateway
- Part 7: Continua Design Guidelines. BLE Personal Health Device
- Part 8: Continua Design Guidelines. BLE Personal Health Gateway
- Part 9: Personal Health Devices Transcoding Whitepaper. Personal Health Devices
- 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 (2016)]	Recommendation ITU-T H.810 (2016), 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 11073-10417:2014, Health informatics – Personal health device communication – Part 10417: Device specialization – Glucose meter. https://www.iso.org/standard/61896.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, Health informatics – Personal health device communication – Part 10419: Device specialization – Insulin pump. https://www.iso.org/standard/69528.html
[ISO/IEEE 11073-10420]	ISO/IEEE 11073-10420-2012, Health informatics – Personal health device communication – Part 10420: Device specialization – Body composition analyzer. https://www.iso.org/standard/61055.html
[ISO/IEEE 11073-10421]	ISO/IEEE 11073-10421:2012, Health informatics – Personal health device communication – Part 10421: Device specialization – Peak expiratory flow monitor (peak flow). https://www.iso.org/standard/61056.html
[ISO/IEEE 11073-10424]	ISO/IEEE 11073-10424:2016, Health informatics – Personal health device communication – Part 10424: Device specialization – Sleep apnoea breathing therapy equipment (SABTE). https://www.iso.org/standard/68906.html NOTE – equivalent to IEEE 11073-10424-2014, Health informatics – Personal health device communication – Part 10424: Device Specialization – Sleep Apnoea Breathing Therapy Equipment (SABTE). http://dx.doi.org/10.1109/IEEESTD.2014.6911927
[ISO/IEEE 11073-10425]	ISO/IEEE 11073-10425:2016, Health informatics – Personal health device communication - Part 10425: Device specialization – Continuous glucose monitor (CGM). https://www.iso.org/standard/67821.html
[ISO/IEEE 11073-10441]	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 –</i> <i>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, Health informatics – Personal health device communication – Part 20601: Application profile – Optimized exchange protocol,

# https://www.iso.org/standard/54331.htmlwith<br/>https://www.iso.org/standard/63972.html[ISO/IEEE 11073-20601-2016C]ISO/IEEE 11073-20601:2016, Health informatics – Personal<br/>health device communication – Part 20601: Application profile<br/>– Optimized exchange protocol, including ISO/IEEE 11073-<br/>20601:2016/Cor.1:2016.<br/>https://www.iso.org/standard/=66717.html<br/>with<br/>https://www.iso.org/standard/71886.html

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

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

 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)
- 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)

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

#### 7 Electronic attachment

The protocol implementation conformance statements (PICS) and the protocol implementation extra information for testing (PIXIT) required for the implementation of Annex A can be downloaded from <a href="http://handle.itu.int/11.1002/2000/12067">http://handle.itu.int/11.1002/2000/12067</a>.

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.
  - 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			
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	se	Check that:			
		Association Response data ex	kchange (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-pr selected encoding rule that is	oto-info field parameters]: The F supported by both Personal Hea	PHG shall respond with a single alth Device (PHD) and PHG.	
		[AND]			
		[association response data-proto-info field parameters]: The PHG shall support at least the MDER encoding rules			
		[AND]			
			oto-info field parameters]: The v i.e., nomenclature-version = 0x8	ersion of the nomenclature used 80000000)	
		[AND]			
[association response data-proto-info field parameters]: The field functional-units shal all bits reset except for those relating to a Test Association			eld functional-units shall have		
		[AND]			
		[association response data-proto-info field parameters]: The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000)			
		[AND]			
		[association response data-pr	oto-info field parameters]: The s	ystem-id field shall contain the	

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

	unique system id of the DHC device, which shall be a valid FLU 64 type identifier				
	unique system id of the PHG device, which shall be a valid EUI-64 type identifier				
	[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 procedure	1. The simulated PHD sends an association request to the PHG under test, with the fields:				
	protocol-version = '100000000000000000000000000000000000				
	encoding-rules= '10000000000000'B				
	nomenclature-version = '100000000000000000000000000000000000				
	□ functional-units = '00000000000000000000000000000000000				
	□ system-type = '000000001000000000000000000000000000				
	dev-config-id = 16449				
	data-rep-mode-capab =				
	<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>				
	□ 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:				
	<ul> <li>If association is accepted, field-value= 0x00 0x00.</li> </ul>				
	<ul> <li>If association is rejected-permanent, field-value= 0x00 0x01.</li> </ul>				
	<ul> <li>If association is rejected-transient, field-value= 0x00 0x02.</li> </ul>				
	<ul> <li>If association is accepted-unknown-config, field-value= 0x00 0x03.</li> </ul>				
	<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,field-value= 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>				
	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
	$\Box  field-length = 2 \text{ bytes}$
	□ field-value= 0x50 0x79 (20601)
e.	protocol-version
	□ field- type = Protocol Version
	□ field-length = 4 bytes (BITS-32)
	□ field-value= 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
	<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-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
	□ 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

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

TP ld						
		TP/PLT/PHG/CLASS/WEG/BV-002				
TP label		Configuration Event Report. Weighing Scale standard configuration				
Coverage	Spec	[ISC	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
	Testable items	Cor	nfEventR	ep 18;M		
Test purpose	e	Che	eck 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_I	MAN_O>	(P_000 AND C_MAN_OXP_024		
Other PICS						
Initial condit	ion	The simulated PHD and the PHG under test are in the Unassociated state.				
Test procedu	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 PH	G 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 0x05 0xDC				
		4.	The PH	G under test must respond with:		
			a. AP	DU Туре		
				field-length = 2 bytes		
				field-value = 0xE7 0x00 (PrstApdu)		
			b. Inv	oke-id		
				field- type = INT-U16		
				field-length = 2 bytes		
				field-value= it must be the same as the invoke-id of the simulated PHD's message.		

(	1	
		c. Obj-Handle:
		□ field- type = HANDLE
		$\Box  field-length = 2 bytes$
		□ field-value = 0x00 0x00
		d. Event-time:
		□ field- type = INT-U32
		□ field-length = 4 bytes
		□ field-value: 0xXX 0xXX
		e. Event-type:
		$\Box  field-length = 2 \text{ bytes}$
		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
	Wai	it until the Operating state is reached in both cases.
	6.	The simulated PHD sends a fixed event report with one measurement.
Pass/Fail criteria	•	The PHG under test must respond either to the association request with an "accepted" message or to the Configuration Event Report with an "accepted-config".
	•	The measurement is correctly presented.
Notes	See	e bug 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-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_SIMP, then MDC_ATTR_TIME_STAMP_ABS			
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 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.			
	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>			
	<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_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 and applies the correct bytes to the correct attributes. E.g. if there is a user interface (UI), verify that the measurement and date are displayed properly.</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).			
	• 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/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).
	• In steps 4 and 6, verify that the PHG under test uses pounds as the unit-code for the measurement reports.
Notes	

TP Id TP label		TP/PLT/PHG/CLASS/WEG/BV-005 Unit-Code. Change from default kilograms to pounds – fixed format observation			
Testable items		WeightNumClass 20;M			
Test purpose		Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present The value of the [Unit-Code] attribute shall be MDC_DIM_KILO_G.			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_024 AND C_MAN_WEG_001			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state usi configuration.	ng 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.
		• The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.
	9.	The simulated PHD sends a fixed event report with an observation in kilograms followed by date and time stamp.
	10.	The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	•	In step 4, verify that the PHG under test is able to accept the data properly and applies pounds to the observation (e.g. if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
	•	In step 10, verify that the PHG under test is able to accept the data properly and applies kilograms to the observation (e.g. if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
Notes		

TP Id TP label		TP/PLT/PHG/CLASS/WEG/BV-005_A Unit-Code. Do not change from default kilograms to pounds – fixed format observation			
	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	y	C_MAN_OXP_000 AND C_MAN_OXP_024 AND (NOT(C_MAN_WEG_001))			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		<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. 5.	The simulated PHD waits until it receives a confirmation, roer message, abrt message, release association or rorj message or TO cer-mds expires. If the PHG has sent a confirmation in step 4, ask to the operator if the measurements have been properly received and displayed.
Pass/Fail criteria	•	In step 2, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message.
	•	In step 4, verify that PHG sends a confirmation, or TOcer-mds expires, or PHG sends a roer message, abrt message, release association or rorj message.
	•	In step 5, verify that measurements do not appear, or if they do appear, they are somehow designated as 'unsupported' data.
Notes		

TP ld		TP/PLT/PHG/CLASS/WEG/BV-006			
TP label		Unit-Code. Use default kilograms – variable format observation.			
Coverage Spec		[ISO/IEEE 11073-10415]			
	Testable items	WeightNumClass 20;M			
Test purpose		Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present The value of the [Unit-Code] attribute shall be MDC_DIM_KILO_G			
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_024			
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 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 Testable items		[ISO/IEEE 11073-10415]			
		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	y	C_MAN_OXP_000 AND C_MAN_OXP_024 AND C_MAN_WEG_001			

Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure	<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.
	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>
	<ol> <li>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).</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 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 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 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_024
Other PICS		
Initial condition		The PHG under test is in the Operating state.

Test procedure	1. The simulated PHD sends a Confirmed variable event report:
	a. ScanReportInfoVar. obs_scan_var:
	$\Box$ Count = 2
	□ Length = 858
	ObservationScan ::= {
	obj-handle: 1
	<pre>attributes: AttributeList ::= {     AVA-Type ::= {</pre>
	attribute-id: 61441
	attribute-value: '00(832 bytes) 00'0
	}
	}
	ObservationScan ::= {
	obj-handle: 1
	<pre>attributes: AttributeList ::= {     AVA-Type ::= {</pre>
	attribute-id: 2646 (MDC ATTR NU VAL OBS SIMP)
	attribute-value: 68
	}
	}
	}
	2. Check the response of the PHG under test.
	3. The simulated PHD sends a confirmed fixed format event report with one measurement.
	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	e	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) = 0x007FFFFF]) 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/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.
Applicabilit	у	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.

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	se	Check that:
		The PHG receives NRes value (variable format event report) but it does not use this value.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_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> </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-013	
TP label		Special values. Positive infinity – fixed format	
Coverage	Spec	[ISO/IEEE 11073-10415]	
	Testable items	WeightNumClass 22; M	
Test purpos	se	Check that:	
		The PHG receives a +INFINITY value (fixed format event report) but it does not use this value.	
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_024	
Other PICS			
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.	
Test procedure		<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.

TP ld		TP/PLT/PHG/CLASS/WEG/BV-014
TP label		Special values. Positive infinity – variable format
Coverage	Spec	[ISO/IEEE 11073-10415]
	Testable items	WeightNumClass 27; C
Test 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 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 ld		TP/PLT/PHG/CLASS/WEG/BV-015		
TP label		Special values. Negative infinity – fixed format		
Coverage	Spec	[ISO/IEEE 11073-10415]		
	Testable items	WeightNumClass 22; M		
Test purpos	se	Check that:		
		The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_024		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		<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 Id 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 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_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	[ISO/IEEE 11073-10415]		
	Testable items	WeightNumClass 22; M		
Test purpose		Check that: The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_024		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		1. 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.
	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/WEG/BV-018			
TP label		Special values. Reserved – variable format			
Coverage	Spec	[ISO/IEEE 11073-10415]			
	Testable items	WeightNumClass 27; C			
Test purpose		Check that: The PHG receives a Reserved for future use value (variable format event report) but it does not use this value.			
Applicability	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 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 ld		TP/PLT/PHG/CLASS/GL	/BV-000	
TP label		Association procedure P	HG GL	
Coverage Spec		[ISO/IEEE 11073-10417]		
	Testable items	ManProcAs 1;M	ManProcAs 2;M	ManProcAs 3;M
	items	ManProcAs 4;M	ManProcAs 5;M	ManProcAs 6;M
		ManProcAs 7;M	ManProcAs 8;M	ManProcAs 9;M
		ManProcAs 10;M	ManProcAs 11;M	ManProcAs 12;M
Test 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-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_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 = '1000000000000000000000000000000'B		
	encoding-rules= '10000000000000'B		
	nomenclature-version = '100000000000000000000000000000'B		
	□ functional-units = '0000000000000000000000000000000'B		
	system-type = '0000000100000000000000000000000'B		
	$\Box  \text{dev-config-id} = 16440$		
	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 PH	G under test sends an association response. The fields of interest are:
	a.	АРДИ Туре
		□ field-length = 2 bytes
		□ field-value = 0xE3 0x00 (AareApdu)
	b.	Result
		□ 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>
		<ul> <li>If association is rejected-permanent, field-value= 0x00 0x01.</li> </ul>
		<ul> <li>If association is rejected-transient, field-value= 0x00 0x02.</li> </ul>
		<ul> <li>If association is accepted-unknown-config, field-value= 0x00 0x03.</li> </ul>
		<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>
	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= 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)
		General field-value =
		Bit 0 must be 0
		<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-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
		$\Box  field-length = 2 \text{ bytes}$
		$\Box  field-value = 0x00 \ 0x00$
		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)
		□ 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 pro	ptocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].

		TP/PLT/PHG/CLASS/GL/BV-001 Configuration Event Report. Glucose Meter standard configuration 1700				
						Coverage Spec
	Testable items	ConfProc 4;M	MDSEvents 2;M	ObjAccServ 5;M		
	Spec	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]				
	Testable items	ConfEventRep 18;M				
Test purpose		Check that:				
		The PHG shall respond to a configuration notification message using a "Remote Operation Response   Confirmed Event Report" data message with an MDC_NOTI_CONFIG event using the ConfigReportRsp structure for the event-info field.				
		[AND]				
		A PHG shall support both single-person and multi-person event reports.				

	[AND] A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4. [AND] Alternatively, the PHG may request the PHD to send the standard configuration in order to	
	enter the Configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.	
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_019	
Other PICS	C_MAN_OXP_085	
Initial condition	The simulated PHD and the PHG under test are in the Unassociated state. The simulated PHD implements a glucose meter device specialization with standard configuration 1700.	
Test procedure	<ol> <li>The simulated PHD sends an association request to the PHG under test with dev-config- id set to 0x06 0xA4 (Glucose Meter – Std Config 1700).</li> <li>The PHG under test responds with an association response, the field of interest is:</li> </ol>	
	<ol> <li>The PHG under test responds with an association response, the field of interest is:</li> <li>a. Result</li> </ol>	
	□ field- type = INT-U16	
	$\Box  \text{field-length} = 2 \text{ bytes}$	
	□ 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 0xA4	
	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	
	$\Box  field-length = 2 \text{ bytes}$	
	$\Box  \text{field-value} = 0x00 \ 0x00$	
	d. Event-time:	
	□ field-type = INT-U32	
	<ul> <li>field-length = 4 bytes</li> <li>field-value: 0xXX 0xXX</li> </ul>	
	e. Event-type: ifield-length = 2 bytes	
	<ul> <li>field-value= MDC_NOTI_CONFIG</li> </ul>	
	f. The following six bytes indicate:	
	<ul> <li>Event-replay-info.length (2 bytes)</li> </ul>	
	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 Blood Glucose (Capillary Whole blood reference method) 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/GL/BV-001_A		
TP label	TP label         Configuration Event Report. Glucose Meter standard configuration 1701		nfiguration 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 11073-2	20601-2016C]
	Testable items	ConfEventRep 18;M		
Test purpos	se	Check that:		
		The PHG shall respond to a configuration notification message using a "Remote Operation Response   Confirmed Event Report" data message with an MDC_NOTI_CONFIG event using the ConfigReportRsp structure for the event-info field.		
		[AND]		
		A PHG shall support both single-person and multi-person event reports.		
		[AND]		
		A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.		
		[AND]		
		Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the Configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.		
Applicability C_MA		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 PHD implements a glucose meter device specialization with standard con				

est procedure	<ol> <li>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).</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
	□ field-length = 2 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 th simulated PHD's message
	ConfigReportRsp.config-result: One of:
	<ul> <li>accepted-config: 0x00 0x00</li> </ul>
	Wait until the Operating state is reached in both cases.
	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-l set to 0 to indicate all attributes.</li> </ul>
	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.

	plasma reference method) measurement and other fixed event report with Control Solution 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 label		TP/PLT/PHG/CLASS/GL/BV-	002	
		Maximum APDU size: Glucose Meter without PM-Store		
Coverage	Spec	[ISO/IEEE 11073-20601-2015	5A] 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 on apply to all APDUs regardless of whether a standard or extended configuration is being used.		
Applicability		C_MAN_OXP_000 AND C_M	AN_OXP_019	
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
	<pre> Length = 5080 ObservationScan ::= {     obj-handle: 1     attributes: AttributeList ::= {         AVA-Type ::= {             attribute-id: 61441             attribute-value: '00(5056 bytes) 00'0         }     }     ObservationScan ::= {         obj-handle: 1         attributes: AttributeList ::= {             AVA-Type ::= {                 attribute-id: 2636 (MDC_ATTR_NU_VAL_OBS_BASIC)                 attribute-value: 100             }         }     } } </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 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	CommonCharac 4;M		
	Spec	[ISO/IEEE 11073-10417]		
	Testable ComChar 2; M items			
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_019 AND C_MAN_OXP_003		C_MAN_OXP_000 AND C_MAN_OXP_019 AND C_MAN_OXP_003		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test proced	dure	1. The simulated PHD sends a Confirmed variable event report:		

	a. Scan	ReportInfoVar. obs_scan_var:
		Count = 2
		_ength = 64472
		ervationScan ::= {
		bbj-handle: 1 attributes: AttributeList ::= {
		AVA-Type ::= {
		attribute-id: 61441
		attribute-value: '00(64448 bytes) 00'0
		}
	}	
		servationScan ::= { bbj-handle: 1
		attributes: AttributeList ::= {
		AVA-Type ::= {
		attribute-id: 2636 (MDC_ATTR_NU_VAL_OBS_BASIC) attribute-value: 80
		<pre>actribute=value: ou }</pre>
	]	}
	}	
	Oh a ala dha	and the DUO we don't at
		e response of the PHG under test.
	. The simul	ated PHD sends a confirmed fixed format event report with one measurement.
	. Check the	e response of the PHG under test.
Pass/Fail criteria	In step 2 t	he PHG under test must respond with a "rors-cmip-confirmed-event-report".
	In step 4 t	he PHG under test must respond with a "rors-cmip-confirmed-event-report".
Notes		

TP ld		TP/PLT/PHG/CLASS/GL/BV-003		
TP label		Blood Glucose Attribute-Value-Map. Order change		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	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 Operatin 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 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 (Blood Glucose Object) to reverse the values to: MDC_ATTR_TIME_STAMP_ABS, then MDC_ATTR_NU_VAL_OBS_BASIC.		

4. The simulated PHD waits until it receives a confirmation.
5. Send a confirmed fixed format event report with the date first followed by a blood glucose value (in mg/dL since it is the standard configuration unit code).
6. The simulated PHD waits until it receives a confirmation.
7. The simulated PHD sends an association release request (normal).
8. The simulated PHD waits until there is an association release response.
9. The simulated PHD sends an association request using the same standard configuration that was used previously.
10. If the PHG under test responds with association request response with "accepted- unknown-config", then
<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_ABS). The observation should be a reasonable mg/dL blood glucose observation.
12. The simulated PHD waits until it receives a confirmation.
• In steps 2, 6 and 12 verify that the PHG under test is able to accept the 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).
<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>

TP ld		TP/PLT/PHG/CLASS/GL/BV-004		
TP label		Blood Glucose Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map		
Coverage	Spec	[ISO/IEEE 11073-10417]	[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_MA	N_OXP_019 AND C_MAN_GL_	_001
Other PICS				
Initial condition			IG under test are in the Operatir Numeric standard configuration I	

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/PLT/PHG/CLASS/GL/BV-005         Blood Glucose Unit-Code. Change from default mg/dL to mmol/L – fixed format observation		
	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		
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.		
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 up	ntil 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. 1	The simulated PHD waits until it receives a confirmation.
	5. 1	The simulated PHD sends an association release request (normal).
	6. 1	The simulated PHD waits until it receives an association release response.
	7. The simulated PHD sends an association request using the same configuration used initially.	
		f 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>
		The simulated PHD sends a fixed event report with an observation in mg/dL followed by date and time stamp.
	10. 1	The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	r	n 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).
	r	n 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
	Testable items	BloodGL 8;M			
Test purpos	se	Check that:			
		For [Standard-Configuration] the [Unit-Code] attribute shall be present			
		The value of the [Unit-Code] attribute shall be MDC_DIM_MILLI_G_PER_DL			
Applicabilit	у	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>
	<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 Id 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
	Testable items	BloodGL 8;M			
Test purpos	se	Check that:			
		For [Standard-Configuration] the [Unit-Code] attribute shall be present			
		The value of the [Unit-Code] attribute shall be MDC_DIM_MILLI_G_PER_DL			
Applicabilit	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 proced	lure	1. Send a confirmed variable format event report using a measurement in mg/dL.			
		2. The simulated PHD waits until it receives a confirmation.			
Pass/Fail criteria		• Verify that the PHG under test is able to accept the data properly and applies mg/dL to the observation (e.g. if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).			
Notes					

TP ld		TP/PLT/PHG/CLASS/GL/BV-007		
TP label		Blood Glucose Unit-Code. Change from default mg/dL to mmol/L – variable 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 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		
		[AND]		

	Continua PAN client components that receive a report of a configuration change shall apply the change to future measurements only		
Applicability	ility C_MAN_OXP_000 AND C_MAN_OXP_019 AND C_MAN_GL_001		
Other PICS			
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure	<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 ld		TP/PLT/PHG/CLASS/GL/BV-008		
TP label		Special values. Not a number – fixed format (Std Config 1700)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	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.		
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 1700.	
Test procedure       1. The simulated PHD sends a confirmed fixed event report for handle 1 (Blo Object) containing an observation value with the value for NaN ([exponent +(2**11 -1) = 0x07FF]) and a time stamp.		
	2. The simulated PHD waits until it receives a confirmation from the PHG under test.	
Pass/Fail criteria	• Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g. if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).	
Notes	This test case has been considered as an implicit test case.	

TP ld		TP/PLT/PHG/CLASS/GL/BV-009		
TP label		Special values. Not a number – variable format (Std Config 1700)		
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		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1700.		
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 test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/GL/BV-010		
TP label		Special values. Not at this resolution – fixed format (Std Config 1700)		
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_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 1700.	
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	This test case has been considered as an implicit test case.	

TP Id TP label		TP/PLT/PHG/CLASS/GL/BV-011		
		Special values. Not at this resolution – variable format (Std Config 1700)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	BloodGL 20; 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 1700.		
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 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 Id TP label		TP/PLT/PHG/CLASS/GL/BV-0	12	
		Special values. Positive infinity – fixed format (Std Config 1700)		
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_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 1700.
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 Id TP label		TP/PLT/PHG/CLASS/GL/BV-013         Special values. Positive infinity – variable format (Std Config 1700)		
	Testable items	BloodGL 20; M		
Test purpos	se	Check that:		
		The PHG receives a +INFINITY value (variable format event report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1700.		
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> </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-014		
TP label		Special values. Negative infinity – fixed format (Std Config 1700)		
Coverage     Spec     [ISO/IEEE 11073-10417]       Testable items     BloodGL 10; M				
		BloodGL 10; 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_019
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1700.
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.
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/GL/BV-015		
TP label		Special values. Negative infinity – variable format (Std Config 1700)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	BloodGL 20; M		
Test purpos	se	Check that:		
		The PHG receives a –INFINITY value (variable format event report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1700.		
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 implicit test case.		

TP ld		TP/PLT/PHG/CLASS/GL/BV-016		
TP label		Special values. Reserved – fixed format (Std Config 1700)		
Coverage Spec Testable items		[ISO/IEEE 11073-10417]		
		BloodGL 10; M		
Test purpose		Check that: The PHG receives a Reserved for futu	re 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 1700.
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. Reserved – variable format (Std Config 1700)		
Coverage	rage 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 condit	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1700.		
Test procedure		1. The simulated PHD sends a confirmed variable event report for handle 1 (Blood Glucose Object) containing an observation value set to the value for reserved (Reserved for future use, [exponent 0, mantissa $-(2^{**}11 - 1) = 0x0801$ ]).		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		• Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g. if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/GL/BV-018		
TP label		Control Solution Attribute-Value-Map. Order change		
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_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, 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.</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.	
	<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_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).	
	<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			
Coverage Spec		[ISO/IEEE 11073-10417]			
	Testable items	CtrlSol 8;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_ABS			
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_019 AND C_MAN_GL_002			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (Control Solution Numeric standard configuration Unit code attribute is set to MDC_DIM_MILLI_G_PER_DL).			
Test procedure		<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, 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).			
		• In steps 4 and 6, verify that the PHG under test uses mmol/L as the unit code for the measurement reports.			
Notes					

TP ld		TP/PLT/PHG/CLASS/GL/BV-020		
TP label		Control Solution Unit-Code. Change from default mg/dL to mmol/L – fixed format observation		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	CtrlSol 6;M		
Spec		[b-ITU-T H.810 (2015)]	_	
	Testable items	Communication 9; M		

Test purpose	Check that:
	For [Standard-Configuration] the [Unit-Code] attribute shall be present
	The value of the [Unit-Code] attribute shall be MDC_DIM_MILLI_G_PER_DL
	[AND]
	Continua PAN client components that receive a report of a configuration change shall apply the change to future measurements only
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_019 AND C_MAN_GL_002
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure	<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 standar 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.
Pass/Fail criteria	<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>
	<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 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	• 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.
	<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/GL/BV-022		
TP label		Control Solution Unit-Code. Use default mg/dL – variable format observation		
Coverage	overage Spec [ISO/IEEE 11073-10417]			
	Testable items	CtrlSol 6;M		
Test purpose		Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present		
Applicability		The value of the [Unit-Code] attribute shall be MDC_DIM_MILLI_G_PER_DL 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>Send a confirmed variable format event report using a measurement in m</li> <li>The simulated PHD waits until it receives a confirmation.</li> </ol>	g/dL.	

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 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	CtrlSol 6;M			
	Spec	[b-ITU-T H.810 (2015)]			
	Testable items	Communication 9; M			
Test purpose		Check that: For [Standard-Configuration] the [Unit-Code] attribute shall be present The value of the [Unit-Code] attribute shall be MDC_DIM_MILLI_G_PER_DL [AND] Continua PAN client components that receive a report of a configuration change shall apply the change to future measurements only			
Applicability	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	lure	<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. Send a second confirmed variable format event report with just a measurement in mmol/L (i.e., do not transmit the unit-code attribute in the event report).			
		4. The simulated PHD waits until it receives a confirmation.			
		5. The simulated PHD sends an association release request (normal).			
		6. The simulated PHD waits until it receives an association release response.			
		7. The simulated PHD sends an association request using the same configuration that was used initially.			
		8. If the PHG under test responds with association request response with "accepted- unknown-config", then			
		The simulated PHD send configuration.	the confirmed configuration event report with the standard		
		The simulated PHD waits configuration event report	until it receives a confirmation from the confirmed just sent.		
		<ol> <li>The simulated PHD sends a confirmed variable event report with an observation in mg/d 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	<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> </ul>
	<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 ld		TP/PLT/PHG/CLASS/GL/BV-024		
TP label		Special values. Not a number – fixed format (Std Config 1701)		
Coverage Spec		[ISO/IEEE 11073-10417]		
	Testable items	CtrlSol 8; 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_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.		

TP ld		TP/PLT/PHG/CLASS/GL/BV-025		
TP label		Special values. 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 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 configuration 1701.	he PHG under test are in the Operati	ng state using the standard

Test procedure	1.	The simulated PHD sends a confirmed variable event report for handle 2 (Control Solution Object) containing an observation value set to the value for 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	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. Not at this resolution – fixed format (Std Config 1701)		
Coverage	Coverage Spec [ISO/IEEE 11073-10417]			
	Testable items	CtrlSol 8; 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 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.		

TP ld		TP/PLT/PHG/CLASS/GL/BV-027		
TP label		Special values. Not at this resolution – variable format (Std Config 1701)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	CtrlSol 12; M		
Test purpose		Check that: The PHG receives NRes value (variable format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condition		The simulated PHD and the 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.
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-028		
TP label		Special values. Positive infinity – fixed format (Std Config 1701)		
Coverage Spec [ISO/IEEE 11073-10417]		[ISO/IEEE 11073-10417]		
	Testable items	CtrlSol 8; M		
Test purpos	se	Check that:		
		The PHG receives a +INFINITY value (fixed format event report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condition		The simulated PHD and the 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 implicit test case.		

TP ld		TP/PLT/PHG/CLASS/GL/BV-029		
TP label		Special values. Positive infinity – variable format (Std Config 1701)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	CtrlSol 12; M		
Test purpose		Check that:		
		The PHG receives a +INFINITY value (variable format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MA	AN_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.	
<ul> <li>Pass/Fail criteria</li> <li>Verify that the PHG under test is able to accept the data, but does not use the very series 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).</li> </ul>		
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. Negative infinity – fixed format (Std Config 1701)		
Coverage	Spec	[ISO/IEEE 11073-10417]		
	Testable items	CtrlSol 8; M		
Test purpos	se	Check that:		
		The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS				
Initial condition		The simulated PHD and the 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-031		
TP label		Special values. Negative infinity – variable format (Std Config 1701)		
Coverage Spec		[ISO/IEEE 11073-10417]		
	Testable items	CtrlSol 12; M		
Test purpose		Check that: The PHG receives a –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 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> </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-032		
TP label		Special values. Reserved – 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 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 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 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-0	33	
TP label		Special values. 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 for	rmat event report) but it does

Applicability	C_MAN_OXP_000 AND C_MAN_OXP_019		
Other PICS			
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1701.		
Test procedure	<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 struct 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 = 0x8000000)					
		[AND]					
		The data-proto-info field shall be filled in with a PhdAssociationInformation structure and the field functional-units shall have all bits reset except for those relating to a Test Association					
		[AND]					
		The data-proto-info field shall be filled in with a PhdAssociationInformation structure and the field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000)					
		[AND]					
		The data-proto-info field shall be filled in with a PhdAssociationInformation structure and the system-id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier					
		[AND]					
		The data-proto-info field shall be filled in with a PhdAssociationInformation structure and the field dev-config-id shall be manager-config-response					

	[AND]
	The data-proto-info field shall be filled in with a PhdAssociationInformation structure and the field data-req-mode-capab-flags shall be 0
	[AND]
	The data-proto-info field shall be filled in with a PhdAssociationInformation structure and the fields data-req-init-*-count shall be 0
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_026
Other PICS	
Initial condition	The PHG is in the Unassociated state.
Test procedure	1. The simulated PHD sends an association request to the PHG under test, with the fields:
	protocol-version = '100000000000000000000000000000'B
	encoding-rules= '10000000000000'B
	nomenclature-version = '100000000000000000000000000000000000
	functional-units = '00000000000000000000000000000000000
	system-type = '000000010000000000000000000000000'B
	$\Box  \text{dev-config-id} = 16443$
	□ data-rep-mode-capab =
	data_req_mode_flags= '00000000000001'B
	<ul> <li>data_req_init_agent_count = 1</li> </ul>
	<ul> <li>data_req_init_manager_count = 0</li> </ul>
	$\Box$ option-list.length= 0
	<ol> <li>The PHG under test sends an association response. The fields of interest are:</li> </ol>
	a. APDU Type
	$\Box  \text{field-length} = 2 \text{ bytes}$
	□ field-value = 0xE3 0x00 (AareApdu)
	b. Result
	field- type = AssociateResult
	$\Box  field-length = 2 \text{ bytes}$
	field-value = One of the following:
	<ul> <li>If association is accepted, field-value= 0x00 0x00.</li> </ul>
	<ul> <li>If association is rejected-permanent, field-value= 0x00 0x01.</li> </ul>
	<ul> <li>If association is rejected-transient, field-value= 0x00 0x02.</li> </ul>
	<ul> <li>If association is accepted-unknown-config, field-value= 0x00 0x03.</li> </ul>
	<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 = DataProtold
	$\Box  field-length = 2 \text{ bytes}$

		i
	□ 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 =	
	<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-id	
	<pre>ifield- type = OCTET STRING</pre>	
	□ field-length = 8 bytes	
	field-value = (EUI-64 manufacturer and device)	
k.	dev-config-id	
	field-type = Configld field length = 2 bytes	
	<ul> <li>field-length = 2 bytes</li> <li>field-value = 0x00 0x00 (manager-config-response)</li> </ul>	
I.	<ul> <li>field-value = 0x00 0x00 (manager-config-response)</li> <li>data-req-mode-flags (DataReqModeCapab)</li> </ul>	
1.	<ul> <li>field- type = DataReqModeFlags</li> </ul>	
	<ul> <li>field-length = 2 bytes</li> </ul>	
	$\Box  \text{field-value} = 0x00\ 0x00$	
	<ul> <li>PHG response to data-req-mode-flags is always 0.</li> </ul>	
m.	data-req-init-agent-count (DataReqModeCapab)	
	□ field- type = INT-U8	
	□ field-length = 1 byte	
	$\Box  \text{field-value} = 0x00$	
n.	data-req-init-manager-count (DataReqModeCapab)	
	□ field- type = INT-U8	

	<ul> <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].

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	ConfEve	ntRep 18;M			
Test purpos	e	Check th	at:			
		standard		ore) of the ISO/IEEE 11073-104 pt all the standard device config able 23 under Gen-4.		
		enter the		uest the PHD to send the stand check attributes from the MDS		
Applicability	,	C_MAN_	OXP_000 AND C_MA	N_OXP_026		
Other PICS		C_MAN_	_OXP_085			
Initial condit	ion	The simu	ulated PHD and the PH	IG under test are in the Unasso	ciated state	
Test proced	ure		simulated PHD sends et to 0x01 0x90 (Pulse	an association request to the P Oximeter).	HG under test with dev-config-	
		2. The	PHG under test respo	nds with an association respons	e, the field of interest is:	
		a.	Result			
			□ field- type = INT-U	J16		
			□ field-length = 2 by	/tes		
			$\Box  field-value = 0x00$	0x00 (accepted) or 0x00 0x03	(accepted-unknown-config)	
		If the res	ult of the association r	esponse was "accepted-unknow	n-config"	
		3. The 0x90		a configuration event report with	n config-report-id set to 0x01	
		4. The	PHG under test must	respond with:		
			a. APDU Type			
			$\Box  field-length = 2 by$	/tes		
			$\Box  field-value = 0xE2$	7 0x00 (PrstApdu)		
			b. Invoke-id			
			□ field- type = INT-I	J16		
			$\Box  field-length = 2 by$	/tes		
			field-value= it mu message.	st be the same as the invoke-id	of the simulated PHD's	
			c. Obj-Handle:			
			□ field- type = HAN	DLE		
			$\Box  field-length = 2 by$	/tes		
			□ field-value = 0x00	) 0x00		

1	
	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	<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	See http://continua.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	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.				
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 procedure		1. The simulated PHD sends an association request to the PHG under test with dev-config-				

		id s	et to	0x01 0x91 (PulseOximeter).
	2.	The	PH	G under test responds with an association response, the field of interest is:
		a.	Res	sult
				field- type = INT-U16
				field-length = 2 bytes
				field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)
	lf th	ne re	sult o	of the association response was "accepted-unknown-config"
	3.	The 0x9		ulated PHD sends a configuration event report with config-report-id set to 0x01
	4.	The	PH	G under test must respond with:
		b.	API	DU Type
				field-length = 2 bytes
				field-value = 0xE7 0x00 (PrstApdu)
		c.	Invo	oke-id
				field- type = INT-U16
				field-length = 2 bytes
				field-value= it must be the same as the invoke-id of the simulated PHD's message.
		d.	Obj	-Handle:
				field- type = HANDLE
				field-length = 2 bytes
				field-value = 0x00 0x00
		e.	Eve	ent-time:
				field- type = INT-U32
				field-length = 4 bytes
				field-value: 0xXX 0xXX
		f.	Eve	ent-type:
				field-length = 2 bytes
				field-value= MDC_NOTI_CONFIG
		g.	The	e following six bytes indicate:
				Event-replay-info.length (2 bytes)
				ConfigReportRsp.config-report-id: it must be the same as config-report-id of the simulated PHD's message
				ConfigReportRsp.config-result: One of:
				<ul> <li>accepted-config: 0x00 0x00</li> </ul>
	5.	IF (	С_М/	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.
		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	e sim	ulated PHD sends a fixed event report with one measurement.
Pass/Fail criteria	•			G under test must respond either to the association request with an "accepted" e or to the Configuration Event Report with an "accepted-config".

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

TP Id TP label		TP/PLT/PHG/CLASS/PO/BV-006 Maximum APDU size: Pulse Oximeter					
	Testable items	CommonCharac 4;M					
Test purpose	9	Check that:					
		If a PHG receives APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.					
		The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitiations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.					
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_026					
Other PICS							
Initial condit	ion	The PHG under test is in the Operating state.					
Test 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		• In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".					
Pass/Fail crit		• In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".					

TP Id TP label		TP/PLT/PHG/CLASS/PO/BV-007         Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map					
	Testable items	SpO2NumObjAttr 11;M					
Test purpose	e	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 condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 0x190.					
Test procedure		<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 purpose		Check that: For [Standard-Configuration] [Unit-Code] value is MDC_DIM_PERCENT [AND] Continua PAN client components that receive a report of a configuration change shall apply				
		the change to future measurements only]				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_026				

Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 0x190.
Test procedure	<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 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 % 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/PO/BV-009		
TP label		Supplemental-Type: SpO <sub>2</sub> — Standard configuration 0x191		
Coverage Spec		[ISO/IEEE 11073-10404]		
	Testable items	Spo2StandConf 1;C		
Test purpos	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		C_MAN_OXP_000 AND C_MAN_OXP_026		
Other PICS				
		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.		
correct bytes to the correct attributes and Supplemental-Type for (		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		1		
Coverage	coverage Spec [ISO/IEEE 11073-10404]			
	Testable items	PulseRateStandConf 1;C		
Test purpose		Check that:		
			the and for Dev-Configuration-losingle entry in its SupplementalT	

	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 ld		TP/PLT/PHG/CLASS/PO/BV-011		
TP label		Special values. Not a number – fixed format		
Coverage	Spec	[ISO/IEEE 11073-10404]		
	Testable items	SpO2NumObjAttr 11; M	PulseRateNumObjAttr 28; M	
Test purpos	e	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_026	
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 (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 Id TP/PLT/PHG/CLASS/PO/BV-012				
TP label Special values. Not a number – variable format				
Coverage	Spec	[ISO/IEEE 11073-10404]		
	Testable items	SpO2NumObjAttr 16; C	PulseRateNumObjAttr 33; C	

Test 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_026	
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 (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	<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/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 purpose       Check that:         The PHG receives NRes value (fixed format event report) but it does not use		t does not use this value.		
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_026		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		<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 Id TP/PLT/PHG/CLASS/PO/BV-014		)14	
TP label		Special values. Not at this resolution – variable format	
Coverage	Spec	[ISO/IEEE 11073-10404]	
	Testable items	SpO2NumObjAttr 16; C	PulseRateNumObjAttr 33; C

Test purpose	Check that:	
	The PHG receives NRes value (variable format event report) but it does not use this value.	
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 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 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-015		
TP label		Special values. Positive infinity – fixed format		
Coverage	Spec	[ISO/IEEE 11073-10404]	[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.		
Applicability	y	C_MAN_OXP_000 AND C	_MAN_OXP_026	
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		<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.		
they were a		they were an actual me	der test is able to accept the data, b easurement (e.g. if there is a UI, ver n that indicates it is not a measurem	ify that the measurement is
Notes This test case has been considered as an implicit test case.				

TP Id TP/PLT/PHG/CLASS/PO/BV-016				
TP label         Special values. Positive infinity – variable format				
Coverage	Spec	[ISO/IEEE 11073-10404]	[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 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 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-017		
TP label		Special values. Negative 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.		
Applicability 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 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.		
<ul> <li>Pass/Fail criteria</li> <li>Verify that the PHG under test is able to accept the data, but does not 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>		ify that the measurement is		
Notes This test case has been considered as an implicit test case.				

TP Id TP/PLT/PHG/CLASS/PO/BV-018		TP/PLT/PHG/CLASS/PO/BV-018
TP label		Special values. Negative infinity – variable format
Coverage Spec [IS		[ISO/IEEE 11073-10404]

	Testable items	SpO2NumObjAttr 16; C	PulseRateNumObjAttr 33; C	
Test purpose	)	Check that:		
		The PHG receives a –INF value.	NITY value (variable format event report) but it does not use this	
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 stand configuration.		e PHG under test are in the Operating state using the standard		
Test procedure		and handle 10 (Pulse	ends a confirmed variable event report for handle 1 (SpO <sub>2</sub> Object) Rate Object) containing an observation value set to the value for INITY, [exponent 0, mantissa $-(2^{**}11 - 2) = 0x0802$ ]).	
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail crit	<ul> <li>Pass/Fail criteria</li> <li>Verify that the PHG under test is able to accept the data, but does not use the values they were an actual measurement (e.g. if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).</li> </ul>		easurement (e.g. if there is a UI, verify that the measurement is	
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/PO/BV-019		
TP label		Special values. Reserved – 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 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_026	
Other PICS				
Initial condition The simulated PHD and the PHG under test are in the Operating state using configuration.		ng state using the standard		
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 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 ld	TP/PLT/PHG/CLASS/PO/BV-020
TP label	Special values. Reserved – variable format

Coverage	Spec	[ISO/IEEE 11073-10404]		
	Testable items	SpO2NumObjAttr 16; C	PulseRateNumObjAttr 33; C	
Test purpose       Check that:         The PHG receives a Reserved for future use value (variable format event report) not use this value.		rmat event report) but it does		
Applicability	lity C_MAN_OXP_000 AND C_MAN_OXP_026			
Other PICS	ner PICS			
<b>Initial condition</b> The simulated PHD and the PHG under test are in the Operating state using the s configuration.		ng state using the standard		
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.		
<ul> <li>Pass/Fail criteria</li> <li>Verify that the PHG under test either reports an error or is able to accept the dat does not use the values as if they were an actual measurement (e.g. if there is a verify that the measurement is displayed in some form that indicates it is not a measurement).</li> </ul>		ement (e.g. if there is a UI,		
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 items	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	е	Check that:			
		The PHG shall respond to a configuration notification message using a "Remote Operation Response   Confirmed Event Report" data message with an MDC_NOTI_CONFIG event using the ConfigReportRsp structure for the event-info field (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 = 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_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 = '100000000000000000000000000000'B		
	encoding-rules= '10000000000000'B		
	nomenclature-version = '100000000000000000000000000000000000		
	□ functional-units = '00000000000000000000000000000000000		
	□ system-type = '000000010000000000000000000000000000		
	dev-config-id = 16437		
	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
	□ field-length = 2 bytes
	□ field-value = One of the following:
	<ul> <li>If association is accepted, field-value= 0x00 0x00.</li> </ul>
	<ul> <li>If association is rejected-permanent, field-value= 0x00 0x01.</li> </ul>
	<ul> <li>If association is rejected-transient, field-value= 0x00 0x02.</li> </ul>
	<ul> <li>If association is accepted-unknown-config, field-value= 0x00 0x03.</li> </ul>
	<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>
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
	$\Box  field-length = 2 \text{ bytes}$
	□ field-value= 0x50 0x79 (20601)
e.	protocol-version
	□ field- type = Protocol Version
	□ field-length = 4 bytes (BITS-32)
	□ field-value= 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 =
	<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-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)
		□ field- type = INT-U8
		□ field-length = 1 byte
		□ field-value = 0x00
	n.	data-req-init-manager-count (DataReqModeCapab)
		□ field- type = INT-U8
		□ field-length = 1 byte
		□ field-value = 0x00
Pass/Fail criteria	All chec	ked values are as specified in the test procedure.
Notes	Value fo	r protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].

TP ld		TP/PLT/PHG/CLASS/BPM/BV-001		
TP label		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/IEEE 11073-206	01-2016C]	
Testable items		ConfEventRep 18;M		
Test purpos	e	Check that:		
		A blood pressure monitor PHG shall respond to an [MDS-Configuration-Event] using a [Confirmed] event report response.		
		The Response shall include the event-reply-info [ConfigRep	oortRsp]	
		[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.		
		Alternatively, the PHG may request the PHD to send the sta enter the Configuring state and check attributes from the M (or rejection) of the PHD.		
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"
	<ol> <li>The simulated PHD sends a configuration event report with config-report-id set to 0x02 0xBC</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-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 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:	
	<pre>event_type = MDC_NOTI_SCAN_REPORT_FIXED</pre>	
	<pre>event_info = ScanReportInfoFixed</pre>	
	<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 <a href="http://continua.plugfests.com/show_bug.cgi?id=123">http://continua.plugfests.com/show_bug.cgi?id=123</a>	

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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	9	Check that:			
		For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present. The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_CMPD_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_ABS			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_020			
Other PICS					
Initial condit	ion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test procedure		1. The simulated PHD sends a confirmed fixed format event report with a report from handle 1 (Non-invasive blood pressure) that matches the Attribute-Value-Map order of MDC_ATTR_NU_CMPD_VAL_OBS_BASIC, MDC_ATTR_TIME_STAMP_ABS and handle 2 (pulse) that matches the Attribute-Value-Map order of MDC_ATTR_NU_VAL_OBS_BASIC, MDC_ATTR_TIME_STAMP_ABS			
		2. The simulated PHD waits until it receives a confirmation.			
		<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).				
		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 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>			

	• 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 Id TP label		TP/PLT/PHG/CLASS/BPM/BV-004		
		Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map		
Coverage	Spec	[ISO/IEEE 11073-10407]		
	Testable items	SystDiast_23;M		
Test purpose		Check that: For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present. The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_CMPD_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_ABS		
Applicability	/	C_MAN_OXP_000 AND C_MAN_OXP_020 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.		
		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 REAT DER MIN (2720)
		MDC_DIM_BEAT_PER_MIN (2720).
	4.	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.
	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 kilopascals and beats per minute as the unit codes for the measurement reports.
Notes		

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.			
					Coverage
	Testable items	SystDiast_21;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_MMHG			
		[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_020 AND C_MAN_BPM_001			
Other PICS					
Initial condition		The simulated PHD and th configuration.	he PHG under test are i	n the Operating state using the standard	
Test procedure		handle 1 (non-invasiv MDC_DIM_KILO_PA	/e blood pressure) to kP SCAL (3843).	ble event report to change the Unit-Code of a nomenclature code , since the only option is beats/minute.	
		2. The simulated PHD w	vaits until it receives a c	onfirmation.	
		(e.g., 16 kPa is 120 n	nmHg and 10 kPa is 80	or handle 1 using a measurement in kPa mmHg) followed by date and time stamp ats per minute followed by date and time	
		4. The simulated PHD w	vaits until it receives a c	onfirmation.	
		5. The simulated PHD s	ends an association rel	ease request (normal)	

	1	
	6.	The simulated PHD waits until it receives an association release response.
	7.	The simulated PHD sends an association request using the same configuration that was used initially.
	8.	If the PHG under test responds with association request response with "accepted- unknown-config", then
		• The simulated PHD sends the confirmed configuration event report with the standard configuration.
		• The simulated PHD waits until it receives a confirmation from the confirmed configuration event report just sent.
	9.	The simulated PHD sends a fixed event report for handle 1 using a measurement in mmHg followed by date and time stamp and for handle 2 using a measurement in beats per minute followed by date and time stamp.
	10.	The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	•	In step 4, verify that the PHG under test is able to accept the data properly and applies kPa and BPM to the observations (e.g. if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
	•	In step 10, verify that the PHG under test is able to accept the data properly and applies mmHg and BPM to the observations (e.g. if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
Notes		

TP ld		TP/PLT/PHG/CLASS/BPM/BV-005_A			
TP label		Unit-Code. Do not change from default millimetres of mercury (mmHg) to kilopascals (kPa) – fixed format observation.			
Coverage	Spec	[ISO/IEEE 11073-10407]			
	Testable items	SystDiast_21;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_MMHG			
Applicability	y	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, 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/BPM/BV-006		
TP label		Unit-Code. Use default millimetres of mercury (mmHg) and beats per minute (BPM) – variable format observation.		
Coverage	Spec	[ISO/IEEE 11073-10407]		
	Testable items	SystDiast_21;M		
Test 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		
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>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	[ISO/IEEE 11073-10407]		
	Testable items	SystDiast_21;M		
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	Communication 9; M		

Test purpose	Check that:
	For [Standard-Configuration] the [Unit-Code] attribute shall be present
	The value of the [Unit-Code] attribute shall be MDC_DIM_MMHG
	[AND]
	Continua PAN client components that receive a report of a configuration change shall apply the change to future measurements only
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_020 AND C_MAN_BPM_001
Other PICS	
Initial 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).
	• In step 10, verify that the PHG under test is able to accept the data properly and applies mmHg and BPM to the observations (e.g. if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
Notes	

TP ld		TP/PLT/PHG/CLASS/BPM/BV-008
TP label		Metric-id-list. Standard configuration
Coverage	Spec	[ISO/IEEE 11073-10407]
	Testable items	SystDiast_17;M

Test purpose	Check that:
	For [Standard-Configuration] the [Metric-Id-List] attribute shall be present. The value of the [Metric-Id-List] attribute shall be MDC_PRESS_BLD_NONINV_SYS, MDC_PRESS_BLD_NONINV_DIA, then MDC_PRESS_BLD_NONINV_MEAN.
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_020
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedure	<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 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_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 cri	iteria	• 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 ld		TP/PLT/PHG/CLASS/BPM/BV-011		
TP label		Metric-id-list. Reduced ids – fixed format		
Coverage	Spec	[ISO/IEEE 11073-10407]		
	Testable items	SystDiast_17;M		
Test 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	e	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_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_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:				
	$\Box  \text{Count} = 2$				
	<pre> Length = 856 ObservationScan ::= {     obj-handle: 1     attributes: AttributeList ::= {         AVA-Type ::= {             attribute-id: 61441             attribute-value: '00(824 bytes) 00'0         }     }     ObservationScan ::= {         obj-handle: 1         attributes: AttributeList ::= {             AVA-Type ::= {                 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					

TP Id TP/PLT/PHG/CLASS/BPM/BV-014				
TP label	TP label Special values. Not a number – fixed format			
Coverage Spec Testable items		[ISO/IEEE 11073-10407]		
		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 num		number – variable format		
Coverage Spec		[ISO/IEEE 11073-104	07]	
	Testable items	SystDiast_45; C	PulsRat_42; M	
Test purpos	5e	Check that: The PHG receives a N	IaN value (variable format event re	eport) but it does not use this value.
Applicabilit	у	C_MAN_OXP_000 AN	ND C_MAN_OXP_020	
Other PICS				
Initial condi	ition	The simulated PHD ar configuration.	nd the PHG under test are in the C	Operating state using the standard
Test procedure       1. The simulated PHD sends a confirmed variable event report for handle 1 (Systolic/Diastolic/MAP Object) and handle 2 (Pulse Rate Object) contain observation values set to the value for NaN ([exponent 0, mantissa +(2** 0x07FF]).		e Rate Object) containing all		
		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 t if they were an actual measurement (e.g. if there is a UI, verify that the meadisplayed in some form that indicates it is not a measurement such as "—" the display area).</li> </ul>		a UI, verify that the measurement is		
Notes This test case has been considered as an implicit test case.		ase.		

TP Id TP/PLT/PHG/CLASS/BPM/BV-016					
TP label		Special values. Not at this resolution – fixed format			
Coverage	Spec	[ISO/IEEE 11073-10407]			
	Testable items	SystDiast_23; M PulsRat_22; M			
Test purpose Check that:					

	The PHG receives NRes 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 11073-10407]			
	Testable items	SystDiast_45; C	PulsRat_42; M		
Test purpos	6e	Check that: The PHG receives NR	tes value (variable format event r	eport) but it does not use this value.	
Applicability	y	C_MAN_OXP_000 AN	ND C_MAN_OXP_020		
Other PICS					
Initial condi	tion	The simulated PHD ar configuration.	nd the PHG under test are in the	Operating state using the standard	
Test proced	Test procedure       1. The simulated PHD sends a confirmed variable event report for handle 1 (Systolic/Diastolic/MAP Object) and handle 2 (Pulse Rate Object) containing a observation values set to the value for NRes ([exponent 0, mantissa –(2**11)		se Rate Object) containing all onent 0, mantissa –(2**11) = 0x0800]).		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail criteria		• Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g. if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).			
Notes This test case has been considered as an implicit test case.		case.			

TP ld		TP/PLT/PHG/CLASS/BPM/BV-018			
TP label	Special values. Positive infinity – fixed format				
Coverage	Spec	[ISO/IEEE 11073-10407]	[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 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 11073-10407]			
	Testable items	SystDiast_45; C	PulsRat_42; M		
Test purpos	e	Check that:			
		The PHG receives a value.	+INFINITY value (variable format event re	eport) but it does not use this	
Applicability	y	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 Operation	ng state using the standard	
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.			
they		they were an act	Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g. if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).		
Notes This test case has been considered as an implicit test case.					

TP Id TP/PLT/PHG/CLASS/BPM/BV-020		TP/PLT/PHG/CLASS/BPM/BV-020
TP label Special values. Negative infinity – fixed format		Special values. Negative infinity – fixed format
		[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	itial condition The simulated PHD and the PHG under test are in the Operating state using the stand configuration.		ng state using the standard		
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 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).			ify that the measurement is
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. Negativ	Special values. Negative infinity – variable format				
Coverage	Spec	[ISO/IEEE 11073-1040	)7]				
	Testable items	SystDiast_45; C	PulsRat_42; M				
Test purpo	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 condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.					
Test procedure		(Systolic/Diastolic/	D sends a confirmed variable event rep /MAP Object) and handle 2 (Pulse Rate alue for negative infinity (–INFINITY, [e	e) containing all observation			
		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	n considered as an implicit test case.				

TP ld		TP/PLT/PHG/CLASS/BPM/BV-022					
TP label		Special values. Reserv	Special values. Reserved – fixed format				
Coverage	Spec	[ISO/IEEE 11073-1040	07]				
	Testable items	SystDiast_23; M	PulsRat_22; M				
Test purpos	se	Check that:					
		The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.					
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_020					
Other PICS							
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.					
Test procedure		(Systolic/Diastolic/ values set to the v mantissa -(2**11 -	D sends a confirmed fixed event repor /MAP Object) and handle 2 (Pulse Rate ralue for reserved (Reserved for future -1) = 0x0801]) and a time stamp.	e) containing all observation use, [exponent 0,			
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 bee	n considered as an implicit test case.				

TP ld		TP/PLT/PHG/CLASS/BPM/BV-023				
TP label		Special values. Reserved – variable format				
Coverage	Spec	[ISO/IEEE 11073-1040	7]			
	Testable items	SystDiast_45; C	PulsRat_42; M			
Test purpos	se	Check that: The PHG receives a Reserved for future use value (variable format event report) but it does not use this value.				
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		(Systolic/Diastolic/	D sends a confirmed variable event rep MAP Object) and handle 2 (Pulse Rate s set to the value for reserved (Reserve -1) = 0x0801]).	e Object) containing all		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.				
Pass/Fail criteria		does not use the v	G under test either reports an error or is alues as if they were an actual measur isurement is displayed in some form the	ement (e.g. if there is a UI,		

	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		Check that:	111_011_7 (000020 ,111				
		associating and, optionally, to i [AND]	determine the identity of the the mplement a simple access restr he filled in with a PhdAssociation	iction policy			
			ge protocol shall be set to proto	col-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 = 0x8000000)					
		[AND] The fields data-req-mode-capab, data-req-init-agent, data-req-init-manager-count shall be 0. If					
			mometer specialization data-rec				
Applicability	y	C_MAN_OXP_000 AND C_MA	N_OXP_025				
Other PICS							
Initial condi	tion	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 = '100000000000000000000000000000000000</li></ul>					
		system-type = '00	000000100000000000000000000000000000000	000000'B			

1			
			dev-config-id = 16447
			data-rep-mode-capab =
			data_req_mode_flags= '000000000000001'B
			data_req_init_agent_count = 1
			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.	AP	DU Type
			field-length = 2 bytes
			field-value = 0xE3 0x00 (AareApdu)
	b.	Re	sult
			field- type = AssociateResult
			field-length = 2 bytes
			field-value = One of the following:
			<ul> <li>If association is accepted, field-value= 0x00 0x00.</li> </ul>
			<ul> <li>If association is rejected-permanent, field-value= 0x00 0x01.</li> </ul>
			<ul> <li>If association is rejected-transient, field-value= 0x00 0x02.</li> </ul>
			<ul> <li>If association is accepted-unknown-config, field-value= 0x00 0x03.</li> </ul>
			<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>
	C.		ected-data-proto (DataProto: sequence of data-proto-id (DataProtold) and data- to-info(defined by data-proto-id))
	d.	dat	a-proto-id
			field- type = DataProtoId
			field-length = 2 bytes
			field-value= 0x50 0x79 (20601)
	e.	pro	tocol-version
			field- type = Protocol Version
			field-length = 4 bytes (BITS-32)
			field-value= 0x80 0x00 0x00 0x00
	f.	enc	coding-rules
			field-type = EncodingRules
			field-length = 2 bytes (BITS-16)
			field-value= depends on the encoding rules supported/selected, but only one can be supported at a time
	g.	nor	nenclature version
			field- type = NomenclatureVersion
			field-length = 4 bytes (BITS-32)
			field-value= Bit 0 must be set (nom-version1)
	h.	fun	ctional units
			field-type = FunctionalUnits

	□ field-length = 4 bytes (BITS-32)
	□ field-value =
	<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-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-00	04	
TP label		Configuration Event Report. Thermometer standard configuration		
Coverage	Spec [ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		2016C]	
	Testable items	ConfEventRep 18;M		
Test purpos	e	Check that:		
			ore) of the ISO/IEEE 11073-104 pt all the standard device config able 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 acceptanc (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	<ol> <li>The simulated PHD sends an association request to the PHG under test with dev-config id set to 0x03 0x20 (Thermometer).</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 0x03 0x20.</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		
	$\Box  \text{field- type = INT-U16}$		
	$\Box  \text{field-length} = 2 \text{ bytes}$		
	<ul> <li>field-value= it must be the same as the invoke-id of the simulated PHD's message.</li> </ul>		
	c. Obj-Handle:		
	$\Box \text{ field-type} = \text{HANDLE}$		
	$\Box  \text{field-length} = 2 \text{ bytes}$		
	$\Box  \text{field-value} = 0x00 \ 0x00$		
	d. Event-time:		
	□ field- type = INT-U32		
	$\Box  field-length = 4 \text{ bytes}$		
	□ field-value: 0xXX 0xXX		
	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	

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	9	Check that: If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an				
		error (roer) code of protocol-violation. The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitiations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_025				
Other PICS						
Initial conditi	ion	The PHG under test is in the Operating state.				
Initial condition Test procedure		<pre>1. The simulated PHD sends a Confirmed variable event report: a. ScanReportInfoVar. obs_scan_var:</pre>				

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

TP ld		TP/PLT/PHG/CLASS/TH/BV-006			
TP label		Attribute-Value-Map. Order change.			
Coverage Spec		[ISO/IEEE 11073-10408]			
	Testable items	Num Objec Temp17;M			
Test 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			
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	<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>			
		<ol> <li>The simulated PHD waits until it receives a confirmation.</li> <li>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.</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 body temperature value (in Celsius degrees since it is the standard configuration unit code).			
		6. The simulated PHD waits until it receives a confirmation.			
		7. The simulated PHD sends an association release request (normal).			
		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>			
		<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 (MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_ABS). The observation should be a reasonable Celsius degrees body temperature 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 Celsius degrees as the unit code for the measurement report (or reports the proper value after conversion to another unit code).
	• In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e. the actual observation may have occurred sometime in the past).
	<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 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, 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 measuremen and date are displayed properly).			
		• In step 6, verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g. if there is a UI, verify that the measurement is displayed properly).			
		• In steps 4 and 6, verify that the PHG under test uses Fahrenheit degrees as the unit code for the measurement reports.			

Notes	

TP ld		TP/PLT/PHG/CLASS/TH/BV-008			
TP label		Unit-Code. Change from default Celsius degrees to Fahrenheit degrees – fixed format observation.			
Coverage Spec		[ISO/IEEE 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	y	C_MAN_OXP_000 AND C_MAN_OXP_025 AND C_MAN_TH_001			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test proced	lure	<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.			
		3. Send a confirmed fixed format event report using a measurement in Fahrenheit degrees followed by date and time stamp.			
		4. The simulated PHD waits until it receives a confirmation.			
		5. The simulated PHD sends an association release request (normal).			
		6. The simulated PHD waits until it receives an association release response.			
		7. The simulated PHD sends an association request using the same configuration that was used initially.			
		8. If the PHG under test responds with association request response with "accepted- unknown-config", then			
		<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 fixed event report with an observation in Celsius degrees followed by date and time stamp.</li></ol>			
		10. The simulated PHD waits until it receives a confirmation.			
Pass/Fail criteria		<ul> <li>In step 4, verify that the PHG under test is able to accept the data properly and applies Fahrenheit degrees to the observation (e.g. if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).</li> </ul>			
		• In step 10, verify that the PHG under test is able to accept the data properly and applies			

	Celsius degrees to the observation (e.g. if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
Notes	

TP Id TP label		TP/PLT/PHG/CLASS/TH/BV-008_A		
		Unit-Code. Do not change from default Celsius degrees to Fahrenheit degrees – fixed format observation.		
Coverage	Spec	[ISO/IEEE 11073-10408]		
	Testable items	Num Objec Temp15;M		
Test purpose	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>		
		• 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/TH/BV-009		
TP label		Unit-Code. Use default Celsius degrees – variable format observation.		
Coverage Spec		[ISO/IEEE 11073-10408]		
	Testable items	Num Objec Temp15;M	Communication 9; M	

Test purpose	Check that:		
	For [Standard-Configuration] the [Unit-Code] attribute shall be present		
	The value of the [Unit-Code] attribute shall be MDC_DIM_DEGC		
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_025		
Other PICS			
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure	<ol> <li>Send a confirmed variable format event report using a measurement in Celsius degrees.</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 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-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	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		
		[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	N_OXP_025 AND C_MAN_TH_	_001
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	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 Id TP label		TP/PLT/PHG/CLASS/TH/BV-011 Special values. Not a number – fixed format		
	Testable items	Num Objec Temp17; M		
Test purpose		Check that:		
		The PHG receives a NaN value (fixed format event report) but it does not use 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 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 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_025	
Other PICS			
		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		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 purpos	Se .	Check that: The PHG receives NRes value (variable format event report) but it does not use this value.	
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_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 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		
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.

		TP/PLT/PHG/CLASS/TH/BV-016		
		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.		
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 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 Testable items		[ISO/IEEE 11073-10408]		
		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		
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 Id TP label		TP/PLT/PHG/CLASS/TH/BV-018		
		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.		
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 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. Reserve		Special values. Reserved – fixed format	
Coverage Spec		[ISO/IEEE 11073-10408]	
	Testable items	Num Objec Temp17; M	
Test purpose		Check that:	
		The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.	
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_025	
Other PICS			

Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure	<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 Id TP label		TP/PLT/PHG/CLASS/TH/BV-020		
		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.		
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 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]			
	Testable items	AssocResp1;M	AssocResp2;M	AssocResp3;M	
		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 respon	In the association response message sent by the PHG:					
	The result field shall be P11073-20601.	set to an appropriate response f	from those defined in ISO/IEEE				
	[AND]						
	In the DataProtoList struit id-20601	cture element, the data protoco	l identifier shall be set to data-proto-				
	[AND]	[AND]					
	The data-proto-info field	shall be filled in with a PhdAsso	ociationInformation structure				
	[AND]						
	The version of the data e version = 0x80000000)	exchange protocol shall be set t	o protocol-version1 (i.e., protocol-				
	[AND]						
		with a single selected encoding all support at least the MDER er	rule that is supported by both PHD neoding rules				
	[AND]						
	The version of the nome version = 0x80000000)	The version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000)					
	[AND]	[AND]					
	The field functional-units Association.	The field functional-units shall have all bits reset except for those relating to a Test Association.					
	[AND]	[AND]					
	The field system-type sh	The field system-type shall be set to sys-type-manager (i.e., system-type = 0x8000000)					
	[AND]	[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						
Other PICS							
Initial condition	The PHG is in the Unas	sociated state.					
Test procedure	1. The simulated PHD	sends an association request to	o the PHG under test, with the fields:				
		ersion = '100000000000000000					
		ules= '1000000000000000'B					
	nomenclat	ure-version = '10000000000000	00000000000000000000000'B				
	functional-	units = '0000000000000000000	0000000000000'B				
	system-typ	be = '00000001000000000000	00000000000'B				
	dev-config	□ dev-config-id = 16438					
	data-rep-m	data-rep-mode-capab =					

		<ul> <li>data_req_mode_flags= '00000000000001'B</li> </ul>
		<ul> <li>data_req_init_agent_count = 1</li> </ul>
		data_req_init_manager_count = 0
		$\Box  \text{option-list.length} = 0$
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:
		<ul> <li>If association is accepted, field-value= 0x00 0x00.</li> </ul>
		<ul> <li>If association is rejected-permanent, field-value= 0x00 0x01.</li> </ul>
		<ul> <li>If association is rejected-transient, field-value= 0x00 0x02.</li> </ul>
		<ul> <li>If association is accepted-unknown-config, field-value= 0x00 0x03.</li> </ul>
		<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>
	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 =

	<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-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
	$\Box  field-length = 2 \text{ bytes}$
	$\Box  field-value = 0x00 \ 0x00$
	PHG response to data-req-mode-flags is always 0.
	m. data-req-init-agent-count (DataReqModeCapab)
	□ field- type = INT-U8
	□ 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/CV/BV-003		
TP label		Maximum APDU size: Cardiovascular		
Coverage Spec [ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		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 I specializations the PHG suppor apply to all APDUs regardless of	ts. The buffer size limitiations in	this bullet and the next on

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	1. The simulated PHD sends a Confirmed variable event report:
	a. ScanReportInfoVar. obs_scan_var:
	$\Box$ Count = 2
	<pre> D Length = 64472 ObservationScan ::= {     obj-handle: 1     attributes: AttributeList ::= {         AVA-Type ::= {             attribute-id: 61441             attribute-value: '00(64448 bytes) 00'0         }     }     ObservationScan ::= {         obj-handle: 1         attributes: AttributeList ::= {             AVA-Type ::= {                 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	

## A.8 Subgroup 2.3.7: Strength (ST)

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

	version of the data exchange protocol shall be set to protocol-version1 (i.e., protocol-version = 0x8000000).
	[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 = '100000000000000000000000000000000000
	encoding-rules= '10000000000000'B
	nomenclature-version = '100000000000000000000000000000000'B
	functional-units = '00000000000000000000000000000000000
	system-type = '000000010000000000000000000000000000
	dev-config-id = 16445
	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
	<ol> <li>The PHG under test sends an association response. The fields of interest are:</li> </ol>
	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:
	<ul> <li>If association is accepted, field-value= 0x00 0x00.</li> </ul>
	<ul> <li>If association is rejected-permanent, field-value= 0x00 0x01.</li> </ul>
	<ul> <li>If association is rejected-transient, field-value= 0x00 0x02.</li> </ul>
	<ul> <li>If association is accepted-unknown-config, field-value= 0x00 0x03.</li> </ul>
	<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>
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
	$\Box  field-length = 2 \text{ bytes}$
	□ field-value= 0x50 0x79 (20601)
e.	protocol-version
	□ field- type = Protocol Version
	$\Box  \text{field-length} = 4 \text{ bytes (BITS-32)}$
	□ 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
	<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-id
		□ field- type = OCTET STRING
		□ field-length = 8 bytes
		□ field-value = (EUI-64 manufacturer and device)
	k.	dev-config-id
		□ field- type = ConfigId
		$\Box  field-length = 2 \text{ bytes}$
		□ field-value = 0x00 0x00 (manager-config-response)
	I.	data-req-mode-flags (DataReqModeCapab)
		field- type = DataReqModeFlags
		□ field-length = 2 bytes
		□ field-value = 0x00 0x00
		PHG response to data-req-mode-flags is always 0.
	m.	data-req-init-agent-count (DataReqModeCapab)
		□ field- type = INT-U8
		□ field-length = 1 byte
		□ field-value = 0x00
	n.	data-req-init-manager-count (DataReqModeCapab)
		□ field- type = INT-U8
		□ field-length = 1 byte
		□ field-value = 0x00
Pass/Fail criteria	All chec	ked values are as specified in the test procedure.
Notes	Value fo	or protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].

TP Id TP label		TP/PLT/PHG/CLASS/ST/BV-002			
		Maximum APDU size: Strength			
Coverage Spec		[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
	Testable items	CommonCharac 4;M			
Test purpose		Check that: If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.			
		The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitiations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_022			
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
	<pre> D Length = 64472 ObservationScan ::= {     obj-handle: 1     attributes: AttributeList ::= {         AVA-Type ::= {             attribute-id: 61441             attribute-value: '00(64448 bytes) 00'0         }     }     ObservationScan ::= {         obj-handle: 1         attributes: AttributeList ::= {             AVA-Type ::= {                 attribute-id: 2633 (MDC_ATTR_ENUM_OBS_VAL_SIMP_OID)                 attribute-value: 284 (MDC_MUSC_HEAD_FACIAL)                 }             }</pre>
	2. Check the response of the DHC under test
	<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	• 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".

## 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	e	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		
	[AND]		
	The fields data-req-init-*-count shall be 0		
Applicability	C_MAN_OXP_000 AND (C_MAN_OXP_021)		
Other PICS			
Initial condition	The PHG is in the Unassociated state.		
Test procedure	1. The simulated PHD sends an association request to the PHG under test, with the fields:		
	protocol-version = '100000000000000000000000000000'B		
	encoding-rules= '10000000000000'B		
	nomenclature-version = '100000000000000000000000000000000'B		
	□ functional-units = '00000000000000000000000000000000000		
	system-type = '00000001000000000000000000000000'B		
	dev-config-id = 16441		
	data-rep-mode-capab =		
	<ul> <li>data_req_mode_flags= '00000000000001'B</li> </ul>		
	<ul> <li>data_req_init_agent_count = 1</li> </ul>		
	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		
	$\Box  \text{field-length} = 2 \text{ bytes}$		
	□ field-value = 0xE3 0x00 (AareApdu)		
	b. Result		
	field-type = AssociateResult		
	$\Box  \text{field-length} = 2 \text{ bytes}$		
	field-value = One of the following:		
	<ul> <li>If association is accepted, field-value= 0x00 0x00.</li> <li>If association is rejected permanent, field value= 0x00 0x01</li> </ul>		
	<ul> <li>If association is rejected-permanent, field-value= 0x00 0x01.</li> </ul>		

	<ul> <li>If association is rejected-transient, field-value= 0x00 0x02.</li> </ul>
	<ul> <li>If association is accepted-unknown-config, field-value= 0x00 0x03.</li> </ul>
	<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>
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
	$\Box  field-length = 2 bytes$
	□ 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
	<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-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 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
		$\Box  field-length = 1 byte$
		□ field-value = 0x00
	n.	data-req-init-manager-count (DataReqModeCapab)
		□ field- type = INT-U8
		$\Box  field-length = 1 byte$
		□ field-value = 0x00
Pass/Fail criteria	All chec	ked values are as specified in the test procedure.
Notes	Value fo	r protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].

TP Id								
		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	CommonCharac 4;M						
	items							
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 limitiations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.						
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_021						
Other PICS								
Initial condit	ion	The PHG under test is in the Operating state.						
Test procedu	ure	1. The simulated PHD sends a Confirmed variable event report:						
		a. ScanReportInfoVar. obs_scan_var:						
		$\Box$ Count = 2						
		□ Length = 5080						
		<pre>ObservationScan ::= {     obj-handle: 1     attributes: AttributeList ::= {         AVA-Type ::= {             attribute-id: 61441             attribute-value: '00(5054 bytes) 00'0         }     } }</pre>						

	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
	ACCIIDACE VALUE. 0X00 0X00 0X00
	}
	2. Check the response of the PHG under test.
	3. The simulated PHD sends a Confirmed fixed event report with one measurement.
	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	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	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 0x1c 0x20 (MedicalMonitor).</li> </ol>							
		2. The PHG under test responds with an association response, the field of interest is:							
		a. Result							
		□ field- type = INT-U16							
		□ field-length = 2 bytes							
		□ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)							
		If the result of the association response was "accepted-unknown-config"							
		3. The simulated PHD sends a configuration event report with config-report-id set to 0x1c 0x20.							
		4. The PHG under test must respond with:							
		a. APDU Type							

	1			
			field-length = 2 bytes	
			field-value = 0xE7 0x00 (PrstApdu)	
		b.	bke-id	
			field- type = INT-U16	
			field-length = 2 bytes	
			field-value= it must be the same as the invoke message.	e-id of the simulated PHD's
		c.	-Handle:	
			field- type = HANDLE	
			field-length = 2 bytes	
			field-value = 0x00 0x00	
		d.	ent-time:	
			field- type = INT-U32	
			field-length = 4 bytes	
			field-value: 0xXX 0xXX	
		e.	ent-type:	
			field-length = 2 bytes	
			field-value= MDC_NOTI_CONFIG	
		f.	following six bytes indicate:	
			Event-replay-info.length (2 bytes)	
			ConfigReportRsp.config-report-id: it must be t simulated PHD's message	he same as config-report-id of the
			ConfigReportRsp.config-result: One of:	
			<ul> <li>accepted-config: 0x00 0x00</li> </ul>	
	5.	IF (	AN_OXP_085 THEN:	
		a.	PHG under test moves to Configuring/Sendin comp-command with handle set to 0 (request to 0 to indicate all attributes.	
		b.	e simulated PHD responds with a rors-cmip-ge ibute-list contains a list of all implemented attril s-time-mgr-set-time bit is not set.	
		c.	ce in the Operating state the PHG is forced to	enable the scanner object.
	Wa	it un	e Operating state is reached in both cases.	
	6.	The	ulated PHD sends a fixed event report with on	e measurement.
Pass/Fail criteria	•		G under test must respond either to the associ e or to the Configuration Event Report with an	
	•	The	asurement is correctly presented.	
Notes	The	PH	n request Get MDS while they are in the Assoc	ciated 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	ConfEventRep 18;M					

Test purpose	Check that:						
	A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.						
	Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the Configuring state and check attributes from the MDS object prior to final acceptance (or rejection) of the PHD.						
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_016						
Other PICS	C_MAN_OXP_085						
Initial condition	The simulated PHD and the PHG under test are in the Unassociated state.						

Test procedure	1.		simulated PHD sends an association request to the PHG under test with dev-config at to 0x1c 0x21 (MedicalMonitor).
	2.	The	PHG under test responds with an association response, the field of interest is:
		a.	Result
			□ field- type = INT-U16
			□ field-length = 2 bytes
			□ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)
	lf th	ne res	ult of the association response was "accepted-unknown-config"
	3.	The 0x21	simulated PHD sends a configuration event report with config-report-id set to 0x1c
	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:
			<ul> <li>accepted-config: 0x00 0x00</li> </ul>
	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-li 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.
		с.	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.	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 Id		TP/PLT/PHG/CLASS/AM/BV-002								
TP label		Configuration Event Report. Adherence Monitor standard configuration 7202								
Coverage	ge Spec		[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]							
	Testable items	Cor	nfEve	entRe	ep 18;M					
Test purpos	e	Check that:								
		sta	ndar	ds sh	supports one (or more) of the ISO/IEEE 11073-104xx device specialization all be able to accept all the standard device configurations specified for the d in conformance Table 23 under Gen-4.					
		ent	er th	e Co	, the PHG may request the PHD to send the standard configuration in order to nfiguring state and check attributes from the MDS object prior to final acceptance of the PHD.					
Applicability	,	C_I	MAN	_OXI	P_000 AND C_MAN_OXP_016					
Other PICS		C_I	MAN	_OX	P_085					
Initial condi	tion	The	e sim	ulate	ed PHD and the PHG under test are in the Unassociated state.					
Tost procod	uro	1.								
Test proced	ure	1.			ulated PHD sends an association request to the PHG under test with dev-config- 0x1c 0x22 (MedicalMonitor).					
		2.	The	PH(	G under test responds with an association response, the field of interest is:					
			a.	Res	sult					
					field- type = INT-U16					
					field-length = 2 bytes					
					field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)					
		lf th	ne re	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	e PH(	G under test must respond with:					
			a.	APD	DU Type					
					field-length = 2 bytes					
					field-value = 0xE7 0x00 (PrstApdu)					
			b.	Invo	oke-id					
					field- type = INT-U16					
					field-length = 2 bytes					
					field-value= it must be the same as the invoke-id of the simulated PHD's message.					
			c.	Obj	-Handle:					
					field- type = HANDLE					
					field-length = 2 bytes					
					field-value = 0x00 0x00					

	d	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:
		<ul> <li>accepted-config: 0x00 0x00</li> </ul>
	5. IF	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>
	C.	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" lessage or to the Configuration Event Report with an "accepted-config".
	• T	he measurement is correctly presented.
Notes	The P	HG can request Get MDS while they are in the Associated state.

TP Id TP label		TP/PLT/PHG/CLASS/AM/BV-003         Configuration Event Report. Adherence Monitor standard configuration 7203						
								Coverage
	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.						
Applicabilit	У	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 s	et to	0x1c 0x23 (MedicalMonitor).
2.	The	PH	G under test responds with an association response, the field of interest is:
	a.	Res	sult
			field- type = INT-U16
			field-length = 2 bytes
			field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-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.	APDU Type
			field-length = 2 bytes
			field-value = 0xE7 0x00 (PrstApdu)
		b.	Invoke-id
			field- type = INT-U16
			field-length = 2 bytes
			field-value= it must be the same as the invoke-id of the simulated PHD's message.
		c.	Obj-Handle:
			field- type = HANDLE
			field-length = 2 bytes
			field-value = 0x00 0x00
		d.	Event-time:
			field- type = INT-U32
			field-length = 4 bytes
			field-value: 0xXX 0xXX
		e.	Event-type:
			field-length = 2 bytes
			field-value= MDC_NOTI_CONFIG
		f.	The following six bytes indicate:
			Event-replay-info.length (2 bytes)
			ConfigReportRsp.config-report-id: it must be the same as config-report-id of the simulated PHD's message
			ConfigReportRsp.config-result: One of:
			<ul> <li>accepted-config: 0x00 0x00</li> </ul>
Wa	it unt	il the	Operating state is reached in both cases.
5.	IF C	C_MA	AN_OXP_085:
	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	it unt	il the	Operating state is reached in both cases.
6.	The	sim	ulated PHD sends a fixed event report with one measurement.

Pass/Fail criteria	• 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.

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	TP ld	TP/PLT/PHG/CLASS/AM/BV-004		
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 (roor) 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         Applicability       C_MAN_OXP_000 AND C_MAN_OXP_016         Other PICS       Initial condition         The PHG under test is in the Operating state.       1. The simulated PHD sends a Confirmed variable event report: <ul> <li>a. ScanReportInfoVar. obs_scan_var:</li> <li>Count = 2</li> <li>Length = 984</li> <li>ObservationScan ::= {                 obj-handle: 1</li></ul>	TP label	Maximum APDU size: Adherence Monitor		
items         Check that:           If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roef) 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           Applicability         C_MAN_OXP_000 AND C_MAN_OXP_016           Other PICS         Initial condition           Initial condition         The PHG under test is in the Operating state.           Test procedure         1. The simulated PHD sends a Confirmed variable event report:	Coverage Spec	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
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         Applicability       C_MAN_OXP_000 AND C_MAN_OXP_016         Other PICS       Initial condition         The PHG under test is in the Operating state.         Test procedure       1. The simulated PHD sends a Confirmed variable event report: <ul> <li>a. ScanReportInfoVar.obs_scan_var:</li> <li>Count = 2</li> <li>Length = 984</li> <li>ObservationScan ::= {                  obj-handle: 1                        attribute=id: fi441                        attribute=value: '00(960 bytes)00'0</li></ul>		le CommonCharac 4;M		
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: <ul> <li>a. ScanReportInfoVar.obs_scan_var:</li> <li>Count = 2</li> <li>Length = 984</li> <li>ObservationScan ::= {                 obj-handle: 1                     attributes: AttributeList ::= {                          AVA-Type ::= {                               attribute-value: '00(960 bytes)00'0</li></ul>	Test purpose	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		
Initial condition       The PHG under test is in the Operating state.         Test procedure       1. The simulated PHD sends a Confirmed variable event report: <ul> <li>a. ScanReportInfoVar.obs_scan_var:</li></ul>	Applicability	C_MAN_OXP_000 AND C_MAN_OXP_016		
Test procedure       1. The simulated PHD sends a Confirmed variable event report:         a. ScanReportInfoVar. obs_scan_var:       □ Count = 2         □ Length = 984       ObservationScan ::= {         obj-handle: 1       attributes: AttributeList ::= {         AVA-Type ::= {       attribute-id: 61441         attribute: AttributeList ::= {       AVA-Type ::= {         ObservationScan ::= {       obj-handle: 1         attribute: AttributeList ::= {       AVA-Type ::= {         AVA-Type ::= {       attributes: AttributeList ::= {         AVA-Type ::= {       attribute: attributeList ::= {         AVA-Type ::= {       attribute: 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.         4. Check the response of the PHG under test.         9. The simulated PHD sends a Confirmed fixed event report with one measurement.         4. Check the response of the PHG under test.         9. In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".				
<ul> <li>a. ScanReportInfoVar. obs_scan_var:</li> <li>Count = 2</li> <li>Length = 984</li> <li>ObservationScan ::= {     obj-handle: 1         attributes: AttributeList ::= {         AVA-Type ::= {             attribute-id: 61441             attribute-id: 61441             attribute: AttributeList ::= {             AVA-Type ::= {</li></ul>	Initial condition	The PHG under test is in the Operating state.		
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".	rest procedure	<pre>a. ScanReportInfoVar.obs_scan_var:     Count = 2     Length = 984     ObservationScan ::= {         obj-handle: 1         attributes: AttributeList ::= {             AVA-Type ::= {                 attribute-id: 61441                 attribute-value: '00(960 bytes) 00'0                 }         }         ObservationScan ::= {             obj-handle: 1             attributes: AttributeList ::= {                 AVA-Type ::= {                     attribute_value: '200(960 bytes) 00'0</pre>		
		3. The simulated PHD sends a Confirmed fixed event report with one measurement.		
• In step 4 the PhG under test must respond with a "rors-cmip-confirmed-event-report".	Pass/Fail criteria			
Notes		• In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".		

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	1	C_MAN_OXP_000 AND C_MAN_OXP_016			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c20).			
Test proced	ure	<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.			
		9. The simulated PHD sends an association request using the same standard configuration that was used previously.			
		10. If the PHG under test responds with association request response with "accepted- unknown-config", then			
		• The simulated PHD sends the confirmed configuration event report with the standard configuration.			
		• The simulated PHD waits until there is a confirmation to the configuration event report that was sent.			
		11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_TIME_STAMP_ABS, then MDC_ATTR_NU_VAL_OBS_BASIC). The observation should be a reasonable Fixed Dosage Medication observation.			
		12. The simulated PHD waits until it receives a confirmation.			
Pass/Fail cri	iteria	• In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g. if there is a UI, verify that the measurement and date are displayed properly).			
		• In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e. the actual observation may have occurred sometime in the past).			
		• When automated, it is necessary to be careful about sending these messages back to back since the ability to look at things like an UI may require that there be pauses for operator verification.			

Notes	

TP ld		TP/PLT/PHG/CLASS/AM/BV-006				
TP label		Attribute-Value-Map. Order change. (0x1c23)				
Coverage	Spec	[ISO/IEEE 11073-104	[ISO/IEEE 11073-10472]			
	Testable items	VarDosage12; M	UserFeedback12; M	StatReporter12; M		
Test purpose       Check that:         For [Standard-Configuration, Variable Dosage Medication Object] the [Attrattribute shall be present         The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_TIM         MDC_ATTR_NU_VAL_OBS_SIMP         [AND]         For [Standard-Configuration, User Feedback Object] the [Attribute-Value-be present         The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_TIM         MDC_ATTR_NU_CMPD_VAL_OBS_BASIC         [AND]         For [Standard-Configuration, Status Reporter Object] the [Attribute-Value-be present         The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_TIM         MDC_ATTR_NU_CMPD_VAL_OBS_BASIC         [AND]         For [Standard-Configuration, Status Reporter Object] the [Attribute-Value-be present         The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_TIM         MDC_ATTR_ENUM_OBS_VAL_BASIC_BIT_STR		MDC_ATTR_TIME_STAMP_ABS  [Attribute-Value-Map] attribute shall MDC_ATTR_TIME_STAMP_ABS   [Attribute-Value-Map] attribute shall				
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 simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and the PHG under test are in the Operating state using the simulated PHD and test are in the Operating state using the simulated PHD and tesing state using the simulated PHD and tesing state usin		perating state using the standard				
Test procedure		Attribute-Value-M MDC_ATTR_ Variable Dos MDC_ATTR_ for User Feed MDC_ATTR_ MDC_ATTR_ 2. The simulated PH 3. The simulated PH Value-Map config (User Feedback of MDC_ATTR_ Variable Dos MDC_ATTR_ for User Feed MDC_ATTR_ MDC_ATTR_ 4. The simulated PH	HD sends a confirmed fixed format e lap order of: _TIME_STAMP_ABS then MDC_AT sage Medication Object _TIME_STAMP_ABS then MDC_AT dback Object _TIME_STAMP_ABS then _ENUM_OBS_VAL_BASIC_BIT_ST HD waits until it receives a confirmat HD sends a confirmed variable even guration of handle 2 (Variable Dosag objec) and of handle 3 (Status Repo _NU_VAL_OBS_BASIC then MDC_ sage Medication Object	TTR_NU_VAL_OBS_BASIC for TTR_NU_CMPD_VAL_OBS_BASIC TR for Status Reporter Object tion. Int report to change the Attribute- ge Medication Object), of handle 4 orter Object) to reverse the values to: _ATTR_TIME_STAMP_ABS for en MDC_ATTR_TIME_STAMP_ABS TR then porter Object tion.		

	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.
	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	<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 mI as the unit code for Variable Dosage Medication 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	
L	

TP ld		TP/PLT/PHG/CLASS/AM/BV-007		
TP label		Metric-id-list. Standard configuration		
Coverage	Spec	[ISO/IEEE 11073-10472]	[ISO/IEEE 11073-10472]	
	Testable items	UserFeedback9; M		
Test purpose		Check that: For [Standard-Configuration, User Feedbackl Object]. Metric-Id List attribute shall be present and with value {MDC_AI_MED_UF_LOCATION, MDC_AI_MED_UF_RESPONSE}		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).		
Test procedure		containing an observation handle 2 containing an obs observation (Enum-Observ	a confirmed variable event repo with the compound field values ( servation (FLOAT) of 3 and for h ved-Value-Basic-Bit-Str) with bit d within the regimen allowed timi	SFLOAT) set to (1, 0), for andle 3 containing an 0 set to 1 ( <i>A medication</i>

	2.	The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	•	Verify that the PHG under test is able to accept the data and applies the data properly as User Feedback: location = 1, response = 0, Variable Dosage Medication= 3 and Status Reporter informing that medication dosage was not dispensed within the regimen allowed timing (bit 0 set to 1).
Notes		

TP ld		TP/PLT/PHG/CLASS/AM/BV-008		
TP label		Metric-id-list. Id order change – fixed format		
Coverage	Spec	[ISO/IEEE 11073-10472]		
	Testable items	UserFeedback9; M		
Test 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 i configuration (0x1c23).		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	P label         Metric-id-list. Id order change – variable format			
Coverage	Spec	[ISO/IEEE 11073-10472]		
	Testable items	UserFeedback9; M	UserFeedback9; M	
Test purpose		Check that: For [Standard-Configuration, User Feedbackl Object]. Metric-Id List attribute shall be present and with value {MDC_AI_MED_UF_LOCATION, MDC_AI_MED_UF_RESPONSE}		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016		
Other PICS				

Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c23).		
Test procedure	<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/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	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 condit	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 4 (user feedback) setting MDC_ATTR_ID_PHYSIO_LIST to (MDC_AI_MED_UF_LOCATION) and MDC_ATTR_ATTRIBUTE_VAL_MAP to { MDC_ATTR_TIME_STAMP_ABS, 8, MDC_ATTR_NU_CMPD_VAL_OBS_BASIC, 6}.</li> </ol>			
		2. The simulated PHD sends a confirmed fixed event report for handle 4 containing an observation with the compound field values (SFLOAT) set to (5) along with a known time stamp.			
		3. The simulated PHD waits until it receives a confirmation from the PHG under test.			
Pass/Fail cri	teria	• Verify that the PHG under test is able to accept the data and time stamp and applies the data properly location= 5.			
Notes					

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 purpose		Check that:	
		For [Standard-Configuration, User Feed	backl 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) 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 Id TP label		TP/PLT/PHG/CLASS/AM/BV-012	
		Special values. Not a number – fixed format (0x1c20)	
Coverage	Spec	[ISO/IEEE 11073-10472]	
	Testable items	FixedDosage12; M	
Test purpos	se	Check that:	
		The PHG receives a NaN value (fixed format event report) but it does not use this value.	
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_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 purpose	•	Check that:		
		The PHG receives a NaN value (variable format event report) but it does not use the	nis 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 st configuration (0x1c20).	andard	
Test procedure		<ol> <li>The simulated PHD sends a confirmed variable event report for handle 1 (Fixe Medication Object) containing an observation with the value for NaN ([exponent mantissa +(2**11 –1) = 0x07FF]).</li> </ol>	0	
		2. The simulated PHD waits until it receives a confirmation from the PHG under t	est.	
Pass/Fail criteria		<ul> <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 measu displayed in some form that indicates it is not a measurement such as "—" or I the display area).</li> </ul>	rement is	
Notes		This test case has been considered as an implicit test case.		

TP Id TP label		TP/PLT/PHG/CLASS/AM/BV-014 Special values. Not at this resolution – fixed format(0x1c20)	
	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.
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 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 Id TP label		TP/PLT/PHG/CLASS/AM/BV-016	
		Special values. Positive infinity – fixed format (0x1c20)	
Coverage	Spec	[ISO/IEEE 11073-10472]	
	Testable items	FixedDosage12; 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 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/PLT/PHG/CLASS/AM/BV-017
TP label		Special values. Positive infinity – variable format(0x1c20)
Coverage	Spec	[ISO/IEEE 11073-10472]

	Testable items	FixedDosage22; C		
Test purpose		Check that:		
		The PHG receives a +INFINITY value (variable format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c20).		
Test procedure		<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 Id TP label		TP/PLT/PHG/CLASS/AM/BV-018         Special values. Negative infinity – fixed format (0x1c20)		
	Testable items	FixedDosage12; 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_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 purpose		Check that:		
		The PHG receives a –INFINI <sup>-</sup> value.	Y value (variable format event re	port) but it does not use this
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 stan configuration.		ng state using the standard		
N			s a confirmed variable event report to observation with the value for no $2^{**}11 - 2$ = 0x0802]).	
		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 they were an actual measurement (e.g. if there is a UI, verify that the measure displayed in some form that indicates it is not a measurement).</li> </ul>		ify that the measurement is		
Notes	Notes This test case has been considered as an implicit test case.			

TP Id TP/PLT/PHG/CLASS/AM/BV-020		TP/PLT/PHG/CLASS/AM/BV-020	
TP label         Special values. Reserved – fixed format (0x1c20)		Special values. Reserved – fixed format (0x1c20)	
Coverage	Spec [ISO/IEEE 11073-10472]		
	Testable items	FixedDosage12; M	
Test purpos	е	Check that:	
		The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.	
Applicability	Applicability C_MAN_OXP_000 AND C_MAN_OXP_016		
Other PICS	xs		
Initial condit	Initial condition The simulated PHD and the PHG under test are in the Operating state using the stand 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.	
does not use the values as if they were an actual measurement (e.g. if the		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	
Notes	Notes This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/AM/BV-021		
<b>TP label</b> Special values. Reserved – variable format (0x1c20)		Special values. Reserved – variable format (0x1c20)		
Coverage	Spec	[ISO/IEEE 11073-10472]		
	Testable items	FixedDosage22; C		
Test purpos	ie -	Check that:		
		The PHG receives a Reserved for future use value (variable format event report) but it does not use this value.		
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_016		
Other PICS	Other PICS			
<b>Initial condition</b> The simulated PHD and the PHG under test are in the Operating state using the configuration (0x1c20).		The simulated PHD and the PHG under test are in the Operating state using the standard configuration (0x1c20).		
		Medication) containing an observation with the value for reserved (Reserved for future		
2		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
does not use the values as if they were an actual measurement (e.g. if ther		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		
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/AM/BV-022			
TP label Spe		Special values. Not a nu	Special values. Not a number – fixed format (0x1c23)		
Coverage	Spec	[ISO/IEEE 11073-10472	[ISO/IEEE 11073-10472]		
	Testable items	VarDosage12; M	UserFeedback12; M		
Test purpos	se	Check that:			
		The PHG receives a Na	N value (fixed format event report	t) but it does not use this value.	
Applicability C_MAN_OXP_000 AND C_MAN_OXP_016					
Other PICS					
<b>Initial condition</b> The simulated PHD and the PHG under test are in the Operating state using the configuration (0x1c23).		perating state using the standard			
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 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		<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>			

This test case has been considered as an implicit test case.
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TP Id TP/PLT/PHG/CLASS/AM/BV-023				
TP label		Special values. Not a number – variable format (0x1c23)		
Coverage	Spec	[ISO/IEEE 11073-1047	[ISO/IEEE 11073-10472]	
	Testable items	VarDosage20; C	UserFeedback23; C	
Test purpos	se	Check that: The PHG receives a Na	aN value (variable format event report)	but it does not use this value.
Applicability	у	C_MAN_OXP_000 ANI	D C_MAN_OXP_016	
Other PICS				
Initial condi	<b>itial condition</b> The simulated PHD and the PHG under test are in the Operating state using the star configuration (0x1c23).		ng state using the standard	
Test procedure       1. The simulated PHD sends a confirmed variable event report for handl Dosage Medication) and handle 4 (User Feedback) containing an obs to the value for NaN ([exponent 0, mantissa +(2**23 -1) = 0x007FFFF Dosage Medication and [exponent 0, mantissa +(2**11 -1) = 0x07FF] Feedback).		ining an observation value set 0x007FFFFF] for Variable		
2. T		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 or if they were an actual measurement (e.g. if there is a UI, verify displayed in some form that indicates it is not a measurement the display area).</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/AM/BV-024			
TP label	Special values. Not at this resolution – fixed format (0x1c23)				
Coverage	Spec	[ISO/IEEE 11073-10472]			
	Testable items	VarDosage12; M UserFeedback12; M			
Test purpos	Check that: The PHG receives NRes value (fixed format event report) but it does not use this value.		does not use this value.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_016			
Other PICS					
Initial condi	ndition The simulated PHD and the PHG under test are in the Operating state using the standar configuration (0x1c23).		ng state using the standard		
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 confirm		until it receives a confirmation fro	om the PHG under test.		

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

TP ld		TP/PLT/PHG/CLASS/AM/BV-025		
TP label Special values. Not at this resolution – variable format (0x1c23)		3)		
Coverage	Spec	[ISO/IEEE 11073-10472]		
	Testable items	VarDosage20; C	UserFeedback23; C	
Test purpos	5e	Check that: The PHG receives NRes value (variable format event report) but it does not use this value.		but it does not use this value.
Applicabilit	у	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 standa configuration (0x1c23).		ing state using the standard
Test procedure1. The simulated PHD sends a confirmed variable event report f Dosage Medication) and handle 4 (User Feedback) containing to the value for NRes ([exponent 0, mantissa +(2**23) = 0x00 Dosage Medication and [exponent 0, mantissa -(2**11) = 0x00		aining an observation value set 0x00800000] for Variable		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
• Verify that the PHG under test is able to accept the data, but does not 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).		verify that the measurement is		
Notes	otes This test case has been considered as an implicit test case.			

TP ld		TP/PLT/PHG/CLASS/AM/BV-026		
TP label	P label Special values. Positive infinity – fixed format (0x1c23)			
Coverage	Spec	[ISO/IEEE 11073-10472]		
	Testable items	VarDosage12; M UserFeedback12; M		
Test purpose		Check that: The PHG receives a +INFINITY value (fixed format event report) but it does not use this		
Applicabilit	у	value. C_MAN_OXP_000 AND C_MAN_OXP_016		
Other PICS	Other PICS			
<b>Initial condition</b> The simulated PHD and the PHG under test are in the Operating state using configuration (0x1c23).		ng state using the standard		
Test procedure1. The simulated PHD sends a confirmed fixed event report for handle 2 (Varial Medication) and handle 4 (User Feedback) containing an observation value s value for positive infinity (+INFINITY, [exponent 0, mantissa +(2**23 - 2) = 0)		observation value set to the		

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

TP ld		TP/PLT/PHG/CLASS/AM/BV-027				
TP label		Special values. Positive infinity – variable format (0x1c23)				
Coverage	Spec	[ISO/IEEE 11073-10472]				
	Testable items	VarDosage20; C	UserFeedback23; C			
Test purpose		Check that:				
		The PHG receives a +INFINITY value (variable format event report) but it does not use this value.				
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 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-028				
TP label		Special values. Negative infinity – fixed format (0x1c23)				
Coverage	Spec	[ISO/IEEE 11073-10472]				
	Testable items	VarDosage12; M	UserFeedback12; M			
Test purpose		Check that:				
		The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.				
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_016				
Other PICS						

Initial 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 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 11073-1047	72]		
	Testable items	VarDosage20; C	UserFeedback23; C		
Test purpos	e	Check that:			
		The PHG receives a – value.	INFINITY value (variable format event re	eport) but it does not use this	
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 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 bee	n considered as an implicit test case.		

TP Id TP/PL		TP/PLT/PHG/CLASS/AM	TP/PLT/PHG/CLASS/AM/BV-030		
TP label		Special values. Reserved – fixed format (0x1c23)			
Coverage	Coverage Spec [ISO/IE		]		
	Testable items	VarDosage12; M	UserFeedback12; M		
Test purpose		Check that:			
		The PHG receives a Re	served for future use value (fixed for	ormat 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 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 11073-1047	72]			
Testable items		VarDosage20; C	UserFeedback23; 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.				
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 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-032
TP label	Association procedure PHG AM

Coverage	Spec	[ISO/IEEE 11073-10472]				
	Testable	MM_AssocReq9; M	MM_AssocResp1; M	MM_AssocResp2; M		
	items	MM_AssocResp3; M	MM_AssocResp4; M	MM_AssocResp5; M		
		MM_AssocResp6; M	MM_AssocResp7; M	MM_AssocResp8; M		
		MM_AssocResp9; M	MM_AssocResp10; M	MM_AssocResp11; M		
		MM_AssocResp12; M				
Test purpos	e	Check that:	L			
		In the association response me	essage sent by the PHG:			
		The result field shall be set to a P11073-20601.	an appropriate response from th	ose defined in ISO/IEEE		
		[AND]				
		In the DataProtoList structure e	element, the data protocol identi	fier shall be set to data-proto-		
		[AND]				
		The data-proto-info field shall b	e filled in with a PhdAssociatior	Information structure		
		[AND]				
		The version of the data exchange protocol shall be set to protocol-version1 (i.e., protocol-version = 0x80000000)				
		[AND]				
		The PHG shall respond with a single selected encoding rule that is supported by both PHD and PHG. The PHG shall support at least the MDER encoding rules				
		[AND]				
		The version of the nomenclature used shall be set to nom-version1 (i.e., nomenclature-version = 0x80000000)				
		[AND]				
		The field functional-units shall have all bits reset except for those relating to a Test Association.				
		[AND]				
		The field system-type shall be set to sys-type-manager (i.e., system-type = 0x80000000)				
		[AND]				
		The System-Id field shall contain the unique system id of the PHG device, which shall be a valid EUI-64 type identifier				
		[AND]				
		The field dev-config-id shall be manager-config-response (0)				
		[AND]				
		The field data-req-mode-capab shall be 0				
		[AND]				
		The fields data-req-init-*-count	shall be 0			
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_016				
Other PICS						
Initial condit	ion	The PHG is in the Unassociate	d state			

Test procedure 1	. The	e simulated PHD sends an association request to the PHG under test, with the fields	51
		protocol-version = '100000000000000000000000000000000000	
		<pre>encoding-rules= '10000000000000'B</pre>	
		nomenclature-version = '100000000000000000000000000000000000	
		□ functional-units = '00000000000000000000000000000000000	
		system-type = '00000001000000000000000000000000'B	
		$\Box  \text{dev-config-id} = 16481$	
		data-rep-mode-capab =	
		<ul> <li>data_req_mode_flags= '000000000000001'B</li> </ul>	
		data_req_init_agent_count = 1	
		data_req_init_manager_count = 0	
		$\Box$ option-list.length= 0	
2	. The	e PHG under test sends an association response. The fields of interest are:	
	a.	АРДИ Туре	
		□ field-length = 2 bytes	
		□ field-value = 0xE3 0x00 (AareApdu)	
	b.	Result	
		□ 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>	
		<ul> <li>If association is rejected-permanent, field-value= 0x00 0x01.</li> </ul>	
		<ul> <li>If association is rejected-transient, field-value= 0x00 0x02.</li> </ul>	
		<ul> <li>If association is accepted-unknown-config, field-value= 0x00 0x03.</li> </ul>	
		<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>	
	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
		$\Box  \text{field-length} = 4 \text{ bytes (BITS-32)}$
		field-value= Bit 0 must be set (nom-version1)
	h.	functional units
		field-type = FunctionalUnits
		□ field-length = 4 bytes (BITS-32)
		□ field-value =
		<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-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)
		□ field- type = INT-U8
		□ field-length = 1 byte
		$\Box$ field-value = 0x00
	n.	data-req-init-manager-count (DataReqModeCapab)
		□ field- type = INT-U8
		$\Box  \text{field-length} = 1 \text{ byte}$
		$\Box  \text{field-value} = 0x00$
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].
		q-init-agent-count verification has been updated according to IEEE PHD errata. See
		ontinua.plugfests.com/show_bug.cgi?id= 786 for further details.

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

TP ld		TP/PLT/PHG/CLASS/IP/BV-000					
TP label		Association procedure PHG Insulin Pump					
Coverage Spec		[ISO/IEEE 11073-10419]					
	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	e	Check that:					
		The result field shall be set to a 11073-20601-2016C].	n appropriate response from th	nose defined in [ISO/IEEE			
		[AND]					
		In the DataProtoList structure e id-20601	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 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 sha and data-req-init-manager-count shall be 0					
Applicability	/	C_MAN_OXP_000 AND C_MA	N_OXP_071				
Other PICS							
Initial condit	tion	The PHG is in the Unassociate	d state.				

Test procedure	1.	The	e simulated PHD sends an Association Request to the PHG under test, with the fields:
·			protocol-version = '001000000000000000000000000000000000
			encoding-rules= '100000000000000'B
			nomenclature-version = '100000000000000000000000000000000000
			functional-units = '00000000000000000000000000000000000
			system-type = '000000010000000000000000000000000000
			dev-config-id = 16440
			data-rep-mode-capab =
		-	<ul> <li>data_req_mode_flags= '000000000000001'B</li> </ul>
			<ul> <li>data_req_init_agent_count = 1</li> </ul>
			<ul> <li>data_req_init_manager_count = 0</li> </ul>
			option-list.length= 0
	2.		G under test sends an Association Response. The fields of interest are:
		a.	APDU Type
			$\Box  \text{field-length} = 2 \text{ bytes}$
			□ field-value = 0xE3 0x00 (AareApdu)
		b.	Result
			□ field- type = AssociateResult
			$\Box  \text{field-length} = 2 \text{ bytes}$
			□ field-value = One of the following:
			<ul> <li>If association is accepted , field- value= 0x00 0x00.</li> </ul>
			<ul> <li>If association is rejected-permanent, field-value= 0x00 0x01.</li> </ul>
			<ul> <li>If association is rejected-transient, field-value= 0x00 0x02.</li> </ul>
			<ul> <li>If association is accepted-unknown-config, field-value= 0x00 0x03.</li> </ul>
			<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>
		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
			$\Box  field-length = 2 \text{ bytes}$
			□ field-value= 0x50 0x79 (20601)
		e.	protocol-version
			□ field- type = Protocol Version
			□ field-length = 4 bytes (BITS-32)
			□ field-value= 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 = Nomen	volaturaVarsian
□ field-length = 4 byte	
	ust be set (nom-version1)
h. functional units	
□ field-type = Function	
□ field-length = 4 byte	es (BITS-32)
□ field-value =	
<ul> <li>Bit 0 must be 0</li> </ul>	
<ul> <li>Bits 1 and 2 ma</li> </ul>	
	bits must not be set
i. system type	
field- type = System	
□ field-length = 4 byte	
$\Box  field-value = 0x80 \ 0$	0x00 0x00 0x00 (sys-type-manager)
j. system-id	
□ field- type = OCTET	r string
$\Box  field-length = 8 \text{ byte}$	95
□ field- value = ( EUI-	64 manufacturer and device )
k. dev-config-id	
field- type = Configl	d
□ field-length = 2 byte	25
□ field- value = 0x00 0	0x00 (manager-config-response)
I. data-req-mode-flags (Da	ataReqModeCapab)
field- type = DataRe	eqModeFlags
field-length = 2 byte	25
□ field- value = 0x00 0	0x00
PHG response to data	ata-req-mode-flags is always 0.
m. data-req-init-agent-coun	t (DataReqModeCapab)
□ field- type = INT-U8	}
field-length = 1 byte	9
□ field- value = 0x00	
n. data-req-init-manager-ce	ount (DataReqModeCapab)
□ field- type = INT-U8	3
□ field-length = 1 byte	2
□ field- value = 0x00	
Pass/Fail criteria All checked values are as specific	ed in the test procedure.
Notes	

TP ld		TP/PLT/PHG/CLASS/IP/BV-001
TP label		Configuration Event Report. Insulin Pump standard configuration
Coverage Spec		[ISO/IEEE 11073-10419]

	Testable	ConfProc	IP 4:M	MDSEventsIP 2;M	ObjAccServIP 5;M	
	items					
	Spec	[ISO/IEE	E 11073-20601-20160	2]		
	Testable items	ConfEve	ntRep 18;M			
Test purpose	)	Check th	at:			
		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 s	hall support both singl	e-person and multi-person even	t reports.	
		[AND]				
			n pump PHG shall res ort response.	pond to an [MDS-Configuration-	Event] using a [Confirmed]	
		The Resp	oonse shall include the	e event-reply-info [ConfigReport	Rsp]	
		[AND]				
		standard	s shall be able to acce	ore) of the ISO/IEEE 11073-104 pt all the standard device config able 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_071				
Other PICS		C_MAN_OXP_085				
Initial conditi	ion	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 procedu	ire	<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 respo	nds an Association Response, t	he field of interest is:	
		a.	Result			
			□ field- type = INT-I	J16		
			$\Box  field-length = 2 by$	/tes		
			$\Box  field-value = 0x00$	0 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			
			$\Box  \text{field-length} = 2 \text{ by}$	/tes		
			□ field-value = 0xE	7 0x00 (PrstApdu)		
		b.	Invoke-id			
			□ field- type = INT-I	J16		
			$\Box  field-length = 2 by$	/tes		
			field- value= it mu message.	ist be the same that the invoke-i	d of the simulated PHD's	

		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:
		<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.
	Wa	ait until Operating state is reached in both cases
	6.	Simulated PHD sends a fixed event report with one Insulin Pump measurement
Pass/Fail criteria	•	The PHG under test must respond either to the Association Request with an "accepted" message or to the Configuration Event Report with an "accepted-config"
	•	The measurement is correctly presented
Notes		
L		

TP Id TP label		TP/PLT/PHG/CLASS/IP/BV-002_A Maximum APDU size: Insulin Pump without PM-Store		
	Testable items	CommonCharac 4; M		
	Spec	[ISO/IEEE 11073-10419]		
	Testable items	ComCharIP 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_071			
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 = 7128     ObservationScan ::= {         obj-handle: 1         attributes: AttributeList ::= {             AVA-Type ::= {                 attribute-id: 61441                 attribute-value: '00(7104 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> </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/IP/BV-002_B		
TP label		Maximum APDU size: Insulin Pump with PM-Store		
Coverage Spec		[ISO/IEEE 11073-20601-20160	2]	
	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 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 = 5080		
	<pre>ObservationScan ::= {     obj-handle: 1     attributes: AttributeList ::= {     AVA-Type ::= {         attribute-id: 61441         attribute-value: '00( 5056 bytes) 00'0         }     } } ObservationScan ::= {     obj-handle: 1     attributes: AttributeList ::= {         AVA-Type ::= {             attribute-id: 2636 (MDC_ATTR_NU_VAL_OBS_BASIC)             attribute-value: 3         }     } }</pre>		
	2. Check the response of the PHG under test.		
	3. The simulated PHD sends a Confirmed fixed event report with one measurement.		
	4. Check the response of the PHG under test.		
Pass/Fail criteria	• In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report"		
	• In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report"		
Notes			

TP ld		TP/PLT/PHG/CLASS/IP/BV-003			
TP label		Bolus Delivered Attribute-Value-Map. Order change			
Coverage Spec		[ISO/IEEE 11073-10419]	[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_MA	N_OXP_071		
Other PICS					
Initial condition		The simulated PHD and the PH	IG under test are in the Operatir	ng 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 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 (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
	5. Send a confirmed fixed format event report with the date first followed by an Bolus Delivered 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>
	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 standar 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 Bolus Delivered 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 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).
	• When automated, need to be careful about just sending these messages back to back since the ability to look at things like a UI may need there to be pauses for operator verification.
Notes	

TP 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 presented	nt	

	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)
	<ul> <li>In Step 4 and 6, verify the PHG under test uses MDC_DIM_INTL_UNIT as the unit-code for the measurement reports</li> </ul>
Notes	

TP Id TP label		TP/PLT/PHG/CLASS/IP/BV-005         Bolus Delivered Unit-Code. Use default Bolus Delivered units - variable format observation		
	Testable items	BolusDer 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		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_071		
Other PICS				
Initial cond	ition	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		<ul> <li>Verify that the PHG under test is able to accept the data properly and applies</li> </ul>		

	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 purpos	6e	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_071		
Other PICS				
Initial condition The simulated PHD and the PHG under test are in the Operating state using the configuration 1900.		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.		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]		[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 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		C_MAN_OXP_000 AND C_MAN_OXP_071		
Other PICS				
Initial condition The simulated PHD and the PHG under test are in the Operati configuration 1900.		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>		
		2. The simulated PHD waits until it receives a confirmation from the PHG under test		

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

TP ld		TP/PLT/PHG/CLASS/IP/BV-008		
TP label		Bolus Delivered Special values. Not at this resolution - fixed format (Std Config)		
Coverage Spec		[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 22; M		
Test purpose		Check that:		
		The PHG receives NRes value (fixed format event report) but it does not use this value.		
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 configuration 1900.		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> </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.		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 11073-104		[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 44; M		
Test purpos	est purpose Check that: The PHG receives NRes value (variable format event report) but it does not use this			
Applicability	Dility 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 configuration 1900.		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> </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-010		
TP label		Bolus Delivered Special values. Positive infinity - fixed format (Std Config)		
Coverage Spec		[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 22; M		
Test purpose		Check that:		
		The PHG receives a +INFINITY value (fixed format event report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_071		
Other PICS				
Initial condi	nitial condition The simulated PHD and the PHG under test are in the Operating state using the state 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.		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/IP/BV-011		
TP label		Bolus Delivered Special values. Positive infinity - variable format (Std Config)		
Coverage	Spec	[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 44; M		
Test purpose		Check that: PHG receives a +INFINITY value (variable format event report) but it does not use this value.		
		C_MAN_OXP_000 AND C_MAN_OXP_071		
Other PICS				
		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> </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 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 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_071		
Other PICS				
Initial condi	<b>nitial condition</b> The simulated PHD and the PHG under test are in the Operating state using the star 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		
they were an a		• Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g. if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).		
Notes This test case has been considered as an implicit test case.		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/IP/BV-013		
TP label		Bolus Delivered Special values. Negative infinity - variable format (Std Config)		
Coverage	Spec	[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 44; M		
Test 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	Other PICS			
Initial condition The simulated PHD and the PHG under test are in the Operating state using the star configuration 1900.		ng state using the standard		
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.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_071
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1900.
Test procedure		1. The simulated PHD sends a confirmed fixed event report for handle 1 (Bolus Delivered Object) containing an observation value set to the value for reserved (Reserved for future use [exponent 0, mantissa $-(2^{**}11 - 1) = 0x0801$ ]) and a time stamp
		2. The simulated PHD waits until it receives a confirmation from the PHG under test
Pass/Fail criteria		• Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g. if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).
Notes		This test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/IP/BV-01	5	
TP label		Bolus Delivered Special values. Reserved - variable format (Std Config)		
Coverage Spec		[ISO/IEEE 11073-10419]		
	Testable items	BolusDer 44; M		
Test purpose		Check that: The PHG receives a Reserved not use this value.	for future use value (variable for	mat event report) but it does
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_071	
Other PICS				
Initial condition		The simulated PHD and the Ph configuration 1900.	IG under test are in the Operatir	ng state using the standard
Test procedure		Delivered Object) containing	a confirmed variable event repong an observation value set to th mantissa –(2**11 –1) = 0x0801	e value for reserved (Reserved

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

TP ld		TP/PLT/PHG/CLASS/IP/BV-016
TP label		Current Basal Rate Setting Attribute-Value-Map. Order change
Coverage Spec		[ISO/IEEE 11073-10419]
	Testable items	CurrBasRate 22;M
Test purpose		Check that: For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC   MDC_ATTR_TIME_STAMP_BO
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_071
Other PICS		
Initial conditi	on	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Initial condition 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> <li>The simulated PHD waits until it receives a confirmation</li> <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> <li>The simulated PHD waits until it receives a confirmation</li> <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> <li>The simulated PHD waits until it receives a confirmation</li> <li>The simulated PHD waits until it receives a confirmation</li> <li>The simulated PHD waits until it receives a confirmation</li> <li>The simulated PHD waits until it receives a confirmation</li> <li>The simulated PHD waits until it receives a confirmation</li> <li>The simulated PHD waits until there is a Association Release Response</li> <li>The simulated PHD sends an Association Request using the same standard configuration that was used previously</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 standard configuration</li> <li>The simulated PHD waits until there is a confirmation to the configuration event report that was sent.</li> <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_MAN_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	
		<ol> <li>Send a confirmed fixed format event report with the new data layout. For unit-code Attribute, use MDC_DIM_INTL_UNIT_PER_HR (5696).</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 cri	iteria	• 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>	

	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
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	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.
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 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		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 purpos	se	Check that:	
		PHG receives a +INFINITY value (fixed format event report) but it does not use this value.	
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_071	
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> </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-022		
TP label		Current Basal Rate Setting Special values. Negative infinity - fixed format (Std Config)		
Coverage	Spec	[ISO/IEEE 11073-10419]		
	Testable items	CurrBasRate 22;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_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 ld		TP/PLT/PHG/CLASS/IP/BV-02	3	
TP label		Current Basal Rate Setting Spe	ecial values. Reserved - fixed for	rmat (Std Config)
Coverage	Spec	[ISO/IEEE 11073-10419]		
	Testable items	CurrBasRate 22;M		
Test purpose		Check that: The PHG receives a Reserved use this value.	for future use value (fixed forma	it event report) but it does not
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_071	
Other PICS				
Initial condition		The simulated PHD and the PH configuration.	IG under test are in the Operatir	ng state using the standard
Test procedure		1. The simulated PHD sends	a confirmed fixed event report for	or handle 2 (Current Basal

	Rate Setting Object) containing an observation value set to the value for reserved (Reserved for future use [exponent 0, mantissa –(2**11 –1) = 0x0801]) and a time stamp 2. The simulated PHD waits until it receives a confirmation from the PHG under test
Pass/Fail criteria	<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-024		
TP label		Current Basal Rate Setting Special values. Not a number - variable format (Std Config)		
Coverage Spec [ISO/IEEE 11073-10419]		[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/PLT/PHG/CLASS/IP/BV-025	
TP label		Current Basal Rate Setting Special values. N	ot at this resolution - variable format (Std Config)
Coverage Spec [ISO/IEEE 11073-10419]			
	Testable items	CurrBasRate 44; M	
Test purpose		Check that:	at 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 a configuration.	are in the Operating state using the standard

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 ld		TP/PLT/PHG/CLASS/IP/BV-026		
TP label		Current Basal Rate Setting Special values. Positive infinity - variable format (Std Config)		
Coverage	Spec	[ISO/IEEE 11073-10419]		
	Testable items	CurrBasRate 44; 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_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 ld		TP/PLT/PHG/CLASS/IP/BV-027
TP label		Current Basal Rate Setting Special values. Negative infinity - variable format (Std Config)
Coverage	Spec	[ISO/IEEE 11073-10419]
	Testable items	CurrBasRate 44; M
Test 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	<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-028	
TP label		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.	
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 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/PLT/PHG/CLASS/IP/BV-029_A Schedule-Store Class methods. Get-Schedule-Segment-Info method 1		
	Testable items	SchStoreMeth 2; M	SchStoreMeth 5; M	SchStoreMeth 8; M
Test purpose		cmip-confirmed-action, th info-args SchedSegmSele [AND]	e Action-type MDC_ACT_SCH ection.	nod it shall use the operation type roiv- ED_SEG_GET_INFO and the action-

	Info], [Get-Schedule-Segment-Id-List] and [Trig-Schedule-Segment-Data-Xfer] methods is mandatory		
	[AND]		
	The PHG shall support at least the choice all-sched-segments in the SegmSelection action- info-args of the Get-Schedule-Segment-Info method.		
Applicability	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 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. The simulated PHD receives the message:		
	a. APDU Type		
	$\Box  field-length = 2 \text{ bytes}$		
	□ field-value = 0xE7 0x00 (PrstApdu)		
	b. invoke-id		
	field-type = InvokeIDType		
	$\Box  field-length = 2 \text{ bytes}$		
	field-value= This value identifies the message; the confirmed response that will be sent by the simulated PHD shall have the same invoke-id.		
	c. obj-handle		
	□ field-type = HANDLE		
	$\Box  field-length = 2 \text{ bytes}$		
	field-value = <handle an="" existing="" of="" schedule-store=""></handle>		
	d. action-type (roiv-cmip-confirmed-action)		
	□ field-type = OID-Type		
	$\Box  field-length = 2 \text{ bytes}$		
	□ field-value = 0x0C 0x24 (MDC_ACT_SCHED_SEG_GET_INFO)		
	e. action-info-args		
	SchedSegmSelection = all-sched-segments (0)		
Pass/Fail criteria	The PHG shall perform Get-Schedule-Segment-Info with all-sched-segments choice and the format of the received message must be the one specified		
Notes			

TP ld		TP/PLT/PHG/CLASS/IP/BV-029_B			
TP label		Schedule-Store Class methods. Get-Schedule-Segment-Info method 2			
Coverage Spec		[ISO/IEEE 11073-10419]			
	Testable items	SchStoreMeth 2; M	SchStoreMeth 5; M	SchStoreMeth 9; O	
Test purpos	se	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 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	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 procedure	<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 receives the message:		
	a. APDU Type		
	$\Box  field-length = 2 \text{ bytes}$		
	□ field-value = 0xE7 0x00 (PrstApdu)		
	b. invoke-id		
	field-type = InvokeIDType		
	$\Box  field-length = 2 \text{ bytes}$		
	field-value= This value identifies the message; the confirmed response that will be sent by the simulated PHD shall have the same invoke-id.		
	c. obj-handle		
	□ field-type = HANDLE		
	□ field-length = 2 bytes		
	□ field-value = <handle an="" existing="" of="" schedule-store=""></handle>		
	d. action-type (roiv-cmip-confirmed-action)		
	□ field-type = OID-Type		
	$\Box  field-length = 2 \text{ bytes}$		
	□ field-value = 0x0C 0x24 (MDC_ACT_SCHED_SEG_GET_INFO)		
	e. action-info-args		
	SchedSegmSelection = sched-segm-id-list		
	<ul> <li>SchedSegmIdList = <list instance<br="" of="" schedule-segments'="" selected="" the="">numbers&gt;</list></li> </ul>		
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/B	V-030	
TP label		Schedule-Store Class met	hods. Get-Schedule-Segment-Id-Li	st
Coverage	Spec	[ISO/IEEE 11073-10419]		
	Testable items	SchStoreMeth 2; M	SchStoreMeth 13; M	

Applicability Other PICS Initial condition	roiv-cm action- For a F Info], [( manda C_MAI The sir has at indicat	N_OXP_000 AND C_MAN_IP_001 mulated PHD and the PHG under test are in the Operating state. The simulated PHD least one schedule segment with data stored and the Schedule-Store-Capab attribute res that it supports all the possible actions. ake the PHG under test perform a [Get-Schedule-Segment-Id-List] action to recover a st of schedule-segments' instance numbers.
Applicability Other PICS Initial condition	Info], [( manda C_MAI The sir has at indicat 1. Ma lis	Get-Schedule-Segment-Id-List] and [Trig-Schedule-Segment-Data-Xfer] methods is atory N_OXP_000 AND C_MAN_IP_001 mulated PHD and the PHG under test are in the Operating state. The simulated PHD least one schedule segment with data stored and the Schedule-Store-Capab attribute tes that it supports all the possible actions. ake the PHG under test perform a [Get-Schedule-Segment-Id-List] action to recover a st of schedule-segments' instance numbers.
Other PICS	The sir has at indicat 1. Ma lis	mulated PHD and the PHG under test are in the Operating state. The simulated PHD least one schedule segment with data stored and the Schedule-Store-Capab attribute ses that it supports all the possible actions. ake the PHG under test perform a [Get-Schedule-Segment-Id-List] action to recover a st of schedule-segments' instance numbers.
Initial condition	has at indicate 1. Ma lis	least one schedule segment with data stored and the Schedule-Store-Capab attribute tes that it supports all the possible actions. ake the PHG under test perform a [Get-Schedule-Segment-Id-List] action to recover a st of schedule-segments' instance numbers.
	has at indicate 1. Ma lis	least one schedule segment with data stored and the Schedule-Store-Capab attribute tes that it supports all the possible actions. ake the PHG under test perform a [Get-Schedule-Segment-Id-List] action to recover a st of schedule-segments' instance numbers.
Test procedure	lis	t of schedule-segments' instance numbers.
	2. Th	
		ne simulated PHD receives the message:
	a.	APDU Type
		$\Box  field-length = 2 \text{ bytes}$
		□ field-value = 0xE7 0x00 (PrstApdu)
	b.	invoke-id
		field-type = InvokeIDType
		$\Box  field-length = 2 \text{ bytes}$
		field-value= This value identifies the message; the confirmed response that will be sent by the simulated PHD shall have the same invoke-id.
	c.	obj-handle
		□ field-type = HANDLE
		$\Box  field-length = 2 \text{ bytes}$
		field-value = <handle an="" existing="" of="" schedule-store=""></handle>
	d.	action-type (roiv-cmip-confirmed-action)
		□ field-type = OID-Type
		$\Box  field-length = 2 \text{ bytes}$
		field-value = 0x0C 0x25 (MDC_ACT_SCHED_SEG_GET_ID_LIST)
	e.	action-info-args
		<pre>cempty&gt;</pre>
Pass/Fail criteria		HG shall perform Get-Schedule-Segment-Id-List action, and the format of the received ige must be the one specified.
Notes		

TP ld		TP/PLT/PHG/CLASS/IP/BV-031		
TP label		Schedule-Store Class methods. Trig-Schedule-Segment-Data-Xfer		
Coverage	Spec	[ISO/IEEE 11073-10419]	1	
	Testable items	SchStoreMeth 2; M	SchStoreMeth 15; M	SchedStoreTX 10; M
Test purpose		Check that:		

Notes	
	received message must be the one specified.
Pass/Fail criteria	The PHG shall perform Trig-Schedule-Segment-Data-Xfer Action and the format of the
	TrigSchedSegmDataXferReq.seg-inst-no = <one existing="" of="" schedule-<br="" the="">segments' instance number&gt;</one>
	e. action-info-args
	□ field-value = 0x0C 0x26 (MDC_ACT_SCHED_SEG_TRIG_XFER)
	$\Box  field-length = 2 \text{ bytes}$
	□ field-type = OID-Type
	d. action-type (roiv-cmip-confirmed-action)
	□ field-value = <handle an="" existing="" of="" schedule-store=""></handle>
	$\Box  field-length = 2 \text{ bytes}$
	□ field-type = HANDLE
	c. obj-handle
	field-value= This value identifies the message; the confirmed response that will be sent by the simulated PHD shall have the same invoke-id.
	$\Box  \text{field-length} = 2 \text{ bytes}$
	□ field-type = InvokeIDType
	b. invoke-id
	□ field-value = 0xE7 0x00 (PrstApdu)
	$\Box  \text{field-length} = 2 \text{ bytes}$
	a. APDU Type
	2. The simulated PHD receives the message:
Test Procedure	1. Make the PHG under test perform a [Trig-Schedule-Segment-Data-Xfer] action.
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.
Other PICS	
Applicability	C_MAN_OXP_000 AND C_MAN_IP_001
	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.
	[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
	[AND]
	action-info-args TrigSchedSegmDataXferReq

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 purpose	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 condit	ion	The simulated PHD and the PHG under test are in the Operating state. The simulated PHD has at least one schedule segment with data stored and the Schedule-Store-Capab attribute indicates that it supports all the possible actions.			
Test procedu	ıre	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:			
		<ul><li>sched-segm-instance</li><li>sched-segm-evt-entry-index</li></ul>			
		<ul> <li>sched-segm-evt-entry-count</li> </ul>			
		<ul> <li>sched-segm-evt-status = Bit 0 must be set (first entry)</li> </ul>			
		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:			
		<ul> <li>sched-segm-instance = <the by="" one="" phd="" previously="" sent="" simulated="" the=""></the></li> </ul>			
		<ul> <li>sched-segm-evt-entry-index = <the by="" one="" previously="" sent="" simulated<br="" the="">PHD&gt;</the></li> </ul>			
		<ul> <li>sched-segm-evt-entry-count = <the by="" one="" previously="" sent="" simulated<br="" the="">PHD&gt;</the></li> </ul>			
		<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 crit	teria	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 conditio	n	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 procedur	е	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:
		<ul> <li>sched-segm-instance</li> </ul>
		<ul> <li>sched-segm-evt-entry-index</li> </ul>
		<ul> <li>sched-segm-evt-entry-count</li> </ul>
		<ul> <li>sched-segm-evt-status = Bit 4 (schsevtsta-agent-abort) must be set</li> </ul>
		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:
		<ul> <li>sched-segm-instance = <the by="" one="" phd="" previously="" sent="" simulated="" the=""></the></li> </ul>
		<ul> <li>sched-segm-evt-entry-index = <the by="" one="" previously="" sent="" simulated<br="" the="">PHD&gt;</the></li> </ul>
		<ul> <li>sched-segm-evt-entry-count = <the by="" one="" previously="" sent="" simulated<br="" the="">PHD&gt;</the></li> </ul>
		<ul> <li>sched-segm-evt-status = Bits 4 and 8 must be set</li> </ul>
Pass/Fail crite	ria	The format of the received message must be the one specified.
Notes		

TP ld		TP/PLT/PHG/CLASS/IP/BV-033_A			
TP label		Schedule-Store Class. Metric data transfer 1			
Coverage	Spec	[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 the 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 condition	The PHG under test is in the Operating state. The simulated PHD has one Schedule-Store object.			
Test procedure	1. Make the PHG under test perform a GET service to the Schedule-Store object.			
	2. Received message by the simulated PHD must be:			
	a. APDU Type			
	$\Box  field-length = 2 \text{ bytes}$			
	field-value = 0xE7 0x00 (PrstApdu)			
	b. invoke-id			
	field-type = InvokeIDType			
	field-length= 2 bytes			
	field-value= <not for="" relevant="" test="" this=""></not>			
	c. CHOICE:			
	field-value= 0x01 0x03 (roiv-cmip-get)			
	d. obj-Handle:			
	field-type = HANDLE			
	□ field-length = 2 bytes			
	field-value = <the handle="" of="" schedule-store="" the=""></the>			
	e. attribute-Id-List:			
	field-type = AttributeIdList			
	$\Box  field-count = 0x00 \ 0x00$			
	$\Box  field-length = 0x00 \ 0x00$			
Pass/Fail criteria	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	Spec	[ISO/IEEE 11073-10419]				
	Testable items	SchedStoreTX 23;M	SchedStoreTX 24;M			
Test purpose		Check that: When the PHG receives an event report, it shall reply with a ScheduleSegmentDataResult response that shall contain the same schedule-store-handle, sched-segm-instance number, sched-segm-evt-entry-index, and sched-segm-evt-entry-count.				
		[AND] In the sched-segm-evt-status, the PHG shall set the schsevtsta-manager-confirm bit.				

Applicability	C_MAN_OXP_000 AND C_MAN_IP_001		
Other PICS			
Initial condition	The PHG under test is in the Operating state. The simulated PHD has one Schedule-Store with at least one Schedule-Segment that contains data.		
Test procedure	1. Make the PHG under test retrieve the information stored in a Schedule-Segment		
	<ol> <li>The simulated PHD responds to the TrigSchedSegmDataXferReq with an appropriate TrigSchedSegmDataXferRsp message</li> </ol>		
	3. The simulated PHD sends a ScheduleSegmentDataEvent to the PHG		
	4. The PHG under test must respond with a ScheduleSegmentDataResult message, the fields of interest are:		
	a. APDU Type		
	$\Box  field-length = 2 \text{ bytes}$		
	□ field-value = 0xE7 0x00 (PrstApdu)		
	b. invoke-id		
	field-type = InvokeIDType		
	□ field-length= 2 bytes		
	field-value= <the of="" same="" schedulesegmentdataevent="" sent="" the=""></the>		
	c. CHOICE:		
	field-value= 0x02 0x01 (rors-cmip-confirmed-event-report)		
	d. Obj-Handle:		
	field-type = HANDLE		
	$\Box  field-length = 2 \text{ bytes}$		
	field-value = <the of="" same="" schedulesegmentdataevent="" sent="" the=""></the>		
	e. CurrentTime		
	field-type = RelativeTime		
	$\Box  field-length = 4 \text{ bytes}$		
	field-value = <not for="" relevant="" test="" this=""></not>		
	f. Event-type		
	□ field-type = OID-Type		
	□ field-length = 2 bytes		
	□ field-value = 0x0C 0x27 (MDC_NOTI_SCHED_SEGMENT_DATA)		
	g. ScheduleSegmentDataResult SchedSegmDataEventDescr = SEQUENCE:		
	□ field-length = 12 bytes		
	☐ field-value =		
	<ul> <li>sched-segm-instance = <the of="" same="" sent<br="" the="">ScheduleSegmentDataEvent&gt;</the></li> </ul>		
	<ul> <li>sched-segm-evt-entry-index = <the of="" same="" sent<br="" the="">ScheduleSegmentDataEvent&gt;</the></li> </ul>		
	<ul> <li>sched-segm-evt-entry-count = <the of="" same="" sent<br="" the="">ScheduleSegmentDataEvent&gt;</the></li> </ul>		
	<ul> <li>sched-segm-evt-status = Bit 8 (schsevtsta-manager-confirm)</li> </ul>		
Pass/Fail criteria	The format of the received message in step 4 must be the one specified.		
Notes			

TP ld		TP	TP/PLT/PHG/CLASS/IP/BV-034				
TP label		Scł	Schedule-Store Class. Specific attributes query				
Coverage Spec			[ISO/IEEE 11073-10419]				
	Testable items	Scł	hedS	toreTX 3_B; O			
Test purpose		Check that:					
				attributes of a Schedule- nd in Table E.1.	Store object may be qu	eried by listing the desired attribute	
Applicability	1	C_	MAN	_OXP_000 AND C_MAN	_IP_001		
Other PICS							
Initial condition		The PHG under test is in the Operating state. The simulated PHD has one Schedule-Store object.					
Test procedure		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 si	mulated PHD must be:		
			a.	APDU Type			
				□ field-length = 2 byte	S		
				□ field-value = 0xE7 0	0x00 (PrstApdu)		
			b.	invoke-id			
				field-type = Invokell	ОТуре		
				□ field-length= 2 bytes	5		
				□ field-value= <not re<="" td=""><td>levant for this test&gt;</td><td></td></not>	levant for this test>		
			c.	CHOICE:			
				□ field-value= 0x01 0x	<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-</td><td>Store&gt;</td></the>	andle of the Schedule-	Store>	
			e.	Attribute-Id-List:			
				□ field-type = Attribute	eldList		
				□ field-count = <lt co<="" td=""><td>ntains one attribute or m</td><td>nore&gt;</td></lt>	ntains one attribute or m	nore>	
				□ field-value = <attrib attributes (Table E.</attrib 		d defined for Schedule-Store	
Pass/Fail cri	teria	The	e fori	mat of the received messa	age in step 2 must be th	e one specified.	
Notes							

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 purpose	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 procedure	<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.			
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_018			
Other PICS		C_MAN_OXP_085			
Initial condi	tion	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 0x08 0x34 (Peak Flow)</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)
	lf tł	ne re	sult o	of the association response was "accepted-unknown-config"
	3.	The 0x3		ulated PHD sends a configuration event report with config-report-id set to 0x08
	4.	The	e PH	G under test must respond with:
		a.	API	DU Туре
				field-length = 2 bytes
				field-value = 0xE7 0x00 (PrstApdu)
		b.	Invo	oke-id
				field- type = INT-U16
				field-length = 2 bytes
				field-value = it must be the same as the invoke-id of the simulated PHD's message.
		c.	Obj	-Handle:
				field- type = HANDLE
				field-length = 2 bytes
				field-value = 0x00 0x00
		d.	Eve	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 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_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.
		c.	Ond	ce in the Operating state the PHG is forced to enable the scanner object.
	Wa	ait un	til the	e Operating state is reached in both cases.
	6.	The	e 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	e mea	asurement is correctly presented.
Notes	The	e PH	G ca	n 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	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]
	Testable items	CommonCharac 4;M
Test purpose		Check that: If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation. The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used. C_MAN_OXP_000 AND C_MAN_OXP_018
Other PICS		
Initial conditi	ion	The PHG under test is in the Operating state.
Test procedu	ıre	<pre>1. The simulated PHD sends a Confirmed variable event report: a. ScanReportInfoVar. obs_scan_var:     Count = 2     Length = 1996     ObservationScan ::= {         obj-handle: 1         attributes: AttributeList ::= {             AVA-Type ::= {                 attribute-id: 61441                 attribute-value: '00(1970 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	teria	<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		In step 4 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 items	PEF12; M	PersBest12; M	FEV1S12; M
	items	ReadStatus12; M		
Test purpose		Check that:		
			oute-Value-Map] attribute shall be	/alue-Map] attribute shall be present. MDC_ATTR_NU_VAL_OBS_SIMP,
		[AND]		
		present. The value of		[Attribute-Value-Map] attribute shall be shall be value MDC_ATTR_NU_ S
		[AND]		
			Value-Map] attribute shall be MD0	-Map] attribute shall be present. The C_ATTR_NU_VAL_OBS_SIMP, then
		[AND]		
		present. The value of	ration, Reading status] the [Attrib the [Attribute-Value-Map] attribute _OBS_BASIC_BIT_STRING, the	
Applicability		C_MAN_OXP_000 AN	ND C_MAN_OXP_018	
Other PICS				
Initial condition	on	The simulated PHD ar configuration (0x0834)		Operating state using the standard
Test procedu	re	1. The simulated PH Attribute-Value-M	ID sends a confirmed fixed format ap order of:	event report that matches the
		<ul> <li>MDC_ATTR_ Object</li> </ul>	NU_VAL_OBS_SIMP then MDC_	_ATTR_TIME_STAMP_ABS for PEF
		<ul> <li>MDC_ATTR_ Personal Bes</li> </ul>	_NU_VAL_OBS_SIMP then MDC_ at Object	_ATTR_TIME_STAMP_ABS for
		<ul> <li>MDC_ATTR_ Object</li> </ul>	NU_VAL_OBS_SIMP then MDC_	_ATTR_TIME_STAMP_ABS for FEV1
			NU_VAL_OBS_BASIC_BIT_STR TIME_STAMP_ABS for Reading	
		2. The simulated PH	ID waits until it receives a confirm	ation.
		Value-Map config	uration of handle 1 (PEF Object),	ent report to change the Attribute- of handle 2 (Personal Best object), of status Object) to reverse the values to:
		<ul> <li>MDC_ATTR_ Object</li> </ul>	_TIME_STAMP_ABS then MDC_/	ATTR_NU_VAL_OBS_SIMP for PEF
		<ul> <li>MDC_ATTR_ Personal Bes</li> </ul>	_TIME_STAMP_ABS then MDC_4 at Object	ATTR_NU_VAL_OBS_SIMP for
		<ul> <li>MDC_ATTR_ Object</li> </ul>	_TIME_STAMP_ABS then MDC_4	ATTR_NU_VAL_OBS_SIMP for FEV1
			_TIME_STAMP_ABS then _NU_VAL_OBS_BASIC_BIT_STR	RING for Reading status Object
		4. The simulated PH	ID waits until it receives a confirm	ation.
			fixed format event report with the a for every object.	e date (absolute-time-stamp) by a
		6. The simulated PH	ID waits until it receives a confirm	ation.
		7. The simulated PH	ID sends an association release re	equest (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 PEF, Personal Best, FEV1 and Reading status values.
	12. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	• In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g. if there is a UI, verify that the measurement and date are displayed properly).
	• In steps 2, 6 and 12 verify that the PHG under test uses I/min as the unit code for PEF and Personal best report, and it uses I as the unit code for FEV1 report (or reports the proper value after conversion to another unit code).
	• In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e. the actual observation may have occurred sometime in the past).
	• When automated, it is necessary to be careful about sending these messages back to back since the ability to look at things like an UI may require that there be pauses for operator verification.
Notes	

TP ld		TP/PLT/PHG/CLASS/PF/BV-003					
TP label		Special values. Not a number – fixed format					
Coverage	Spec	[ISO/IEEE 11073-10-	421]				
	Testable items	PEF12; M	PersBest	12; M	FEV1S12; M		
Test purpos	е	Check that: The PHG receives a NaN value (fixed format event report) but it does not use this value.					
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_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 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 P	HD waits until it rece	ives a confirmation fr	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>					

<b>Notes</b> This test case has been considered as an implicit test case.	Notes	This test case has been considered as an implicit test case.
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TP ld		TP/PLT/PHG/CLASS/PF/BV-004				
TP label		Special values. Not a number – variable format				
Coverage	Spec	[ISO/IEEE 11073-104	421]			
	Testable items	PEF20; C	PersBest20; C	FEV1S20; C		
Test purpos	se	Check that: The PHG receives a	NaN value (variable format event	t report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 A	ND C_MAN_OXP_018			
Other PICS						
Initial condi	ition	The simulated PHD a configuration (0x0834		Operating state using the standard		
Test procec	lure	<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) = 0x007FFFF]).</li> </ol>				
		2. The simulated P	HD waits until it receives a confin	mation 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 measurements are 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-005					
TP label		Special values. Not at this resolution – fixed format					
Coverage	Spec	[ISO/IEEE 11073-10	)421]				
	Testable items	PEF12; M		PersBest12; M	FEV1S12; M		
Test purpos	e	Check that:		<i>//</i>			
		The PHG receives N	Res value	e (fixed format event rep	ort) but it does not use this value.		
Applicability	/	C_MAN_OXP_000	AND C_MA	AN_OXP_018			
Other PICS							
Initial condi	tion	The simulated PHD configuration (0x083		HG under test are in the	Operating state using the standard		
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 F	PHD waits	until it receives a confir	mation from the PHG under test.		
Pass/Fail criteria		if they were an a	actual mea		e data, but does not use the values as is a UI, verify that the measurements a measurement).		

This test case has been considered as an implicit test case.
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TP ld		TP/PLT/PHG/CLASS/PF/BV-006				
TP label	_	Special values. Not at this resolution – variable format				
Coverage Spec		[ISO/IEEE 11073-1	10421]			
	Testable items	PEF20; C	PersBest20; C	FEV1S20; C		
Test purpose		Check that: The PHG receives	NRes value (variable format even	t report) bu it does not use this value.		
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 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 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-007			
TP label		Special values. Posi	itive infinity – fixed format		
Coverage Spec		[ISO/IEEE 11073-10	0421]		
	Testable items	PEF12; M	PersBest12; M	FEV1S12; M	
Test purpos	se	Check that:			
		The PHG receives a +INFINITY value (fixed format event report) buit does not use this value.			
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_018			
Other PICS					
Initial cond	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 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> </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.	
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TP ld		TP/PLT/PHG/CLASS/PF/BV-008			
TP label		Special values. Po	sitive 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 cond	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 positive infinity (+INFINITY, [exponent 0, mantissa +(2**23 – 2) = 0x007FFFE]).</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-009				
TP label		Special values. Nega	Special values. Negative infinity – fixed format			
Coverage Spec Testable items		[ISO/IEEE 11073-10	0421]			
		PEF12; M	PersBest12; M	I	FEV1S12; M	
Test purpose		Check that: The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.				
Applicability	у	C_MAN_OXP_000 AND C_MAN_OXP_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 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. Negative 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 –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 cond	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 Id TP label		TP/PLT/PHG/CLASS/PF/BV-011 Special values. Reserved – fixed format				
						Coverage Spec Testable items
PEF12; M	PersBest12; M	FEV1S12; 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_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 Pl	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-012			
TP label		Special values. Rese	rved – variable format		
Coverage	Spec	[ISO/IEEE 11073-104	121]		
	Testable items	PEF20; C	PersBest20; C	FEV1S20; 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_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 reserved (Reserved for future use, [exponent 0, mantissa –(2**23 – 1) = 0x00800001]).</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 Id TP label		TP/PLT/PHG/CLASS/PF/BV-013			
		Association procedure PHG PF			
Coverage	Spec	[ISO/IEEE 11073-10421]			
	Testable	PF_AssocResp1; M	PF_AssocResp2; M	PF_AssocResp3; M	
	items	PF_AssocResp4; M	PF_AssocResp5; M	PF_AssocResp6; M	
		PF_AssocResp7; M	PF_AssocResp8; M	PF_AssocResp9; M	
		PF_AssocResp10; M	PF_AssocResp11; M	PF_AssocResp12; M	
Test purpos	se	Check that:			
		In the association response message sent by the PHG:			
		The result field shall be set to an appropriate response from those defined in ISO/IEEE P11073-20601.			
		[AND]			
		In the DataProtoList structure element, the data protocol identifier shall be set to data-proto-id-			

	20601			
	[AND]			
	The data-proto-info field shall be filled in with a PhdAssociationInformation structure			
	[AND]			
	The version of the data exchange protocol shall be set to protocol-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 = '000000010000000000000000000000'B			
	dev-config-id = 16481			
	data-rep-mode-capab =			
	<ul> <li>data_req_mode_flags= '00000000000001'B</li> </ul>			
	<ul> <li>data_req_init_agent_count = 1</li> </ul>			
	data_req_init_manager_count = 0			
	$\Box  \text{option-list.length} = 0$			
	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:
	<ul> <li>If association is accepted, field-value= 0x00 0x00.</li> </ul>
	<ul> <li>If association is rejected-permanent, field-value= 0x00 0x01.</li> </ul>
	<ul> <li>If association is rejected-transient, field-value= 0x00 0x02.</li> </ul>
	<ul> <li>If association is accepted-unknown-config, field-value= 0x00 0x03.</li> </ul>
	<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>
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 =
	<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-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)
		□ field- type = INT-U8
		□ field-length = 1 byte
		□ field-value = 0x00
	n.	data-req-init-manager-count (DataReqModeCapab)
		□ field- type = INT-U8
		□ field-length = 1 byte
		□ field-value = 0x00
Pass/Fail criteria	All chec	ked values are as specified in the test procedure.
Notes	Value fo	protocol-version has been modified according to [ISO/IEEE 11073-20601-2015A].
	data-rec	r-init-agent-count verification has been updated according to IEEE PHD errata. See <u>ntinua.plugfests.com/show_bug.cgi?id= 787</u> 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 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_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-conf id set to 0x07D0 (BCA).</li> </ol>	ig-
	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 t simulated PHD's message	he
	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- set to 0 to indicate all attributes.</li> </ul>	·list
	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.

ec [IS stable Co ms [IS stable Co ms Co Ch If a err Th spi ap C_	faximum APDU size: Body Composition Analyser         SO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]         commonCharac 4; M         SO/IEEE 11073-10420]         commChar1; M         Check that:         a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an rror (roer) code of protocol-violation.         he PHG's receive buffer shall be at least as large as the largest buffer specified in the pecializations the PHG supports. The buffer size limitations in this bullet and the next on pply to all APDUs regardless of whether a standard or extended configuration is being used.         c_MAN_OXP_000 AND C_MAN_OXP_027
stable Coms Coms Coms Coms Coms Coms Coms Comparison Co	CommonCharac 4; M SO/IEEE 11073-10420] CommChar1; M Check that: a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an rror (roer) code of protocol-violation. he PHG's receive buffer shall be at least as large as the largest buffer specified in the pecializations the PHG supports. The buffer size limitations in this bullet and the next on pply to all APDUs regardless of whether a standard or extended configuration is being used.
ms [IS stable Co ms Ch If a err Th sp ap C_	SO/IEEE 11073-10420] CommChar1; M Check that: a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an rror (roer) code of protocol-violation. he PHG's receive buffer shall be at least as large as the largest buffer specified in the pecializations the PHG supports. The buffer size limitations in this bullet and the next on pply to all APDUs regardless of whether a standard or extended configuration is being used.
stable Coms Character I for a	CommChar1; M Check that: a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an rror (roer) code of protocol-violation. The PHG's receive buffer shall be at least as large as the largest buffer specified in the pecializations the PHG supports. The buffer size limitations in this bullet and the next on pply to all APDUs regardless of whether a standard or extended configuration is being used.
ms Ch If a err Th sp ap C_	Check that: a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an rror (roer) code of protocol-violation. The PHG's receive buffer shall be at least as large as the largest buffer specified in the pecializations the PHG supports. The buffer size limitations in this bullet and the next on pply to all APDUs regardless of whether a standard or extended configuration is being used.
If a err Th sp ap C_	a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an rror (roer) code of protocol-violation. The PHG's receive buffer shall be at least as large as the largest buffer specified in the pecializations the PHG supports. The buffer size limitations in this bullet and the next on pply to all APDUs regardless of whether a standard or extended configuration is being used.
	C_MAN_OXP_000 AND C_MAN_OXP_027
ТЬ	
Ть	
111	he PHG under test is in the Operating state.
1.	<pre>a. ScanReportInfoVar.obs_scan_var:     Count = 2     Length = 7696     ObservationScan ::= {         obj-handle: 1         attributes: AttributeList ::= {             AVA-Type ::= {                 attribute-id: 61441                 attribute-value: '00(7670 bytes) 00'0                 }         }         ObservationScan ::= {             obj-handle: 1             attributes: AttributeList ::= {                 AVA-Type ::= {</pre>
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	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/BCA/BV-002					
TP label	TP label		Attribute-Value-Map. Order change				
Coverage	overage Spec		[ISO/IEEE 11073-10420]				
	Testable items	Weight	NumClass 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]					
				ody Fat object] the [Attribute-Va /IDC_ATTR_NU_VAL_OBS_SIN			
		then MDC_ATTR_TIME_STAMP_ABS.					
Applicability	1	C_MAN_OXP_000 AND C_MAN_OXP_027					
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		e simulated PHD sends ribute-Value-Map order	a confirmed fixed format event of:	report that matches the		
		•	MDC_ATTR_NU_VAL Weight Object	_OBS_SIMP then MDC_ATTR_	_TIME_STAMP_ABS for Body		
		•	MDC_ATTR_NU_VAL Height Object	_OBS_SIMP then MDC_ATTR	_TIME_STAMP_ABS for Body		
			MDC_ATTR_NU_VAL Fat Object	_OBS_SIMP then MDC_ATTR	_TIME_STAMP_ABS for Body		
				until it receives a confirmation.			
		Va	lue-Map configuration o	a confirmed variable event report f handle 1 (Body Weight Object) ody Fat Object) to reverse the va	), of handle 2 (Body Height		
		•	MDC_ATTR_TIME_S Weight Object	TAMP_ABS then MDC_ATTR_I	NU_VAL_OBS_SIMP for Body		
		•	MDC_ATTR_TIME_S Height Object	TAMP_ABS then MDC_ATTR_I	NU_VAL_OBS_SIMP for Body		
			MDC_ATTR_TIME_S Fat Object	TAMP_ABS then MDC_ATTR_I	NU_VAL_OBS_SIMP for Body		
		4. The simulated PHD waits until it receives a confirmation.					

	<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).
	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.
	<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 (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 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 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 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/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 purpos	se	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>
	<ol> <li>The simulated PHD waits until it receives a confirmation.</li> </ol>
	<ol> <li>Send a confirmed fixed format event report with the new data layout. For the unit-code attribute, use pounds MDC_DIM_LB (1760).</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_SIMP attribute.</li> </ol>
	6. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	<ul> <li>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 measuremen and date are displayed properly).</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).
	<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 format observation.				
Coverage	Spec	[ISO/IEEE 11073-10420]				
	Testable items	WeightNumClass 19; M				
Test purpose		Check that:				
		For [Standard-Configuration] the [Unit-Code] attribute shall be present				
		The value of the [Unit-Code] attribute shall be MDC_DIM_KILO_G.				
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_027 AND C_MAN_BCA_001				
Other PICS						
Initial 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.				
		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				

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

TP ld		TP/PLT/PHG/CLASS/BCA/BV-005
TP label		Unit-Code Body Weight. Do not change from default kilograms to pounds – fixed format observation
Coverage	Spec	[ISO/IEEE 11073-10420]
	Testable items	WeightNumClass 19; M
Test purpose	е	Check that:
		For [Standard-Configuration] the [Unit-Code] attribute shall be present
		The value of the [Unit-Code] attribute shall be MDC_DIM_KILO_G.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_027 AND (NOT(C_MAN_BCA_001))
Other PICS		
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test procedu	ure	<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 cri	teria	• 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.
		<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-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		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_027		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		1. 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 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 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		<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.
		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).

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

TP ld		TP/PLT/PHG/CLASS/BCA/BV-008			
TP label		Unit-Code Body Height. Change from default centimetres to inches – fixed format observation			
Coverage	Spec	[ISO/IEEE 11073-10420]			
	Testable items	BodyHeight20; M			
Test purpos	е	Check that:			
		For [Standard-Configuration] the [Unit-Code] attribute shall be present			
		The value of the [Unit-Code] attribute shall be MDC_DIM_CENTI_M.			
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_027 AND C_MAN_BCA_002			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.			
Test 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> </ol>			
		2. The simulated PHD waits until it receives a confirmation.			
		3. Send a confirmed fixed format event report using a measurement in inches followed by date and time stamp.			
		4. The simulated PHD waits until it receives a confirmation.			
		5. The simulated PHD sends an association release request (normal).			
		6. The simulated PHD waits until it receives an association release response.			
		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> <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 fixed event report with an observation in centimetres followed by date and time stamp.</li> </ul>
	10. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	• In step 4, verify that the PHG under test is able to accept the data properly and applies inches to the observation (e.g. if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
	• In step 10, verify that the PHG under test is able to accept the data properly and applies centimetres to the observation (e.g. if there is a UI, verify that the measurement and date are displayed properly even if they are converted to a different set of units).
Notes	

TP ld		TP/PLT/PHG/CLASS/BCA/BV-009		
TP label		Unit-Code Body Height. Do not change from default centimetres to inches – fixed format observation		
Coverage	Spec	[ISO/IEEE 11073-10420]		
	Testable items	BodyHeight20; M		
Test purpose	е	Check that:		
		For [Standard-Configuration] the [Unit-Code] attribute shall be present		
		The value of the [Unit-Code] attribute shall be MDC_DIM_CENTI_M		
Applicability	,	C_MAN_OXP_000 AND C_MAN_OXP_027 AND (NOT(C_MAN_BCA_002))		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test proced	ure	<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> </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 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 cri	teria	<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				
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TP Id TP label		TP/PLT/PHG/CLASS/BCA/BV-010         Unit-Code Body Height. Use default centimetres – variable format observation		
	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		
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 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-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_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>Send a confirmed variable format event report to set the unit code to inches MDC_DIM_INCH (1376) for handle 2 (Body Height Object) and a measurement in inches.</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 inches (i.e., do not transmit the unit-code attribute in the event report).		
		4. The simulated PHD waits until it receives a confirmation.		
		5. The simulated PHD sends an association release request (normal).		

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

TP ld		TP/PLT/PHG/CLASS/BCA/BV-012			
TP label		Unit-Code Body Fat. Change from default % to kilograms/pounds – fixed format observation			
Coverage	Spec	[ISO/IEEE 11073-10420]			
	Testable items	BodyFat21; M			
Test purpose	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 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 procedu	ure	<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).
Notes	

TP ld	PId TP/PLT/PHG/CLASS/BCA/BV-013		
TP label Unit-Code Body Fat. Do not change from defa		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 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 (NOT(C_MAN_BCA_00		C_MAN_OXP_000 AND C_MAN_OXP_027 AND (NOT(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, 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-014		
TP label		Unit-Code Body Fat. Use default % – variable format observation		
Coverage Spec [ISO/IEEE 11073-10420]		[ISO/IEEE 11073-10420]		
	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		
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 standa configuration.	ırd	
Test procedure		1. Send a confirmed variable format event report using a measurement in centimetres.		
		2. The simulated PHD waits until it receives a confirmation.		
		to the observation (e.g. if there is a UI, verify that the measurement and date are	metres	
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 items	BodyFat21; M			
Test purpose		Check that:			
		For [Standard-Configuration] the [Unit-Code] attribute shall be present			
		The value of the [Unit-Code]	attribute shall be MDC_DIM_PEI	RCENT	
Applicability		C_MAN_OXP_000 AND C_I	MAN_OXP_027 AND C_MAN_BO	CA_003	
Other PICS					
Initial condition         The simulated PHD and the PHG under test are in the Operating state using configuration.		ting state using the standard			
Test procedu	ire		ble format event report to set the 31) for handle 3 (Body Fat Objec		
		2. The simulated PHD wait	s until it receives a confirmation.		
			ed variable format event report wi ansmit the unit-code attribute in th		
		<ol> <li>The simulated PHD waits until it receives a confirmation.</li> </ol>			
		<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>			
		<ol> <li>The simulated PHD waits until it receives a confirmation.</li> </ol>			
		<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 sen	ds an association release reques	t (normal).	
		10. The simulated PHD wait	s until it receives an association	release response.	
		11. The simulated PHD sen used initially.	ds an association request using t	he same configuration that was	
		12. If the PHG under test re unknown-config", then	sponds with association request	response with "accepted-	
		The simulated PHD configuration.	sends the confirmed configuration	on event report with the standard	
		The simulated PHD configuration event	waits until it receives a confirma report just sent.	tion from the confirmed	
			ds a confirmed variable event rep ne stamp (i.e., do not send the un dard configuration).		
		14. The simulated PHD wait	s until it receives a confirmation.		
Pass/Fail criteria		applies kilograms to the	hat the PHG under test is able to observations (e.g. if there is a UI properly even if they are converte	, verify that the measurement	
		applies pounds to the ot	hat the PHG under test is able to oservations (e.g. if there is a UI, v erly even if they are converted to	verify that the measurement and	
		centimetres to the obser	e PHG under test is able to accept vation (e.g. if there is a UI, verify ven if they are converted to a diff	that the measurement and date	
Notes					

TP Id TP/PLT/PHG/CLASS/BCA/BV-016					
TP label		Special values. Not a number – fixed format			
Coverage Spec		[ISO/IEEE 11073-10420]			
	Testable items	WeightNumClass 21; M	BodyHeight22; M	BodyFat23; M	
Test purpos	se	Check that:			
		The PHG receives a NaN v	alue (fixed format event report	) but it does not use this value.	
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_027			
Other PICS					
		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.			
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 co	nsidered as an implicit test cas	Se.	

TP ld		TP/PLT/PHG/CLASS/BCA/BV-017			
TP label		Special values. Not a number – variable format			
Coverage	Spec	Spec [ISO/IEEE 11073-10420]			
	Testable items	WeightNumClass 26; M	BodyHeight38; M	BodyFat39; M	
Test purpos	se	Check that:			
		The PHG receives a NaN value (variable format event report) but it does not use this value.			
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_027			
Other PICS					
Initial condition The simulated PHD and the PHG of configuration.		e 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 NaN ([exponent 0, mantissa +(2**23 -1) = 0x007FFFFF]).</li> </ol>			
		2. The simulated PHD wa	aits until it receives a confirmation f	rom the PHG under test.	
Pass/Fail criteria		if they were an actual	nder test is able to accept the data, measurement (e.g. if there is a UI, y n that indicates it is not a measuren	verify that the measurement is	

This test case has been considered as an implicit test case.
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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	se	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				
<b>Initial condition</b> The simulated PHD and the PHG under test are in the Operating state using the s configuration.		ing state using the standard		
Test procedure1. The simulated PHD sends a confirmed fixed event report for handle 2 (Body Height) and handle 3 (Body Fat) containing a for NRes ([exponent 0, mantissa +(2**23) = 0x00800000]) ar		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, but does not u if they were an actual measurement (e.g. if there is a UI, verify that the u 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 label		TP/PLT/PHG/CLASS/BCA/BV-019		
		Special values. Not at this resolution – 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 NRes value (variable format event report) but it does not use this value.		
Applicabilit	plicability 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 th configuration.		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 valu for NRes ([exponent 0, mantissa +(2**23) = 0x00800000]).</li> </ol>		ng an observation with the value
		2. The simulated PHD wa	aits until it receives a confirmation f	rom the PHG under test.
		if they were an actual r	der test is able to accept the data, measurement (e.g. if there is a UI, y 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.
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TP ld		TP/PLT/PHG/CLASS/BCA/BV-020			
TP label		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 +INFINITY value (fixed format event report) but it does not use this value.			
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_027			
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 (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.			
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	nsidered as an implicit test case.		

TP Id TP label		TP/PLT/PHG/CLASS/BCA/BV-021				
		Special values. Positive 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.				
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_027				
Other PICS						
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.				
Test procedure		<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> <li>The simulated PHD waits until it receives a confirmation from the PHG under test.</li> </ol>				
Pass/Fail criteria				ata, but does not use the values as if		

they were an actual measurement (e.g. if there is a UI, verify that the measure 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/BCA/BV-022		
		Special values. Negative 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 –INFINITY value (fixed format event report) but it does not use this value.		
Applicabilit	У	C_MAN_OXP_000 AND C_MAN_OXP_027		
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 (Body Weight), handle 2 (Body Height) and handle 3 (Body Fat) containing an observation with the value for negative infinity (–INFINITY, [exponent 0, mantissa –(2**23 –2) = 0x00800002]) and a time stamp.</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 it they were an actual measurement (e.g. if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).</li> </ul>		
Notes		This test case has been considered as an implicit test case.		

TP Id TP label		TP/PLT/PHG/CLASS/BCA/BV-023		
		Special values. Negative infinity – variable format		
Coverage Spec		[ISO/IEEE 11073-10420]		
	Testable items	WeightNumClass 26; M	BodyHeight38; M	BodyFat39; M
Test purpos	se	Check that:		
		The PHG receives a –INFINITY value (variable format event report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_027		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		handle 2 (Body Height) an	a confirmed variable event repo d handle 3 (Body Fat) containin NITY, [exponent 0, mantissa –(2	g an observation with the value

	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/BCA/BV-024		
		Special values. Reserved – 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 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_027		
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 (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		• 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/BCA/BV-025 Special values. Reserved – variable format			
Testable items	WeightNumClass 26; M	BodyHeight38; M	BodyFat39; 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.			
Applicabilit	у	C_MAN_OXP_000 AND C_	MAN_OXP_027		
Other PICS					
Initial condition		The simulated PHD and the configuration.	PHG under test are in the C	Operating state using the standard	

handle 2 (Body Height) ar		The simulated PHD sends a confirmed variable event report for handle 1 (Body Weight), handle 2 (Body Height) and handle 3 (Body Fat) containing an observation with the value for reserved (Reserved for future use, [exponent 0, mantissa $-(2^{**}23-1) = 0x00800001$ ]).
	2.	The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	•	Verify that the PHG under test either reports an error or is able to accept the data, but does not use the values as if they were an actual measurement (e.g. if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).
Notes	This	s 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	se	Check that:				
		In the association response message sent by the PHG:				
		The result field shall be set to an appropriate response from those defined in ISO/IEEE P11073-20601.				
		[AND]				
		In the DataProtoList structure element, the data protocol identifier shall be set to data-proto- id-20601				
		[AND]				
		The data-proto-info field shall be filled in with a PhdAssociationInformation structure				
		[AND]				
		The version of the data exchange protocol shall be set to protocol-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_027		
Other PICS			
Initial condition	The PHG is in the Unassociated state.		
Test procedure	1. The simulated PHD sends an association request to the PHG under test, with the fields:		
	protocol-version = '100000000000000000000000000000000000		
	encoding-rules= '100000000000000'B		
	nomenclature-version = '100000000000000000000000000000000000		
	functional-units = '00000000000000000000000000000000000		
	system-type = '00000001000000000000000000000000'B		
	dev-config-id = 16481		
	□ 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>		
	$\square$ option-list.length= 0		
	2. The PHG under test sends an association response. The fields of interest are:		
	a. APDU Type		
	$\Box  \text{field-length} = 2 \text{ bytes}$		
	$\Box  \text{field-value} = 0 \times \text{E3} \ 0 \times 00 \ (\text{AareApdu})$		
	b. Result		
	□ field- type = AssociateResult		
	$\Box  \text{field-length} = 2 \text{ bytes}$		
	<ul> <li>field-value = One of the following:</li> </ul>		
	<ul> <li>If association is accepted, field-value= 0x00 0x00.</li> </ul>		
	<ul> <li>If association is rejected-transient, field-value= 0x00 0x02.</li> </ul>		
	<ul> <li>If association is accepted-unknown-config, field-value= 0x00 0x03.</li> </ul>		
	<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>		
	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
	<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-id
	□ field- type = OCTET STRING
	□ field-length = 8 bytes
	□ field-value = (EUI-64 manufacturer and device)
k.	dev-config-id
	□ field- type = ConfigId
	$\Box  field-length = 2 \text{ bytes}$
	□ 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
	$\Box  field-length = 1 \ byte$
	□ field-value = 0x00
n.	data-req-init-manager-count (DataReqModeCapab)

	□ field- type = INT-U8
	$\Box  field-length = 1 byte$
	□ 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		
TP label		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 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_029		
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 0x0258 (HR).</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 0x0258.		
		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
		□ field-length = 2 bytes
		$\Box  field-value = 0x00$
		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:
		<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/ECG/BV-001		
TP label	P 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 used.
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: <ul> <li>a. ScanReportInfoVar. obs_scan_var:</li> <li>Count = 2</li> <li>Length = 1248</li> <li>ObservationScan ::= {     obj-handle: 1         attributes: AttributeList ::= {             AVA-Type ::= {                 attribute-id: 61441                 attribute-value: '00(1224 bytes) 00'0                 }</li></ul>
	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/ECG/BV-	-002	
TP label Maximum APDU size: Basic ECG specialization		CG specialization/ Simple ECG p	profile without PM-Store	
Coverage Spec [ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-206		A] and [ISO/IEEE 11073-20601-2	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	<pre>1. The simulated PHD sends a Confirmed variable event report: a. ScanReportInfoVar. obs_scan_var:</pre>		
	2. Check the response of the PHG under test.		
	3. The simulated PHD sends a Confirmed variable event report with one attribute update.		
	4. Check the response of the PHG under test.		
Pass/Fail criteria	• In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".		
	• In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".		
Notes			

TP ld		TP/PLT/PHG/CLASS/ECG/BV-	-003	
TP label Maximum APDU size: Basic ECG Specialization/Heart Rate		CG Specialization/Heart Rate pro	ofile with PM-Store	
Coverage Spec [ISO/IEEE 1		[ISO/IEEE 11073-20601-2015/	A] and [ISO/IEEE 11073-20601-2	2016C]
	Testable items	CommonCharac 4;M		
Spec		[ISO/IEEE 11073-10406]		
	Testable items	CommChar1; M		

Test purpose	Check that:		
	If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.		
	The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.		
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_003 AND C_MAN_OXP_029		
Other PICS			
Initial condition	The PHG under test is in the Operating state.		
Test procedure	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>		
	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/ECG/BV-004		
TP label		Maximum APDU size: Basic ECG/Simple ECG profile with PM-Store		
Coverage Spec [ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		2016C]		
	Testable items	CommonCharac 4;M		
Spec		[ISO/IEEE 11073-10406]		
	Testable items	CommChar1; M		

Test purpose	Check that:		
	If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.		
	The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.		
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_003 AND C_MAN_OXP_030		
Other PICS			
Initial 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		
	<pre>D Length = 64472 ObservationScan ::= { obj-handle: 9 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 61441 attribute-value: '00(64448 bytes) 00'0 } } } ObservationScan ::= { obj-handle: 9 attributes: AttributeList ::= { AVA-Type ::= { attribute-id: 2454 (MDC_ATTR_UNIT_CODE) attribute-value: 2194 (MDC_DIM_MILLI_VOLT) } } } }</pre>		
	2. Check the response of the PHG under test.		
	3. The simulated PHD sends a Confirmed variable event report with one attribute update.		
	4. Check the response of the PHG under test.		
Pass/Fail criteria	• In step 2 the PHG under test must respond with a "rors-cmip-confirmed-event-report".		
	• In step 4 the PHG under test must respond with a "rors-cmip-confirmed-event-report".		
Notes			

TP ld		TP/PLT/PHG/CLASS/ECG/BV-005		
TP label		Basic ECG Specialization/Heart Rate profile. Attribute-Value-Map. Order change		lap. Order change
Coverage	Spec	[ISO/IEEE 11073-10406]		
	Testable items	HeartRate22; M		
Test purpose			ne [Attribute-Value-Map] attribute ue-Map] attribute shall be MDC_/ /IP_REL	

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.
Test procedure	<ol> <li>The simulated PHD sends a confirmed fixed format event report that matches the Attribute-Value-Map order of:</li> </ol>
	MDC_ATTR_NU_VAL_OBS_BASIC then MDC_ATTR_TIME_STAMP_REL for Heart Rate Object
	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 (Heart Rate Object) to reverse the values to:</li> </ol>
	MDC_ATTR_TIME_STAMP_REL then MDC_ATTR_NU_VAL_OBS_BASIC for Heart Rate Object
	4. The simulated PHD waits until it receives a confirmation.
	5. Send a confirmed fixed format event report with the date (relative-time-stamp) by a measurement data for Heart Rate 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
	<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_TIME_STAMP_REL). The observations should be reasonable Heart Rate.</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 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>
	• In steps 2, 6 and 12 verify that the PHG under test uses beats/min as the unit code for Heart Rate (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 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 Id TP/PLT/PHG/CLASS/ECG/BV-006		TP/PLT/PHG/CLASS/ECG/BV-006
TP label         Basic ECG Specialization/Heart Rate profile. Special values. Not a number – fixed for Config 600)		Basic ECG Specialization/Heart Rate profile. Special values. Not a number – 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	NaN value	(fixed format eve	ent report) but i	it does not use this value.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_029				
Other PICS						
Initial condition		The simulated PHD configuration 600.	and the PH	G under test are	in the Operatir	ng state using the standard
Test procedure			ng an obse	rvation value with		or handle 1 (Heart Rate NaN ([exponent 0, mantissa
		2. The simulated F	HD waits u	until it receives a o	confirmation fro	om the PHG under test.
Pass/Fail criteria		• Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g. if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement such as "—" or blanking the display area).				
Notes		This test case has b	een conside	ered as an implici	t test case.	

TP Id TP label		TP/PLT/PHG/CLASS/ECG/BV-007         Basic ECG Specialization/Heart Rate profile. Special values. Not a number – variable format (Std Config 600)		
	Testable items	HeartRate44; M		
Test purpos	se	Check that:		
		The PHG receives a NaN value (variable format event report) but it does not use this value.		
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> <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/ECG/BV-008
TP label	Basic ECG Specialization/Heart Rate profile. Special values. Not at this resolution – fixed

	1	format (Std Config 600)		
Coverage Spec		[ISO/IEEE 11073-10406]		
	Testable items	HeartRate22; M		
Test purpose		Check that:		
		The PHG receives NRes value (fixed format event report) but it does not use this va	alue.	
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 sta configuration 600.	andard	
Test procedure		<ol> <li>The simulated PHD sends a confirmed fixed event report for handle 1 (Heart R 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/ECG/BV-009		
TP label		Basic ECG Specialization/Heart Rate profile. Special values. Not at this resolution – variable format (Std Config 600)		
Coverage	Spec	[ISO/IEEE 11073-10406]		
	Testable items	HeartRate44; M		
Test purpos	e	Check that:		
		The PHG receives NRes value (variable format event report) but it does not use this value.		
Applicability	y	C_MAN_OXP_000 AND C_MAN_OXP_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 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 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)		
	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 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/ECG/BV-011			
TP label		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 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_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		• 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-012         Basic ECG Specialization/Heart Rate profile. Special values. Negative infinity – fixed format (Std Config 600)		
	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/PLT/PHG/CLASS/ECG/BV-013 Basic ECG Specialization/Heart Rate profile. Special values. Negative infinity – variable format (Std Config 600)		
	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.		
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 configuration 600.	state using the standard	
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 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 Id TP label		TP/PLT/PHG/CLASS/ECG/BV-014 Basic ECG Specialization/Heart Rate profile. Special values. Reserved – fixed format (Std Config 600)		
	Testable items	HeartRate22; M		
Test purpos	se	Check that:		
		The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 AND C_MAN_OXP_029		
Other PICS				
Initial 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 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 Id TP label		TP/PLT/PHG/CLASS/ECG/BV-015 Basic ECG Specialization/Heart Rate profile. Special values. Reserved – variable format (Std Config 600)			
	Testable items	HeartRate44; M			
Test purpose		Check that:			
		The PHG receives a Reserved for future use value (variable format event report) but it does not use this value.			
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_029			
Other PICS					
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standar configuration 1701.	ď		

Test procedure	1.	The simulated PHD sends a confirmed variable event report for handle 1 (Heart Rate Object) containing an observation value set to the value for 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	Thi	s test case has been considered as an implicit test case.

TP ld		TP/PLT/PHG/CLASS/ECG/BV-016				
TP label		Association procedure PHC	GECG			
Coverage	Spec	[ISO/IEEE 11073-10406]				
	Testable items	ManProcAsResp1; M	ManProcAsResp2; M	ManProcAsResp3; M		
	nomo	ManProcAsResp4; M ManProcAsResp6; M ManProcAsR		ManProcAsResp7; M		
		ManProcAsResp8; M ManProcAsResp9; M ManProcAs		ManProcAsResp10; M		
		ManProcAsResp11; M	lanProcAsResp11; M ManProcAsResp12; M ManProcAsRes			
		ManProcAsResp14; C				
Test purpos	se	Check that:				
		In the association response	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-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 = 0x80000000)				
		[AND]				
The System-Id field shall contain the unique system id of the PHG device, which sh 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					
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	<ul> <li>1. The simulated PHD sends an association request to the PHG under test, with the fields: <ul> <li>protocol-version = '010000000000000000000000000000000000</li></ul></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 = DataProtold				

	□ field-length = 2 bytes
	□ field-value= 0x50 0x79 (20601)
e.	protocol-version
	□ field- type = Protocol Version
	□ field-length = 4 bytes (BITS-32)
	□ field-value= 0x40 0x00 0x00 0x00
f.	encoding-rules
	field-type = EncodingRules
	□ field-length = 2 bytes (BITS-16)
	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)
	General 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-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
	$\Box  field-length = 2 \text{ bytes}$
	□ 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
	$\Box  field-length = 1 \text{ byte}$
	□ field-value = 0x00
n.	data-req-init-manager-count (DataReqModeCapab)

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

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

TP 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;		ManProcAs 3;M		
	literine	ManProcAs 4;M	ManProcAs 5;M	ManProcAs 6;M		
		ManProcAs 7;M ManProcAs 8;M ManProcAs 9		ManProcAs 9;M		
		ManProcAs 10;M	ManProcAs 11;M	ManProcAs 12;M		
Test purpos	e	P11073-20601. [AND] In the DataProtoList structure id-20601. [AND] The data-proto-info field shall [AND] The version of the data excha [AND] The PHG shall respond with a and PHG. The PHG shall sup [AND] The version of the nomenclat version = 0x8000000) [AND] The field functional-units shall Association. [AND] The field system-type shall be [AND] The System-Id field shall cont valid EUI-64 type identifier [AND]	an appropriate response from the element, the data protocol ident be filled in with a PhdAssociatio ange protocol shall be set to protocol a single selected encoding rule the port at least the MDER encoding ure used shall be set to nom-verse I have all bits reset except for the e set to sys-type-manager (i.e., s cain the unique system id of the F e manager-config-response (0)	ifier shall be set to data-proto- nInformation structure bcol-version 2 hat is supported by both PHD g rules sion1 (i.e., nomenclature- bse relating to a Test ystem-type = 0x80000000)		
	The field data-req-mode-capab shall be 0					

Other PICS           Initial condition         The PHG is in the Unassociated state.           Test procedure         1. The simulated PHD sends an associated state.           □ protocol-version = '010000000         □ encoding-rules= '1000000000           □ nomenclature-version = '10000         □ functional-units = '00000000000           □ functional-units = '000000000000         □ system-type = '0000000000000000           □ dev-config-id = 16440         □ data_req_mode_flags='0'           □ data_req_init_agent_cou         □ data_req_init_agent_cou           □ field-length = 0 Sytes         □ field-length = 2 bytes           □ field-value = 0xE3 0x00 (b         □ field-value = 0xe of the fi           □ field-value = One of the	[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.		
Initial condition       The PHG is in the Unassociated state.         Test procedure       1. The simulated PHD sends an asso         □       protocol-version = '010000000         □       encoding-rules= '1000000000         □       nomenclature-version = '10000         □       functional-units = '00000000000         □       system-type = '000000000000         □       system-type = '00000000000000000000000000000000000	MAN_OXP_000 AND C_MAN_OXP_067		
Test procedure       1. The simulated PHD sends an asso         □ protocol-version = '010000000       □ encoding-rules= '1000000000         □ nomenclature-version = '10000       □ functional-units = '0000000000         □ system-type = '0000000010000       □ dev-config-id = 16440         □ data_req_mode_flags= '00       □ data_req_mode_flags= '00         □ data_req_mode_flags= '00       □ data_req_mode_flags= '00         □ data_req_init_agent_coul       □ data_req_init_agent_coul         □ option-list.length= 0       0         2. The PHG under test sends an asso       a. APDU Type         □ field-length = 2 bytes       □ field-value = 0xE3 0x00 (         b. Result       □ field-length = 2 bytes         □ field-length = 2 bytes       □ field-length = 2 bytes         □ field-length = 2 bytes       □ field-length = 2 bytes         □ field-length = 2 bytes       □ field-length = 2 bytes         □ field-length = 2 bytes       □ field-length = 2 bytes         □ field-length = 2 bytes       □ field-sociation is accellength         □ field-sociation is reject       □ fi association is reject         □ fi association is reject       □ fi association is reject         □ fi association is reject       □ fi association is reject         □ fi association is reject       □ fi association is reject         □ f			
<ul> <li>protocol-version = '010000000</li> <li>encoding-rules= '10000000000</li> <li>functional-units = '00000000000000000000000000000000000</li></ul>	G is in the Unassociated state.		
proto-info(defined by data-pro d. data-proto-id field- type = DataProtold field-length = 2 bytes field-value= 0x50 0x79 (2 e. protocol-version	00000'B 0000000000000000000000000000000		

	□ 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 =
	<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-id
	□ field- type = OCTET STRING
	$\Box  field-length = 8 \text{ bytes}$
	□ 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
	$\Box  field-length = 1 byte$
	$\Box  field-value = 0x00$
n.	data-req-init-manager-count (DataReqModeCapab)
	□ field- type = INT-U8
	$\Box  field-length = 1 byte$
	$\Box  field-value = 0x00$

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

TP ld		TP/PLT/PHG/CLASS/INR/BV-001					
TP label		Configuration Event Report. INR monitor standard configuration 1800					
Coverage	Spec	[ISO/IEEE 11073-104	418C]				
	Testable items	ConfProc 4;M	ConfProc 4;M MDSEvents 2;M ObjAccServ 5;M				
	Spec	[ISO/IEEE 11073-206	601-2015A] and [ISO/IEEE 11073-2	20601-2016C]			
	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 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	y	C_MAN_OXP_000 AND C_MAN_OXP_067					
Other PICS		C_MAN_OXP_085					
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state. The simulated PHD implements an INR monitor device specialization with standard configuration 1800.					
Test procedure		<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 re	esponse, the field of interest is:			
		a. Result					
		field- ty	pe = 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 0x07 0x08.				
		3. The simulated P	HD sends a configuration event rep	bort with config-report-id set to UXU7			
		3. The simulated P 0x08.	HD sends a configuration event rep test must respond with:	oort with config-report-id set to 0x07			
		3. The simulated P 0x08.	test must respond with:	oort with config-report-id set to UXU7			
		<ol> <li>The simulated P 0x08.</li> <li>The PHG under a. APDU Type</li> </ol>	test must respond with:	ort with config-report-id set to UXU7			

		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:
			<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.
	Wa	it un	ntil 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	•		e PHG under test must respond either to the association request with an "accepted" essage or to the Configuration Event Report with an "accepted-config".
	•	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	A] and [ISO/IEEE 11073-20601-	2016C]

	estable ems	Cor	nfEve	entRep 18;M		
Test purpose		Che	eck t	nat:		
		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 .				
		[AN	ID]			
		A P	HG	shall support both sing	le-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.				
		[AN	ID]			
		ente	er th		quest the PHD to send the stand d check attributes from the MDS	
Applicability		C_N	MAN	_OXP_000 AND C_M	AN_OXP_067	
Other PICS		C_1	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 18						
Test procedure		1.			s an association request to the P nonitor – Std Config 1801).	HG under test with dev-config-
		2.	The	PHG under test resp	onds with an association respons	e, the field of interest is:
		a. Result				
		□ field- type = INT-U16				
				$\Box  field-length = 2 k$	bytes	
		□ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unknown-config)				
		lf th	ne re	sult of the association	response was "accepted-unknow	n-config"
		3.	The 0xA		s a configuration event report with	h config-report-id set to 0x06
		4.	The	PHG under test mus	t respond with:	
			a.	APDU Type		
				$\Box  field-length = 2 k$	bytes	
				□ field-value = 0xE	7 0x00 (PrstApdu)	
			b.	Invoke-id		
				□ field- type = INT	-U16	
				$\Box  field-length = 2 k$	bytes	
				field-value = it m message.	lust be the same as the invoke-id	of the simulated PHD's
			c.	Obj-Handle:		
				□ field- type = HAN		
				$\Box  field-length = 2 t$		
				$\Box  field-value = 0x0$	0 0x00	
			d.	Event-time:		
				□ field- type = INT		
				$\Box  field-length = 4 k$	oytes	

		□ 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_MAN_OXP_085 THEN:
	a.	The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes.
	b.	The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set.
	c.	Once in the Operating state the PHG is forced to enable the scanner object.
	Wait ur	til the Operating state is reached in both cases.
		e simulated PHD sends a fixed event report with one INR measurement and other ed event report with Control Solution measurement.
Pass/Fail criteria		e PHG under test must respond either to the association request with an "accepted" essage or to the Configuration Event Report with an "accepted-config".
	• Th	e measurement is correctly presented.
Notes		

TP Id TP label		TP/PLT/PHG/CLASS/INR/BV-003 Maximum APDU size: INR monitor without PM-Store		
	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.		
		specializations the PHG supp	all be at least as large as the large orts. The buffer size limitations in s of whether a standard or extend	this bullet and the next on
Applicability		C_MAN_OXP_000 AND C_M	IAN_OXP_067	
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
		<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 ::= {</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/INR/BV-004		
TP label		Maximum APDU size: INR monitor with PM-Store		
Coverage Spec		[ISO/IEEE 11073-20601-2015A	A] and [ISO/IEEE 11073-20601-2	2016C]
	Testable items	CommonCharac 4;M		
	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	ComChar 2; M		
Test purpos	e	Check that:		
		If a PHG receives an APDU that error (roer) code of protocol-vic	at is larger than the PHG's receiv lation.	ve buffer, it shall reply with an
		The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.		
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_067 AND C_MAN_OXI	P_003
Other PICS				

Initial condition	The PHG under test is in the Operating state.		
Test procedure	1. The simulated PHD sends a Confirmed variable event report:		
	a. ScanReportInfoVar. obs_scan_var:		
	$\Box$ 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 ::= {</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/INR/BV-005		
TP label		INR Attribute-Value-Map. Order change		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	INR 10; M		
Test purpose		Check that: For [Standard-Configuration] 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_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.
	<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.
	11. The simulated PHD sends a fixed event report following the standard configuration attribute-value-format (MDC_ATTR_NU_VAL_OBS_BASIC, then MDC_ATTR_TIME_STAMP_BO). The observation should be a reasonable INR observation.
	12. The simulated PHD waits until it receives a confirmation.
Pass/Fail criteria	• In steps 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g. if there is a UI, verify that the measurement and date are displayed properly).
	• In steps 2, 6 and 12 verify that the PHG under test uses INR unit as the unit code for the measurement report (or reports the proper value after conversion to another unit code).
	• In steps 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e. the actual observation may have occurred sometime in the past).
	• When automated, it is necessary to be careful about sending these messages back to back since the ability to look at things like an UI may require that there be pauses for operator verification.
Notes	

TP ld		TP/PLT/PHG/CLASS/INR/BV-006		
TP label		INR Attribute-Value-Map. Adding additional attributes to the Attribute-Value-Map		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	INR 10;M		
Test purpose		Check that: For [Standard-Configuration] the [Attribute-Value-Map] attribute shall be present The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC   MDC_ATTR_TIME_STAMP_BO		
Applicability		C_MAN_OXP_000 AND C_MA	N_OXP_067	
Other PICS				
Initial condition			IG under test are in the Operatir andard configuration Unit code a	

	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 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	<ul> <li>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 measuremen and date are displayed properly).</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).
	<ul> <li>In steps 4 and 6, verify that the PHG under test uses INR unit as the unit code for the measurement reports.</li> </ul>
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 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		<ol> <li>Send a confirmed variable format event report using a measurement in INR unit.</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 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	e	Check that:		
		The PHG receives a NaN v	alue (fixed format event re	port) 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 configuration 1800.	PHG under test are in the	e Operating state using the standard
Test procedure			on value with the value fo	nt report for handle 1 (INR Object) r NaN ([exponent 0, mantissa +(2**11 –
		2. The simulated PHD waits until it receives a confirmation from the PHG under test.		
Pass/Fail criteria		if they were an actual r	neasurement (e.g. if there	he data, but does not use the values as is a UI, verify that the measurement is neasurement such as "—" or blanking
Notes		This test case has been co	sidered as an implicit tes	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 11073-10418	C]	
	Testable items	INR 20; R		
Test purpos	e	Check that:		
		The PHG receives a Nal	N 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 configuration 1800.	the PHG under test are in the Operat	ing state using the standard
Test procedure			sends a confirmed variable event rep vation value set to the value for NaN	
		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, al measurement (e.g. if there is a UI, orm that indicates it is not a measurer	verify that the measurement is
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	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_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> </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-011	
TP label		Special values. Not at this resolution – variable format (Std Config 1800)	
Coverage Spec [I		[ISO/IEEE 11073-10418C]	
	Testable items	INR 20; R	
Test purpose		Check that: The PHG receives NRes value (variable format event report) but it does not use this value.	
Applicability		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 purpose		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_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 t		This test case has been considered as an implicit test case.	

TP ld TP label		TP/PLT/PHG/CLASS/INR/BV-013	
		Special values. Positive infinity – variable format (Std Config 1800)	
Coverage	Spec	[ISO/IEEE 11073-10418C]	
	Testable items	INR 20; R	
Test purpos	se	Check that:	
		The PHG receives a +INFINITY value (variable format event report) but it does not use this value.	
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_067	
Other PICS			
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1800.	
Test procedure		<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 consid		This test case has been considered as an implicit test case.	

TP ld TP label		TP/PLT/PHG/CLASS/INR/BV-014	
		Special values. Negative infinity – fixed format (Std Config 1800)	
Coverage	Spec	[ISO/IEEE 11073-10418C]	
	Testable items	INR 10; M	
Test purpose		Check that:	
		The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.	
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_067	
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 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.		
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 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).		

<b>Notes</b> This test case has been considered as an implicit test case.	
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TP ld		TP/PLT/PHG/CLASS/INR/BV-016		
TP label		Special values. Reserved – fixed format (Std Config 1800)		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	INR 10; M		
Test 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_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		<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 Id TP label		TP/PLT/PHG/CLASS/INR/BV-017	
		Special values. Reserved – variable format (Std Config 1800)	
Coverage Spec [ISO/IEEE 11073-10418C]		[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.	
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 reserved (Reserved for future use, [exponent 0, mantissa –(2**11 –1) = 0x0801]).</li> <li>The simulated PHD waits until it receives a confirmation from the PHG under test.</li> </ol>	
Pass/Fail cr	iteria	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/I	PLT/PHG/CLASS/INR/BV-0	118	
TP label		Con	trol Calibration Attribute-Va	lue-Map. Order change	
Coverage	Coverage Spec		[ISO/IEEE 11073-10418C]		
	Testable items	Ctrl	Cal 7;M		
Test purpos	e	Che	ck that:		
		For	[Standard-Configuration] th	e [Attribute-Value-Map] attribute	e shall be present
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC   MDC_ATTR_TIME_STAMP_BO			
Applicability	/	C_N	IAN_OXP_000 AND C_MA	N_OXP_067	
Other PICS					
Initial condit	tion		simulated PHD and the PH figuration.	IG under test are in the Operati	ng state using the standard
Test proced	ure	<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.		mat event report with the date fi hits since it is the standard confi	
		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 rele	ase response.
			The simulated PHD sends that was used previously.	an association request using th	e same standard configuration
		10.	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
		11.	attribute-value-format (MD	a fixed event report following th C_ATTR_NU_VAL_OBS_BASI P_BO). The observation should	
		12.	The simulated PHD waits	until it receives a confirmation.	
Pass/Fail cri	iteria	•		the correct attributes (e.g. if th	to accept the data properly and ere is a UI, verify that the

	<ul> <li>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).</li> <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</li> </ul>
	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/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 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	1	C_MAN_OXP_000 AND C_MAN_OXP_067		
Other PICS				
Initial condit	tion	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).		
		• In steps 4 and 6, verify that the PHG under test uses INR units as the unit code for the measurement reports.		
Notes				

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TP ld		TP/PLT/PHG/CLASS/INR/BV-020		
TP label		Control Calibration Unit-Code. Use default INR units – variable format observation		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	CtrlCal 6;M		
Test purpos	se	Check that:		
		For [Standard-Configuration] the [Unit-Code] attribute shall be present		
		The value of the [Unit-Code] attribute shall be MDC_DIM_INR		
Applicability		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 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 Id TP label		TP/PLT/PHG/CLASS/INR/BV-021 Special values. Not a number – fixed format (Std Config 1801)		
	Testable items	CtrlCal 7; M		
Test purpos	se	Check that:		
		The PHG receives a NaN value (fixed format event report) but it does not use this value.		
Applicabilit	у	C_MAN_OXP_000 A	ND C_MAN_OXP_067	
Other PICS				
Initial condition		The simulated PHD a configuration 1801.	and the PHG under test are in the Operating state using the standard	
Test procedure		Object) containir	HD sends a confirmed fixed event report for handle 2 (Control Calibration ng an observation value with the value for NaN ([exponent 0, mantissa 07FF]) and a time stamp.	
		2. The simulated P	HD waits until it receives a confirmation from the PHG under test.	
Pass/Fail criteria		if they were an a	HG under test is able to accept the data, but does not use the values as actual measurement (e.g. if there is a UI, verify that the measurement is not form that indicates it is not a measurement such as "—" or blanking ).	
Notes		This test case has be	een 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	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_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 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 cr	iteria	• Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g. if there is a UI, verify that the measurement is displayed in some form that indicates it is not a measurement).		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/INR/BV-023		
TP label		Special values. Positive infinity – fixed format (Std Config 1801)		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	CtrlCal 7; M		
Test purpos	se	Check that:		
		The PHG receives a +INFINITY value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_067		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1801.		
Test procedure		<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 cr	riteria	• Verify that the PHG under test is able to accept the data, but does not use the values as i 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-024		
TP label		Special values. Negative infinity – fixed format (Std Config 1801)		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	CtrlCal 7; M		
Test purpos	se	Check that:		
		The PHG receives a –INFINITY value (fixed format event report) but it does not use this value.		
Applicability		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 ld		TP/PLT/PHG/CLASS/INR/BV-025		
TP label		Special values. Reserved – fixed format (Std Config 1801)		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	CtrlCal 7; M		
Test 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_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		• 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-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/PLT/PHG/CLASS/INR/BV-027
TP label		Special values. Not at this resolution – variable format (Std Config 1801)
Coverage	Spec	[ISO/IEEE 11073-10418C]
	Testable items	CtrlCal 13; R
Test purpose		Check that:
		The PHG receives NRes value (variable format event report) but it does not use this value.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_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).

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

TP ld		TP/PLT/PHG/CLASS/INR/BV-028		
TP label		Special values. Positive infinity – variable format (Std Config 1801)		
Coverage	Spec	[ISO/IEEE 11073-10418C]		
	Testable items	CtrlCal 13; R		
Test purpos	Test purpose Check that:			
	The PHG receives a +INFINITY value (variable format event report) but it does not u value.			
Applicabilit	icability C_MAN_OXP_000 AND C_MAN_OXP_067			
Other PICS	ther PICS			
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1801.		
Calibration Object		<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.		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/INR/BV-029	
<b>TP label</b> Special values. Negative infinity – variable format (Std Config 1801)		Special values. Negative infinity – variable format (Std Config 1801)	
Coverage	Spec [ISO/IEEE 11073-10418C]		
	Testable items	CtrlCal 13; R	
Test purpos	e	Check that:	
The PHG receives a –INFINITY value (variable format event revent revent)		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_067	
Other PICS			
Initial condi	tion	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 cr	• Verify that the PHG under test is able to accept the data, but does not use the vathey were an actual measurement (e.g. if there is a UI, verify that the measurement		

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

TP ld		TP/PLT/PHG/CLASS/INR/BV-030	
<b>TP label</b> Special values. Reserved – variable format (Std Config 1801)		Special values. Reserved – 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 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 cond	ition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1801.	
Test proced	lure	<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.		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	est 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 id-20601.			fier 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-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 = '000000010000000000000000000000000000				
	□ 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				
	$\Box$ option-list.length= 0				
	2. The PHG under test sends an Association Response. The fields of interest are:				
	a. APDU Type				
	$\Box  field-length = 2 \text{ bytes}$				
1					
	□ field-value = 0xE3 0x00 (AareApdu)				

	□ 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>
	<ul> <li>If association is rejected-permanent, field-value= 0x00 0x01.</li> </ul>
	<ul> <li>If association is rejected-transient, field-value= 0x00 0x02.</li> </ul>
	<ul> <li>If association is accepted-unknown-config, field-value= 0x00 0x03.</li> </ul>
	<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>
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
	<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-id
	field- type = OCTET STRING

		$\Box  field-length = 8 \text{ bytes}$
		□ 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
		$\Box  field-length = 2 \text{ bytes}$
		$\Box  field-value = 0x00 \ 0x00$
		PHG response to data-req-mode-flags is always 0.
	m.	data-req-init-agent-count (DataReqModeCapab)
		□ field- type = INT-U8
		$\Box  field-length = 1 byte$
		$\Box  field-value = 0x00$
	n.	data-req-init-manager-count (DataReqModeCapab)
		□ field- type = INT-U8
		$\Box  field-length = 1 \text{ byte}$
		$\Box  field-value = 0x00$
Pass/Fail criteria	All chec	ked values are as specified in the test procedure.
Notes	[AT4wir	eless] Value for protocol-version has been modified according to 20601-2015A.

TP ld		TP/PLT/PHG/CLASS/SABTE/BV-001				
TP label         Configuration Event Report. SABTE standard configuration 2400		ion 2400				
Coverage Spec		[ISO/IEEE 11073-10424]				
	Testable items	ConfProc 4;M	MDSEvents 2;M	ObjAccServ 5;M		
	Spec	[ISO/IEEE 11073-20601-	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
	Testable items	ConfEventRep 18;M				
Test purpose		Check that:				
		The PHG shall respond to a configuration notification message using a "Remote Operation Response   Confirmed Event Report" data message with an MDC_NOTI_CONFIG event using the ConfigReportRsp structure for the event-info field.				
		[AND]				
		A PHG shall support both single-person and multi-person event reports.				
		[AND]				
		A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified for the profiles listed in conformance Table 23 under Gen-4.				
		[AND]				
		Alternatively, the PHG may request the PHD to send the standard configuration in order to enter the Configuring state and check attributes from the MDS object prior to final acceptance				

	(or reje	(or rejection) of the PHD.		
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_069			
Other PICS	C_MA	N_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. Tł	2. The PHG under test responds an Association Response, the field of interest is:		
	a.	a. Result		
		□ field- type = INT-U16		
		□ field-length = 2 bytes		
		□ field-value = 0x00 0x00 (accepted) or 0x00 0x03 (accepted-unkown-config)		
	IF the	result of the Association Response was "accepted-unkown-config"		
		ne simulated PHD sends a configuration event report with config-report-id set to 0x07 {08		
	4. Tł	ne PHG under test must respond with:		
	a.	APDU Type		
		□ field-length = 2 bytes		
		□ field-value = 0xE7 0x00 (PrstApdu)		
	b.	Invoke-id		
		□ field- type = INT-U16		
		□ field-length = 2 bytes		
		field- value= it must be the same that the invoke-id of the simulated PHD's message.		
	c.	Obj-Handle:		
		□ field- type = HANDLE		
		□ field-length = 2 bytes		
		□ field-value = 0x00 0x00		
	d.	Event-time:		
		□ field- type = INT-U32		
		□ field-length = 4 bytes		
		□ field-value: 0xXX 0xXX		
	e.	Event-type:		
		□ field-length = 2 bytes		
		field-value= MDC_NOTI_CONFIG		
	f.	The following six bytes indicate:		
		Event-replay-info.length (2 bytes)		
		ConfigReportRsp.config-report-id: it must be the same that config-report-id of the simulated PHD's message		
		ConfigReportRsp.config-result: One of:		
		<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		

Notes	
	The measurement is correctly presented
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>
	6. The simulated PHD sends a fixed event report with one SABTE 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.
	set to 0 to indicate all attributes.

TP ld		TP/PLT/PHG/CLASS/SABTE/BV-002			
TP label		Maximum APDU size: SABTE			
Coverage Spec Testable items		[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]			
		CommonCharac 4;M			
	Spec	[ISO/IEEE 11073-10424]			
	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. 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_069			
Other PICS					
Initial condi	tion	The PHG under test is in the Operating state.			
Test procedure		<ul> <li>1. The simulated PHD sends a Confirmed variable event report:</li> <li>a. ScanReportInfoVar. obs_scan_var:</li> <li>□ Count = 2</li> <li>□ Length = 64472</li> </ul>			
		<pre>ObservationScan ::= {     obj-handle: 1         attributes: AttributeList ::= {             AVA-Type ::= {                 attribute-id: 61441                 attribute-value: '00(64448 bytes) 00'0                 }</pre>			

	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	• 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/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	e	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		1. The simulated PHD sends a confirmed fixed format event report with that matches the Attribute-Value-Map order of:				
		<ul> <li>MDC_ATTR_NU_VAL_OBS_BASIC then MDC_ATTR_TIME_STAMP_BO for Duration of Patient Use Object</li> </ul>				
		<ul> <li>MDC_ATTR_NU_VAL_OBS_SIMP then MDC_ATTR_TIME_STAMP_BO for Duration of Flow Generation Object</li> </ul>				
		c. MDC_ATTR_ENUM_OBS_VAL_SIMP_OID, then MDC_ATTR_TIME_STAMP_BO for Device Mode Set				

		d. MDC_ATTR_ENUM_OBS_VAL_SIMP_OID, then MDC_ATTR_TIME_STAMP_BO for Therapy Mode Set.
	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 (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:
		<ul> <li>MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_NU_VAL_OBS_BASIC for Duration of Patient Use Object.</li> </ul>
		<ul> <li>MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_NU_VAL_OBS_SIMP for Duration of Flow Generation Object.</li> </ul>
		c. MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_ENUM_OBS_VAL_SIMP_OID for Device Mode Set Object.
		d. MDC_ATTR_TIME_STAMP_BO, then MDC_ATTR_ENUM_OBS_VAL_SIMP_OID for Therapy Mode Set Object.
	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 value 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 a 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_BO). The observation should be reasonable Duration of Patient Use, Duration of Flow Generation, Device Mode Set and Therapy Mode Set observations.
	12.	The simulated PHD waits until it receives a confirmation
Pass/Fail criteria	•	In Step 2, 6 and 12 verify that the PHG under test is able to accept the data properly and applies the correct bytes to the correct attributes (e.g. if there is a UI verify the measurement and date are displayed properly).
	•	In Step 2, 6 and 12 verify the PHG under test uses minutes as the unit-code for Duration of Patient Use and Duration of Flow Generation measurement reports (or reports the proper value after convert to another unit-code)
	•	In Step 2, 6 and 12 verify that if the PHG utilizes a date / time stamp, then the PHG uses a time stamp derived from the observation's time stamp (i.e. the actual observation may have occurred sometime in the past).
	•	When automated, need to be careful about just sending these messages back to back since the ability to look at things like a UI may need there to be pauses for operator verification.
Notes		
	1	

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 purpos	e	Check that:				
		For [Standard-Configu	uration] the [Attribute-Va	lue-Map] attribute	e shall be present	
		The value of the [Attribute-Value-Map] attribute shall be MDC_ATTR_NU_VAL_OBS_BASIC   MDC_ATTR_TIME_STAMP_BO				
Applicability	/	C_MAN_OXP_000 AN	ND 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		Value-Map config	uration of handle 1 (Du _VAL_OBS_BASIC, MD	ration of Patient L	ort to change the Attribute- Jse Object) to set the values to: CODE, then	
		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 PH	ID waits until it receives	a confirmation.		
Pass/Fail criteria			to the correct attributes		the data properly and applies UI verify the measurement and	
		<ul> <li>In Step 6, verify that the PHG under test is able to accept the data properly and ap the correct bytes to the correct attributes (e.g. if there is a UI verify the measurement displayed properly)</li> </ul>				
		In Step 4 and 6, v code for the measurements		st uses Duration o	of Patient Use unit as the unit-	
Notes						

TP Id TP label		TP/PLT/PHG/CLASS/SABTE/B	SV-005	
		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_MA	N_OXP_069	

Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration.
Test 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 Id TP label		TP/PLT/PHG/CLASS/SABTE/BV-006         Unit-Code Duration of Flow Generation. Use default minutes - variable format observation		
	Testable items	DFG 8;M		
Test purpos	50	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-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 Id TP label		TP/PLT/PHG/CLASS/SABTE/BV-008		
		Special values. Not a number – variable format (Std Config 2400)		
Coverage	Spec	[ISO/IEEE 11073-1	0424]	
	Testable items	DPU 12; M	DFG 12; M	
Test purpose		Check that: The PHG receives	a NaN value (variable format event report) but it does not use this value.	
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_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 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)			2400)	
Coverage	Spec	[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 Patien Use Object) and handle 2 (Duration of Flow Generation Object) containing an observatior 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 Id TP label		TP/PLT/PHG/CLASS/SABTE/BV-010			
		Special values. Not	at this resolution - variable forma	at (Std Config 2400)	
Coverage	Spec	[ISO/IEEE 11073-10	0424]		
	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> <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-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 e	vent repor	t) but it does not use this value.
Applicability		C_MAN_OXP_000 AN	D 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		Use Object) and h value set to the va 0x07FE for Duration	andle 2 (Duration of Flow Gen	eration Ob ITY [expo ), mantissa	or handle 1 (Duration of Patient oject) containing an observation nent 0, mantissa $+(2^{**}11 - 2) =$ a $+(2^{**}23 - 2) = 0x007FFFFE$
		2. The simulated PH	D waits until it receives a confi	rmation fro	om the PHG under test
Pass/Fail criteria		Verify that the PHG under test is able to accept the data, but does not use the values as if they were an actual measurement (e.g. if there is a UI verify 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 11073-104	424]		
	Testable items	DPU 12; R	DFG 12; R		
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_069			
Other PICS					
Initial condit	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 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. Nega	ative infinity - fixed format (Std C	Config 2400)	
Coverage	Spec	[ISO/IEEE 11073-104	424]		
	Testable items	DPU 10; M	DFG 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	y	C_MAN_OXP_000 AND C_MAN_OXP_069			
Other PICS					
Initial condi	tion	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2400.			
Test procedure		<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 ld		TP/PLT/PHG/CLASS/SABTE/BV-014				
TP label		Special values. Ne	Special values. Negative infinity - variable format (Std Config 2400)			
Coverage	Spec	[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 cond	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 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>				
		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.
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TP ld		TP/PLT/PHG/CLASS/SABTE/BV-015			
TP label		Special values. Rese	rved - fixed format (Std Config 2400)		
Coverage	Spec	[ISO/IEEE 11073-10-	424]		
	Testable items	DPU 10; M	DFG 10; 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_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 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> </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/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	у	C_MAN_OXP_000 AND C_MAN_OXP_069			
Other PICS					
Initial cond	ition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 1800.			
Test procedure		Patient Use Object) an observation value set t mantissa –(2**11 –1) =	nds a confirmed variable event report d handle 2 (Duration of Flow Gener o the value for reserved (Reserved = 0x0801 for Duration of Patient Use = 0x00800001 for Duration of Flow 0	ation Object) containing an for future use [exponent 0, e], [exponent 0,	

	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 Co	ontinuous Glucose Monitor	
Coverage	Spec	[ISO/IEEE 11073-10425]		
	Testable items	ManProcAsCGM 1;M	ManProcAsCGM 2;M	ManProcAsCGM 3;M
		ManProcAsCGM 4;M	ManProcAsCGM 5;M	ManProcAsCGM 6;M
		ManProcAsCGM 7;M	ManProcAsCGM 8;M	ManProcAsCGM 9;M
		ManProcAsCGM 10;M	ManProcAsCGM 11;M	ManProcAsCGM 12;M
Test purpose	e	Check that:		
		The result field shall be set to a 11073-20601-2016C].	an appropriate response from the	ose defined in [ISO/IEEE
		[AND]		
		In the DataProtoList structure e	element, the data protocol identi	fier shall be set to data-proto-
		[AND]		
		The data-proto-info field shall b	pe filled in with a PhdAssociation	Information structure
		[AND]		
		The version of the data exchan	ge protocol shall be set to proto	col-version 2
		[AND]		
			single selected encoding rule th ort at least the MDER encoding	
		[AND]		
		The version of the nomenclature version = 0x80000000)	re used shall be set to nom-vers	ion1 (i.e., nomenclature-
		[AND]		
		The field functional-units shall Association.	have all bits reset except for tho	se relating to a Test
		[AND]		
		The field system-type shall be	set to sys-type-manager (i.e., sy	vstem-type = 0x80000000)
		[AND]		
		The System-Id field shall conta valid EUI-64 type identifier	in the unique system id of the P	HG 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>
	<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= 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
  - □ 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
  - $\Box$  field-length = 2 bytes
  - □ field- value = 0x00 0x00 (manager-config-response)
- I. data-req-mode-flags (DataReqModeCapab)
  - field- type = DataReqModeFlags
  - $\Box \quad field-length = 2 bytes$
  - □ 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
  - $\Box \quad field-value = 0x00$
- n. data-req-init-manager-count (DataReqModeCapab)
  - □ field- type = INT-U8
  - $\Box \quad field-length = 1 byte$

	☐ field- value = 0x00
Pass/Fail criteria	All checked values are as specified in the test procedure.
Notes	

TP ld		TP/PLT/PHG/CLASS/CGM/B	V-001	
TP label		Configuration Event Report. C	Continuous Glucose Monitor st	andard configuration
Coverage	Spec	[ISO/IEEE 11073-10425]		
	Testable items	ConfProcCGM 4;M	MDSEventsCGM 2;M	ObjAccServCGM 5;M
	Spec	[ISO/IEEE 11073-20601-2016	SC]	
	Testable items	ConfEventRep 18;M		
Test purpos	se	Check that:		
			Report" data message with ar	age using a "Remote Operation MDC_NOTI_CONFIG event
		[AND]		
		A PHG shall support both sing	gle-person and multi-person e	vent reports.
		[AND]		
		A Continuous Glucose Monito [Confirmed] event report resp		DS-Configuration-Event] using a
		The Response shall include the	ne event-reply-info [ConfigRep	portRsp]
		[AND]		
			more) of the ISO/IEEE 11073- ept all the standard device co Table 23 under Gen-4.	
		[AND]		
				andard configuration in order to DS object prior to final acceptance
Applicability	у	C_MAN_OXP_000 AND C_M	AN_OXP_073	
Other PICS		C_MAN_OXP_085		
Initial condi	tion		PHG under test are in the Unas s Glucose Monitor device spe	ssociated state. The simulated cialization with Standard
Test proced	lure		s an Association Request to tl tinuous Glucose Monitor PHD	he PHG under test with dev-config- – Std Config 2500)
		2. The PHG under test resp	onds an Association Respons	e, the field of interest is:
		a. Result		
		field- type = INT	-U16	
		$\Box  field-length = 2$	oytes	
		$\Box  field-value = 0x0$	00 0x00 (accepted) or 0x00 0x	03 (accepted-unkown-config)
		IF the result of the Association	n Response was "accepted-ur	nkown-config"

	3.	The simulated PHD sends a configuration event report with config-report-id set to 0x09 0xC4	9
	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	
		□ 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	
		$\Box  field-length = 4 \text{ bytes}$	
		$\Box  field-value = 0xXX \ 0xXX$	
		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	f
		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- 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.	Э
		c. Once in the Operating state the PHG is forced to enable the scanner object.	
	Wa	ait 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"	d"
	•	The measurement is correctly presented	

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]
Coverage	-	[ISO/IEEE 11073-20601-2016C]
	Testable items	CommonCharac 4; M
	Spec	[ISO/IEEE 11073-10425]
	Testable items	ComCharCGM 2; M
Test purpose	e	Check that:
		If a PHG receives an APDU that is larger than the PHG's receive buffer, it shall reply with an error (roer) code of protocol-violation.
		The PHG's receive buffer shall be at least as large as the largest buffer specified in the specializations the PHG supports. The buffer size limitations in this bullet and the next on apply to all APDUs regardless of whether a standard or extended configuration is being used.
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_073
Other PICS		
Initial condit	ion	The PHG under test is in the Operating state.
Test procedu	ıre	<pre>1. The simulated PHD sends a Confirmed variable event report: a. ScanReportInfoVar. obs_scan_var:     Count = 2     Length = 856     ObservationScan ::= {         obj-handle: 1             attributes: AttributeList ::= {                 AVA-Type ::= {</pre>
Pass/Fail crit	teria	<ul> <li>}</li> <li>2. Check the response of the PHG under test</li> <li>3. The simulated PHD sends a Confirmed fixed event report with one measurement.</li> <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>
Notes		

TP ld	TP/PLT/PHG/CLASS/CGM/BV-002_B
TP label	Maximum APDU size: Continuous Glucose Monitor with PM-Store

Coverage	Spec	[ISO/IEEE 11073-20601-2016C]
Cororago	Testable items	CommonCharac 4; M
	Spec	[ISO/IEEE 11073-10425]
	Testable items	ComCharCGM 3; M
Test purpose	9	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 conditi	ion	The PHG under test is in the Operating state.
Test procedu	ıre	<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</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	teria	<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	Glucose 14; M		
Test purpose	•	Check that:		
		For [Standard-Configuration]	he [Attribute-Value-Map] attribute	SHALL BE PRESENT.
		The value of the [Attribute-Valthen	ue-Map] attribute shall be MDC_	ATTR_NU_VAL_OBS_BASIC,
		MDC_ATTR_TIME_STAMP_I	30	
Applicability		C_MAN_OXP_000 AND C_M	AN_OXP_073	
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	ire		s a confirmed fixed format event r of MDC_ATTR_NU_VAL_OBS_ MP_BO	
		2. The simulated PHD waits	until it receives a confirmation	
		Value-Map configuration	s a confirmed variable event repo of handle 1 (Glucose Numeric Ob MP_BO, then MDC_ATTR_NU_V	pject) to reverse the values to
		4. The simulated PHD waits	until it receives a confirmation	
		5. The simulated PHD send followed by a blood gluce	s a confirmed fixed format event se value.	report with the date first
		6. The simulated PHD waits	until it receives a confirmation	
		7. The simulated PHD send	s an Association Release Reque	st (normal)
		8. The simulated PHD waits	until there is a Association Relea	ase Response
		9. The simulated PHD send configuration that was us	s an Association Request using t ed previously	he same standard
		10. If the PHG under test res unknown-config", then:	ponds with association request re	esponse with "accepted-
		Simulated PHD send configuration	Is the confirmed configuration eve	ent report with the standard
		<ul> <li>Simulated PHD waits that was sent.</li> </ul>	s until there is a confirmation to th	e configuration event report
		attribute-value-format (M	s a fixed event report following th DC_ATTR_NU_VAL_OBS_BASIO MP_BO). The observation shoul	C, then
		12. The simulated PHD waits	until it receives a confirmation	
Pass/Fail crit	eria		that the PHG under test is able to to the correct attributes (e.g. if the re displayed properly).	
			that the PHG under test uses ME surement report (or reports the p	
			that if the PHG utilizes a date / tin n the observation time stamp (i.e. in the past).	
			b be careful about just sending th things like an UI may need a pat	

Notes	
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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	/	C_MAN_OXP_000 AND C_MAN_OXP_073			
Other PICS					
Initial condi	tion	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			
		3. The simulated PHD sends a confirmed fixed format event report with the new data layout. For unit-code Attribute, use MDC_DIM_MILLI_G_PER_DL (2130).			
		4. The simulated PHD waits until it receives a confirmation			
		<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 that the PHG under test uses MDC_DIM_MILLI_G_PER_DL as the unit-code for the measurement reports.</li> </ul>			
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 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_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	Coverage Spec [ISO/IEEE 11073-10425]			
	Testable items	Glucose 14; M		
Test purpos	e	Check that:		
		The PHG receives a NaN value (fixed format event report) but it does not use this value.		
Applicability	/	C_MAN_OXP_000 AND C_MAN_OXP_073		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2500.		
Test procedure		<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> </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 by blanking the display area).		
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/CGM/B	V-007	
TP label		Glucose Special values. Not a number - variable format (Std Config)		
Coverage	Spec	[ISO/IEEE 11073-10425]		
	Testable items	Glucose 18; M		

Test 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_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	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_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> <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/CGM/BV-0	009
TP label		Glucose Special values. Not at this resolution - variable format (Std Config)	
Coverage	Spec	[ISO/IEEE 11073-10425]	
	Testable items	Glucose 18; M	

Test 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_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/PLT/PHG/CLASS/CGM/BV-010 Glucose Special values. Positive infinity - fixed format (Std Config)		
	Testable items	Glucose 14; 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_073		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2500.	d	
Test procedure		<ol> <li>The simulated PHD sends a confirmed fixed event report for handle 1 (Glucose Num Object) containing an observation value set to the value for positive infinity (+INFINI [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		<ul> <li>Verify that the PHG under test is able to accept the data, but does not use the values they were an actual measurement (e.g. if there is a UI verify the measurement is displayed in some form that indicates it is not a measurement).</li> </ul>	s as if	
Notes		This test case has been considered as an implicit test case.		

TP ld		TP/PLT/PHG/CLASS/CGM/BV-011	
TP label		Glucose Special values. Positive infinity - variable format (Std Config)	
Coverage	Spec	[ISO/IEEE 11073-10425]	
	Testable items	Glucose 18; M	

Test 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 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 ld		TP/PLT/PHG/CLASS/CGM/BV-013	
TP label		Glucose Special values. Negative infinity - variable format (Std Config)	
Coverage	Spec	[ISO/IEEE 11073-10425]	
	Testable items	Glucose 18; M	

Test purpose	Check that:		
	The PHG receives a –INFINITY value (variable format event report) but it does not use this value.		
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_073		
Other PICS			
Initial condition	The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2500.		
Test procedure	<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 ld		TP/PLT/PHG/CLASS/CGM/BV-014		
TP label		Glucose Special values. Reserved - fixed format (Std Config)		
Coverage Spec		[ISO/IEEE 11073-10425]		
	Testable items	Glucose 14; M		
Test purpose		Check that:		
		The PHG receives a Reserved for future use value (fixed format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_073		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2500.		
Test procedure		<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 ld		TP/PLT/PHG/CLASS/CGM/BV-015	
TP label		Glucose Special values. Reserved - variable format (Std Config)	
Coverage	Spec	[ISO/IEEE 11073-10425]	

	Testable items	Glucose 18; M		
Test purpose		Check that:		
		The PHG receives a "Reserved for future use value" (variable format event report) but it does not use this value.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_073		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration 2500.		
Test procedure		<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		dered as an implicit test case.		

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