

# TEST REPORT

## IEC 62368-1

### Audio/video, information and communication technology equipment

#### Part 1: Safety requirements

**Report Number** ..... : ZL/2021/20027

**Date of issue** ..... : 2021-02-23

**Total number of pages** ..... : 52

**Applicant's name** ..... : Texas Instruments Incorporated

**Address** ..... : 12500 TI BLVD., Dallas Texas, 75243, USA

#### Test specification:

**Standard**..... : IEC 62368-1:2014 (Second Edition)

**Test procedure** ..... : Commission testing

**Non-standard test method** ..... : N/A

**Test Report Form No.** ..... : IEC62368\_1B

**Test Report Form(s) Originator**..... : UL(US)

**Master TRF** ..... : 2014-03

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Test Item description .....	BLE and 802.15.4 module	
Trade Mark .....	Texas Instruments Incorporated	
Manufacturer .....	Same as applicant	
Model/Type reference .....	CC2650MODA	
Ratings .....	3.3Vdc	
Testing procedure and testing location:		
<input checked="" type="checkbox"/> Testing Laboratory:	SGS Taiwan Ltd., Safety Laboratory	
Testing location/ address .....	No. 33, Wu Chyuan Road, New Taipei Industrial Park, Wu Ku District, New Taipei City 24886, Taiwan	
<input type="checkbox"/> Associated CB Testing Laboratory:		
Testing location/ address .....		
Tested by (name + signature) .....	Clover Chang Project handler	<i>Clover Chang</i>
Approved by (name + signature) .....	Kai Chai Reviewer	<i>Kai Chai</i>
<input type="checkbox"/> Testing procedure: TMP/CTF Stage 1		
Testing location/ address .....		
Tested by (name + signature) .....		
Approved by (name + signature) .....		
<input type="checkbox"/> Testing procedure: WMT/CTF Stage 2		
Testing location/ address .....		
Tested by (name + signature) .....		
Witnessed by (name + signature) .....		
Approved by (name + signature) .....		
<input type="checkbox"/> Testing procedure: SMT/CTF Stage 3 or 4		
Testing location/ address .....		
Tested by (name + signature) .....		
Approved by (name + signature) .....		
Supervised by (name + signature) .....		

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<b>List of Attachments (including a total number of pages in each attachment):</b> Attachment 1: 11 pages of EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Attachment 2: 2 pages of Differences of Italy Attachment 3: 2 pages of Photos	
<b>Summary of testing:</b> The sample(s) tested complies with the requirements of IEC 62368-1:2014. The investigation of the product did not cover the functional characteristics of the equipment, only the safety aspects as laid out in IEC 62368-1 were subjected to the investigation.  The equipment is for building-in type and whole set will be embedded inside of the end of product; therefore, the relevant tests shall be evaluated within the end of product.	
<b>Tests performed (name of test and test clause):</b> --	<b>Testing location:</b> As page 2
<b>Summary of compliance with National Differences:</b> EU Group Differences  <b>List of countries addressed</b> CENELEC member countries (EU Group Differences): Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.  <input checked="" type="checkbox"/> <b>The product fulfils the requirements of EN 62368-1:2014+A11:2017</b> <input checked="" type="checkbox"/> <b>The product fulfils the requirements of CEI EN 62368-1:2016</b>  For National Differences see corresponding Attachment.	

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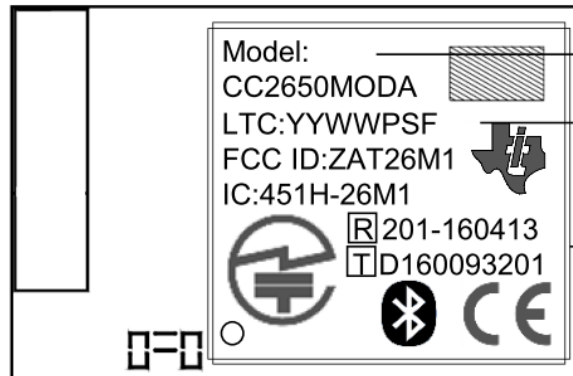
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TEST ITEM PARTICULARS:	
Classification of use by .....	<input type="checkbox"/> Ordinary person <input checked="" type="checkbox"/> Instructed person <input type="checkbox"/> Skilled person <input type="checkbox"/> Children likely to be present
Supply Connection .....	<input type="checkbox"/> AC Mains <input type="checkbox"/> DC Mains <input checked="" type="checkbox"/> External Circuit - not Mains connected - <input type="checkbox"/> ES1 <input type="checkbox"/> ES2 <input type="checkbox"/> ES3
Supply % Tolerance .....	<input type="checkbox"/> +10%/-10% <input type="checkbox"/> +20%/-15% <input type="checkbox"/> +____%/ -____% <input checked="" type="checkbox"/> None
Supply Connection – Type .....	<input type="checkbox"/> pluggable equipment type A - <input type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input type="checkbox"/> direct plug-in <input type="checkbox"/> mating connector <input type="checkbox"/> pluggable equipment type B - <input type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input type="checkbox"/> permanent connection <input type="checkbox"/> mating connector <input checked="" type="checkbox"/> other: not Mains connected
Considered current rating of protective device as part of building or equipment installation .....	_____ A; Installation location: <input type="checkbox"/> building; <input type="checkbox"/> equipment
Equipment mobility .....	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input checked="" type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in <input type="checkbox"/> rack-mounting <input type="checkbox"/> wall-mounted
Over voltage category (OVC) .....	<input checked="" type="checkbox"/> OVC I <input type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other: _____
Class of equipment .....	<input type="checkbox"/> Class I <input type="checkbox"/> Class II <input checked="" type="checkbox"/> Class III
Access location .....	<input type="checkbox"/> restricted access location <input checked="" type="checkbox"/> N/A
Pollution degree (PD) .....	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
Manufacturer's specified maximum operating ambient:	85 °C
IP protection class .....	<input checked="" type="checkbox"/> IPX0 <input type="checkbox"/> IP____
Power Systems .....	<input type="checkbox"/> TN <input type="checkbox"/> TT <input type="checkbox"/> IT - _____ V <sub>L-L</sub>
Altitude during operation (m) .....	<input checked="" type="checkbox"/> 2000 m or less <input type="checkbox"/> _____ m
Altitude of test laboratory (m) .....	<input type="checkbox"/> 2000 m or less <input checked="" type="checkbox"/> 120 m
Mass of equipment (kg) .....	<input checked="" type="checkbox"/> 7 g

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<b>POSSIBLE TEST CASE VERDICTS:</b>	
- test case does not apply to the test object..... :	N/A
- test object does meet the requirement ..... :	P (Pass)
- test object does not meet the requirement ..... :	F (Fail)
<b>TESTING:</b>	
Date of receipt of test item..... :	Original: 2020-11-09 New: 2021-02-18
Date (s) of performance of tests ..... :	N/A
<b>GENERAL REMARKS:</b>	
<p><b>"(See Enclosure #)" refers to additional information appended to the report.</b></p> <p><b>"(See appended table)" refers to a table appended to the report.</b></p> <p>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p> <p>This document is issued by the company under its General Conditions of Service accessible at <a href="https://www.sgs.com.tw/terms-of-service">https://www.sgs.com.tw/terms-of-service</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.</p> <p>Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.</p> <p>Unless otherwise stated: (a) the results shown in this document refer only to the sample(s) tested and (b) such sample(s) are retained for 3 months. This document cannot be reproduced except in full, without prior approval of the company</p> <p>When determining the test conclusion, if that measure uncertainty is determined according to IEC Guide 115 Cl.4.4.3 figure 2, then the Measurement Uncertainty are not providing.</p> <p>All evaluation, test results and judgement in this report are based on information, documents and samples provided by applicant.</p>	
<b>Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60068-2-1:</b>	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided .....	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
<b>When differences exist; they shall be identified in the General product information section.</b>	
<b>Name and address of factory (ies) .....</b>	Powertech Technology Inc. No.10, Datong Rd., Hsinchu Industrial Park, Hukou 30352, Taiwan

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**GENERAL PRODUCT INFORMATION:**
**Product Description –**

The product is a BLE and 802.15.4 module, intended to use for Audio/video, information and communication technology equipment.

According the product specification, the product is supplied by 3.3Vdc and the energy source considered as ES1 and PS2.

The investigation of the product shall be considered according to the application of final product or system.

The electronical components were mounded on the PCB (min. V-1) and covered by metal shielding.

**Model Differences –**

N/A

**Additional application considerations – (Considerations used to test a component or sub-assembly) –**

N/A

**Amendment report history**

Test Report	Test Report no.	Report issued date	Change and/or addition
Original	ZL/2020/B0020	2020-12-07	Original
Amendment 1	ZL/2021/20027	2021-02-23	<p>Due to the following technical modifications / administrative changes:</p> <ol style="list-style-type: none"> <li>1. Change the Applicant and Manufacturer information from “Texas Instruments Norway AS” and “Postboks 264 Skøyen Oslo N-0213 Norway” to “Texas Instruments Incorporated” and “12500 TI BLVD., Dallas Texas, 75243, USA”</li> </ol>

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**ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:**

(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.)

(Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared Class 3 as a worse case classification e.g. PS3, ES3.

**Electrically-caused injury (Clause 5):**

(Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification)

Example: +5 V dc input

ES1

**Source of electrical energy**
**Corresponding classification (ES)**

Input

ES1

All circuit

ES1

**Electrically-caused fire (Clause 6):**

(Note: List sub-assembly or circuit designation and corresponding energy source classification)

Example: Battery pack (maximum 85 watts):

PS2

**Source of power or PIS**
**Corresponding classification (PS)**

Input

PS2

All circuit

PS2

**Injury caused by hazardous substances (Clause 7)**

(Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.)

Example: Liquid in filled component

Glycol

**Source of hazardous substances**
**Corresponding chemical**

None (Equipment for building-in, it must be evaluated in end-use product)

N/A

**Mechanically-caused injury (Clause 8)**

(Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.)

Example: Wall mount unit

MS2

**Source of kinetic/mechanical energy**
**Corresponding classification (MS)**

None (Equipment for building-in, it must be evaluated in end-use product)

N/A

**Thermal burn injury (Clause 9)**

(Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.)

Example: Hand-held scanner – thermoplastic enclosure

TS1

**Source of thermal energy**
**Corresponding classification (TS)**

None (Equipment for building-in, it must be evaluated in end-use product)

N/A

**Radiation (Clause 10)**

(Note: List the types of radiation present in the product and the corresponding energy source classification.)

Example: DVD – Class 1 Laser Product

RS1

**Type of radiation**
**Corresponding classification (RS)**

None (Equipment for building-in, it must be evaluated in end-use product)

N/A

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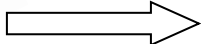
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**ENERGY SOURCE DIAGRAM**

Indicate which energy sources are included in the energy source diagram. Insert diagram below

Input (ES1, PS2)



Internal circuit (ES1, PS2)

☒ ES1

☒ PS1

☐ MS

☐ TS

☐ RS

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OVERVIEW OF EMPLOYED SAFEGUARDS				
Clause	Possible Hazard			
5.1	Electrically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (ES3: Primary Filter circuit)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary person	ES1: All circuit	N/A	N/A	N/A
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
PCB	PS2	See 6.3	V-1 or better	N/A
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
N/A	N/A	N/A	N/A	N/A
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A

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IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
<b>Supplementary Information:</b> (1) See attached energy source diagram for additional details. (2) "N" – Normal Condition; "A" – Abnormal Condition; "S" Single Fault				

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<b>4</b>	<b>GENERAL REQUIREMENTS</b>		—
4.1.1	Acceptance of materials, components and subassemblies	See appended Table 4.1.2.	P
4.1.2	Use of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions presented in the equipment.	P
4.1.3	Equipment design and construction	Equipment is for building-in, it shall be evaluated in end-use product.	N/A
4.1.15	Markings and instructions .....	(See Annex F)	P
4.4.4	Safeguard robustness	See below.	N/A
4.4.4.2	Steady force tests .....	Equipment is for building-in, it shall be evaluated in end-use product.	N/A
4.4.4.3	Drop tests .....	Equipment is for building-in, it shall be evaluated in end-use product.	N/A
4.4.4.4	Impact tests .....	Equipment is for building-in, it shall be evaluated in end-use product.	N/A
4.4.4.5	Internal accessible safeguard enclosure and barrier tests .....	Equipment is for building-in, it shall be evaluated in end-use product.	N/A
4.4.4.6	Glass Impact tests .....	Not applicable.	N/A
4.4.4.74	Thermoplastic material tests .....	Equipment is for building-in, it shall be evaluated in end-use product.	N/A
4.4.4.8	Air comprising a safeguard .....	No insulation comprising with air to act as a safeguard.	N/A
4.4.4.9	Accessibility and safeguard effectiveness	Not applicable.	N/A
4.5	Explosion	No explosion occurred.	N/A
4.6	Fixing of conductors	No conductors requiring safeguard.	N/A
4.6.1	Fix conductors not to defeat a safeguard		N/A
4.6.2	10 N force test applied to .....	Not applicable.	N/A
4.7	Equipment for direct insertion into mains socket - outlets	Not direct plug-in equipment.	N/A
4.7.2	Mains plug part complies with the relevant standard .....	Refer to clause 4.7.	N/A
4.7.3	Torque (Nm) .....	Not applicable.	N/A
4.8	Products containing coin/button cell batteries	No battery in the equipment.	N/A
4.8.2	Instructional safeguard		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.8.3	Battery Compartment Construction		N/A
	Means to reduce the possibility of children removing the battery .....	Refer to clause 4.8.	—
4.8.4	Battery Compartment Mechanical Tests .....	Refer to clause 4.8.	N/A
4.8.5	Battery Accessibility		N/A
4.9	Likelihood of fire or shock due to entry of conductive object .....	Equipment is for building-in, it shall be evaluated in end-use product.	N/A

<b>5</b>	<b>ELECTRICALLY-CAUSED INJURY</b>		—
5.2.1	Electrical energy source classifications .....	The product is class III and classified as ES1.	P
5.2.2	ES1, ES2 and ES3 limits	See below.	P
5.2.2.2	Steady-state voltage and current .....	All circuits are classified as ES1.	P
5.2.2.3	Capacitance limits .....	No capacitors as electrical energy source.	N/A
5.2.2.4	Single pulse limits .....	No single pulses generated.	N/A
5.2.2.5	Limits for repetitive pulses .....	No repetitive pulses generated.	N/A
5.2.2.6	Ringing signals .....	Not used an analogue telephone network ringing signal in the equipment.	N/A
5.2.2.7	Audio signals .....	No audio signals.	N/A
5.3	Protection against electrical energy sources	No protection against electrical shock deemed to necessary for ES1 energy source.	N/A
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons		N/A
5.3.2.1	Accessibility to electrical energy sources and safeguards		N/A
5.3.2.2	Contact requirements		N/A
	a) Test with test probe from Annex V .....	Refer to clause 5.3.	N/A
	b) Electric strength test potential (V) .....	Refer to clause 5.3.	N/A
	c) Air gap (mm) .....	Refer to clause 5.3.	N/A
5.3.2.4	Terminals for connecting stripped wire		N/A
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material	Class III equipment, only functional insulation in the equipment.	N/A
5.4.1.3	Humidity conditioning .....	Not applicable.	N/A
5.4.1.4	Maximum operating temperature for insulating materials .....	For components, see Annex G and 4.1.2.	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.5	Pollution degree .....	PD2	—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N/A
5.4.1.5.3	Thermal cycling		N/A
5.4.1.6	Insulation in transformers with varying dimensions	No such component.	N/A
5.4.1.7	Insulation in circuits generating starting pulses	No such part.	N/A
5.4.1.8	Determination of working voltage	Not applicable.	N/A
5.4.1.9	Insulating surfaces	Not applicable.	N/A
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted	No such part.	N/A
5.4.1.10.2	Vicat softening temperature .....	Not applicable.	N/A
5.4.1.10.3	Ball pressure .....	Not applicable.	N/A
5.4.2	Clearances	Only functional insulation is considered and complied with Annex B.4.4	N/A
5.4.2.2	Determining clearance using peak working voltage	Not applicable.	N/A
5.4.2.3	Determining clearance using required withstand voltage .....	Class III equipment, no connected to mains.	N/A
	a) a.c. mains transient voltage .....	Not applicable.	—
	b) d.c. mains transient voltage .....	Not applicable.	—
	c) external circuit transient voltage .....	Not applicable.	—
	d) transient voltage determined by measurement .....	Not applicable.	—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test		N/A
5.4.2.5	Multiplication factors for clearances and test voltages .....	Not applicable.	N/A
5.4.3	Creepage distances .....	Only functional insulation is considered and complied with Annex B.4.4.	N/A
5.4.3.1	General	Refer to clause 5.4.3.	N/A
5.4.3.3	Material Group .....	Not applicable.	—
5.4.4	Solid insulation	No such insulation.	N/A
5.4.4.2	Minimum distance through insulation .....	Not applicable.	N/A
5.4.4.3	Insulation compound forming solid insulation		N/A
5.4.4.4	Solid insulation in semiconductor devices		N/A
5.4.4.5	Cemented joints	No such parts.	N/A

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5.4.4.6	Thin sheet material	No such parts.	N/A
5.4.4.6.1	General requirements		N/A
5.4.4.6.2	Separable thin sheet material		N/A
	Number of layers (pcs) ..... :	Not applicable.	N/A
5.4.4.6.3	Non-separable thin sheet material		N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material ..... :	Not applicable.	N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components	No such parts.	N/A
5.4.4.9	Solid insulation at frequencies >30 kHz ..... :	No such parts.	N/A
5.4.5	Antenna terminal insulation	No such parts.	N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
	Insulation resistance (MΩ)..... :	Not applicable.	—
5.4.6	Insulation of internal wire as part of supplementary safeguard ..... :	No such parts.	N/A
5.4.7	Tests for semiconductor components and for cemented joints	No such parts.	N/A
5.4.8	Humidity conditioning	Not applicable.	N/A
	Relative humidity (%)..... :	See above.	—
	Temperature (°C) ..... :	See above.	—
	Duration (h) ..... :	See above.	—
5.4.9	Electric strength test ..... :	No protection against electrical shock deemed necessary to ES1 energy source.	N/A
5.4.9.1	Test procedure for a solid insulation type test		N/A
5.4.9.2	Test procedure for routine tests		N/A
5.4.10	Protection against transient voltages between external circuit	No such circuit.	N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test ..... :	Not applicable.	N/A
5.4.10.2.3	Steady-state test..... :	Not applicable.	N/A
5.4.11	Insulation between external circuits and earthed circuitry ..... :	No such parts.	N/A

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5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements	Refer to clause 5.4.11.	N/A
	Rated operating voltage $U_{op}$ (V).....:	Not applicable.	—
	Nominal voltage $U_{peak}$ (V).....:	Not applicable.	—
	Max increase due to variation $U_{sp}$ .....	Not applicable.	—
	Max increase due to ageing $\Delta U_{sa}$ .....	Not applicable.	—
	$U_{op} = U_{peak} + \Delta U_{sp} + \Delta U_{sa}$ .....	Not applicable.	—
5.5	Components as safeguards		N/A
5.5.1	General	No component used as safeguard.	N/A
5.5.2	Capacitors and RC units	No such capacitors and RC units.	N/A
5.5.2.1	General requirement		N/A
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector.....:	Refer to clause 5.5.2.	N/A
5.5.3	Transformers	No transformers.	N/A
5.5.4	Optocouplers	No optocouplers.	N/A
5.5.5	Relays	No relays.	N/A
5.5.6	Resistors	No such resistors.	N/A
5.5.7	SPD's	No SPD's.	N/A
5.5.7.1	Use of an SPD connected to reliable earthing		N/A
5.5.7.2	Use of an SPD between mains and protective earth		N/A
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable.....:	Not applicable.	N/A
5.6	Protective conductor		N/A
5.6.2	Requirement for protective conductors	Class III equipment, no protective earth conductors.	N/A
5.6.2.1	General requirements		N/A
5.6.2.2	Colour of insulation		N/A
5.6.3	Requirement for protective earthing conductors		N/A
	Protective earthing conductor size (mm <sup>2</sup> ) .....	Refer to clause 5.6.2.	—
5.6.4	Requirement for protective bonding conductors	Class III equipment, no protective bonding conductors.	N/A
5.6.4.1	Protective bonding conductors		N/A
	Protective bonding conductor size (mm <sup>2</sup> ). .....	Not applicable.	—
	Protective current rating (A) .....	Not applicable.	—

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5.6.4.3	Current limiting and overcurrent protective devices		N/A
5.6.5	Terminals for protective conductors	No such conductors.	N/A
5.6.5.1	Requirement		N/A
	Conductor size (mm <sup>2</sup> ), nominal thread diameter (mm) .....	Not applicable.	N/A
5.6.5.2	Corrosion		N/A
5.6.6	Resistance of the protective system	No such resistance.	N/A
5.6.6.1	Requirements		N/A
5.6.6.2	Test Method Resistance ( $\Omega$ ).....	Not applicable.	N/A
5.6.7	Reliable earthing	Class III equipment, no such construction.	N/A
5.7	Prospective touch voltage, touch current and protective conductor current		N/A
5.7.2	Measuring devices and networks	Class III equipment, all prospective touch voltage inside the equipment is ES1.	N/A
5.7.2.1	Measurement of touch current .....	Not applicable.	N/A
5.7.2.2	Measurement of prospective touch voltage		N/A
5.7.3	Equipment set-up, supply connections and earth connections	Refer to clause 5.7.2.	N/A
	System of interconnected equipment (separate connections/single connection) .....	Not applicable.	—
	Multiple connections to mains (one connection at a time/simultaneous connections) .....	Not applicable.	—
5.7.4	Earthed conductive accessible parts .....	Class III equipment, no applicable.	N/A
5.7.5	Protective conductor current	Class III equipment, no applicable.	N/A
	Supply Voltage (V) .....	Not applicable.	—
	Measured current (mA) .....	Not applicable.	—
	Instructional Safeguard .....	Not applicable.	N/A
5.7.6	Prospective touch voltage and touch current due to external circuits		N/A
5.7.6.1	Touch current from coaxial cables		N/A
5.7.6.2	Prospective touch voltage and touch current from external circuits		N/A
5.7.7	Summation of touch currents from external circuits	Class III equipment, no applicable.	N/A
	a) Equipment with earthed external circuits Measured current (mA) .....	Not applicable.	N/A

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	b) Equipment whose external circuits are not referenced to earth. Measured current (mA) .....	Not applicable.	N/A
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<b>6</b>	<b>ELECTRICALLY- CAUSED FIRE</b>		—
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications	See energy source identification and classification table.	P
6.2.2.1	General	All circuits are considered PS2.	P
6.2.2.2	Power measurement for worst-case load fault ... :	Refer to below.	P
6.2.2.3	Power measurement for worst-case power source fault .....	Refer to below.	P
6.2.2.4	PS1 .....		N/A
6.2.2.5	PS2 .....	Considered.	P
6.2.2.6	PS3 .....		N/A
6.2.3	Classification of potential ignition sources		P
6.2.3.1	Arcing PIS .....	There are no arcing PIS inside the equipment.	N/A
6.2.3.2	Resistive PIS .....	All devices/components inside the equipment are considered as resistive PIS.	P
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1 (a)	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials .....	During the test, no ignition occurred, or component's temperature reach to 300°C of spontaneous ignition point. (See appended table 5.4.1.4, 6.3.2, 9.0, B.2.6) However, Equipment is for building-in, it shall be evaluated in end-use product.	P
6.3.1 (b)	Combustible materials outside fire enclosure	No such parts.	N/A
6.4	Safeguards against fire under single fault conditions		N/A
6.4.1	Safeguard Method	Equipment is for building-in, it shall be evaluated in end-use product.	N/A
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits	Equipment is for building-in, it shall be evaluated in end-use product.	N/A
6.4.3.1	General		N/A
6.4.3.2	Supplementary Safeguards		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Special conditions if conductors on printed boards are opened or peeled		N/A
6.4.3.3	Single Fault Conditions .....	Not applicable.	N/A
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits		N/A
6.4.5	Control of fire spread in PS2 circuits	Considered.	P
6.4.5.2	Supplementary safeguards .....	- Printed board rated min. V-1 class material. - All other components mounted on V-1 class material.	P
6.4.6	Control of fire spread in PS3 circuit		N/A
6.4.7	Separation of combustible materials from a PIS		N/A
6.4.7.1	General .....	Not applicable.	N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers	Equipment is for building-in, it shall be evaluated in end-use product.	N/A
6.4.8.1	Fire enclosure and fire barrier material properties		N/A
6.4.8.2.1	Requirements for a fire barrier		N/A
6.4.8.2.2	Requirements for a fire enclosure		N/A
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		N/A
6.4.8.3.1	Fire enclosure and fire barrier openings		N/A
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm) .....	Not applicable.	N/A
	Needle Flame test		N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm) .....	Not applicable.	N/A
	Flammability tests for the bottom of a fire enclosure .....	Not applicable.	N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c) .....	Not applicable.	N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating .....	Not applicable.	N/A
6.5	Internal and external wiring		N/A
6.5.1	Requirements		N/A
6.5.2	Cross-sectional area (mm <sup>2</sup> ) .....	Not applicable.	—

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Clause	Requirement + Test	Result - Remark	Verdict
6.5.3	Requirements for interconnection to building wiring .....	Not applicable.	N/A
6.6	Safeguards against fire due to connection to additional equipment	Not applicable.	N/A
	External port limited to PS2 or complies with Clause Q.1	Supplied via 2 Wire PWR/DATA connector which comply with PS2, no test necessary.	N/A

<b>7</b>	<b>INJURY CAUSED BY HAZARDOUS SUBSTANCES</b>		—
7.2	Reduction of exposure to hazardous substances		N/A
7.3	Ozone exposure		N/A
7.4	Use of personal safeguards (PPE)		N/A
	Personal safeguards and instructions .....	No hazardous substances, equipment is for building-in type, it shall be evaluated in end-use product.	—
7.5	Use of instructional safeguards and instructions		N/A
	Instructional safeguard (ISO 7010) .....	No hazardous substances, equipment is for building-in type, it shall be evaluated in end-use product.	—
7.6	Batteries.....	No battery in the equipment.	N/A

<b>8</b>	<b>MECHANICALLY-CAUSED INJURY</b>		—
8.1	General	EUT is intended for building-in. The protection against mechanically-caused injury is to be determined when employed in the end-use product.	N/A
8.2	Mechanical energy source classifications		N/A
8.3	Safeguards against mechanical energy sources		N/A
8.4	Safeguards against parts with sharp edges and corners		N/A
8.4.1	Safeguards		N/A
8.5	Safeguards against moving parts	No moving part.	N/A
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard .....	Not applicable.	—
8.5.4	Special categories of equipment comprising moving parts	No such part.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Safeguards and Safety Interlocks .....	Not applicable.	N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard .....	Not applicable.	—
8.5.4.2.3	Disconnection from the supply		N/A
8.5.4.2.4	Probe type and force (N) .....	Not applicable.	N/A
8.5.5	High Pressure Lamps	No high pressure lamps in the equipment.	N/A
8.5.5.1	Energy Source Classification		N/A
8.5.5.2	High Pressure Lamp Explosion Test.....	Not applicable.	N/A
8.6	Stability	Equipment is for building-in type, it shall be evaluated in end-use product.	N/A
8.6.1	Product classification		N/A
	Instructional Safeguard .....	Not applicable.	—
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A
	Applied Force .....	Not applicable.	—
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10° tilt.....	Not applicable.	—
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force).....	Not applicable.	N/A
	Position of feet or movable parts .....	Not applicable.	—
8.7	Equipment mounted to wall or ceiling	Equipment is for building-in type, it shall be evaluated in end-use product.	N/A
8.7.1	Mounting Means (Length of screws (mm) and mounting surface) .....	Not applicable.	N/A
8.7.2	Direction and applied force .....	Not applicable.	N/A
8.8	Handles strength	Equipment is for building-in type, it shall be evaluated in end-use product.	N/A
8.8.1	Classification		N/A
8.8.2	Applied Force .....	Not applicable.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.9	Wheels or casters attachment requirements	Equipment is for building-in type, it shall be evaluated in end-use product.	N/A
8.9.1	Classification		N/A
8.9.2	Applied force .....	Not applicable.	—
8.10	Carts, stands and similar carriers	Equipment is for building-in type, it shall be evaluated in end-use product.	N/A
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard .....	Not applicable.	—
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force .....	Not applicable.	—
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N) .....	Not applicable.	—
8.10.6	Thermoplastic temperature stability (°C) .....	Not applicable.	N/A
8.11	Mounting means for rack mounted equipment	Equipment is for building-in type, it shall be evaluated in end-use product.	N/A
8.11.1	General		N/A
8.11.2	Product Classification		N/A
8.11.3	Mechanical strength test, variable <i>N</i> .....	Not applicable.	N/A
8.11.4	Mechanical strength test 250N, including end stops		N/A
8.12	Telescoping or rod antennas .....	No such construction.	N/A
	Button/Ball diameter (mm) .....	Not applicable.	—

<b>9</b>	<b>THERMAL BURN INJURY</b>		<b>—</b>
9.2	Thermal energy source classifications	EUT is intended for building-in. The protection against thermal burn injury is to be determined when employed in the end-use equipment.	N/A
9.3	Safeguard against thermal energy sources		N/A
9.4	Requirements for safeguards		N/A
9.4.1	Equipment safeguard		N/A
9.4.2	Instructional safeguard .....	Refer to clause 9.2.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
<b>10</b>	<b>RADIATION</b>		—
10.2	Radiation energy source classification		N/A
10.2.1	General classification		N/A
10.3	Protection against laser radiation	No such part.	N/A
	Laser radiation that exists equipment:		—
	Normal, abnormal, single-fault..... :	Not applicable.	N/A
	Instructional safeguard .....	Not applicable.	—
	Tool..... :	Not applicable.	—
10.4	Protection against visible, infrared, and UV radiation	No visible, infrared and UV radiation.	N/A
10.4.1	General		N/A
10.4.1.a)	RS3 for Ordinary and instructed persons .....	Not applicable.	N/A
10.4.1.b)	RS3 accessible to a skilled person..... :	Not applicable.	N/A
	Personal safeguard (PPE) instructional safeguard..... :	Not applicable.	—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1. :	Not applicable.	N/A
10.4.1.d)	Normal, abnormal, single-fault conditions .....	Not applicable.	N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque..... :	Not applicable.	N/A
10.4.1.f)	UV attenuation..... :	Not applicable.	N/A
10.4.1.g)	Materials resistant to degradation UV .....	Not applicable.	N/A
10.4.1.h)	Enclosure containment of optical radiation..... :	Not applicable.	N/A
10.4.1.i)	Exempt Group under normal operating conditions..... :	Not applicable.	N/A
10.4.2	Instructional safeguard .....	Not applicable.	N/A
10.5	Protection against x-radiation	No X-radiation.	N/A
10.5.1	X- radiation energy source that exists equipment :		N/A
	Normal, abnormal, single fault conditions		N/A
	Equipment safeguards..... :	Not applicable.	N/A
	Instructional safeguard for skilled person..... :	Not applicable.	N/A
10.5.3	Most unfavourable supply voltage to give maximum radiation .....	Not applicable.	—
	Abnormal and single-fault condition .....	Not applicable.	N/A
	Maximum radiation (pA/kg)..... :	Not applicable.	N/A
10.6	Protection against acoustic energy sources	Not personal music player.	N/A
10.6.1	General		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
10.6.2	Classification		N/A
	Acoustic output, dB(A)..... :	Not applicable.	N/A
	Output voltage, unweighted r.m.s..... :	Not applicable.	N/A
10.6.4	Protection of persons		N/A
	Instructional safeguards ..... :	Not applicable.	N/A
	Equipment safeguard prevent ordinary person to RS2..... :	Not applicable.	—
	Means to actively inform user of increase sound pressure..... :	Not applicable.	—
	Equipment safeguard prevent ordinary person to RS2..... :	Not applicable.	—
10.6.5	Requirements for listening devices (headphones, earphones, etc.)	No such part.	N/A
10.6.5.1	Corded passive listening devices with analog input		N/A
	Input voltage with 94 dB(A) $L_{Aeq}$ acoustic pressure output..... :	Not applicable.	—
10.6.5.2	Corded listening devices with digital input		N/A
	Maximum dB(A)..... :	Not applicable.	—
10.6.5.3	Cordless listening device		N/A
	Maximum dB(A)..... :	Not applicable.	—

<b>B</b>	<b>NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS</b>		—
B.2	Normal Operating Conditions	Considered.	N/A
B.2.1	General requirements..... :	(See Test Item Particulars and appended test tables)	N/A
	Audio Amplifiers and equipment with audio amplifiers ..... :	No amplifiers.	N/A
B.2.3	Supply voltage and tolerances	Not connected to mains.	N/A
B.2.5	Input test..... :	(See appended table B.2.5)	N/A
B.3	Simulated abnormal operating conditions		N/A
B.3.1	General requirements..... :	Equipment is for building-in type, it shall be evaluated in end-use product.	N/A
B.3.2	Covering of ventilation openings		N/A
B.3.3	D.C. mains polarity test	Not connected to D.C mains.	N/A
B.3.4	Setting of voltage selector ..... :	No voltage select switch.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
B.3.5	Maximum load at output terminals .....		N/A
B.3.6	Reverse battery polarity	No battery in the equipment.	N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.	No Audio amplifier in the equipment.	N/A
B.3.8	Safeguards functional during and after abnormal operating conditions		N/A
B.4	Simulated single fault conditions		N/A
B.4.2	Temperature controlling device open or short-circuited .....	No such parts.	N/A
B.4.3	Motor tests	No such parts.	N/A
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature .....	No such parts.	N/A
B.4.4	Short circuit of functional insulation		N/A
B.4.4.1	Short circuit of clearances for functional insulation		N/A
B.4.4.2	Short circuit of creepage distances for functional insulation		N/A
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors		N/A
B.4.6	Short circuit or disconnect of passive components		N/A
B.4.7	Continuous operation of components		N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions		N/A
B.4.9	Battery charging under single fault conditions ...	No such parts.	N/A
<b>C</b>	<b>UV RADIATION</b>		—
C.1	Protection of materials in equipment from UV radiation	The equipment does not produce significant UV radiation.	N/A
C.1.2	Requirements		N/A
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure apparatus		N/A
C.2.4	Xenon-arc light exposure apparatus		N/A
<b>D</b>	<b>TEST GENERATORS</b>		—
D.1	Impulse test generators	Not applicable.	N/A

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D.2	Antenna interface test generator		N/A
D.3	Electronic pulse generator		N/A
<b>E</b>	<b>TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS</b>		—
E.1	Audio amplifier normal operating conditions	No amplifier.	N/A
	Audio signal voltage (V) .....	Not applicable.	—
	Rated load impedance (Ω) .....	Not applicable.	—
E.2	Audio amplifier abnormal operating conditions	Not applicable.	N/A
<b>F</b>	<b>EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS</b>		—
F.1	General requirements		P
	Instructions – Language .....	Instruction language is in English, however, the instructions shall be in a language acceptable for the country where the equipment is to be used.	—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1		P
F.2.2	Graphic symbols IEC, ISO or manufacturer specific	Direct current symbol according to IEC 60417-5031 is used.	P
F.3	Equipment markings		P
F.3.1	Equipment marking locations		P
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification .....	See copy of marking plate.	—
F.3.2.2	Model identification .....	See copy of marking plate.	—
F.3.3	Equipment rating markings	See below.	P
F.3.3.1	Equipment with direct connection to mains		N/A
F.3.3.2	Equipment without direct connection to mains	Class III equipment.	P
F.3.3.3	Nature of supply voltage.....	See copy of marking plate.	—
F.3.3.4	Rated voltage .....	See copy of marking plate.	—
F.3.3.4	Rated frequency .....	Class III equipment, not applicable.	—
F.3.3.6	Rated current or rated power .....	See copy of marking plate.	—
F.3.3.7	Equipment with multiple supply connections		N/A
F.3.4	Voltage setting device	No voltage setting device in the equipment.	N/A
F.3.5	Terminals and operating devices	See below.	N/A
F.3.5.1	Mains appliance outlet and socket-outlet markings .....	No such part.	N/A

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F.3.5.2	Switch position identification marking .....	No such part.	N/A
F.3.5.3	Replacement fuse identification and rating markings .....	No such part.	N/A
F.3.5.4	Replacement battery identification marking .....	No such part.	N/A
F.3.5.5	Terminal marking location	Class III equipment, not applicable.	N/A
F.3.6	Equipment markings related to equipment classification	Class III equipment, not applicable.	N/A
F.3.6.1	Class I Equipment		N/A
F.3.6.1.1	Protective earthing conductor terminal		N/A
F.3.6.1.2	Neutral conductor terminal		N/A
F.3.6.1.3	Protective bonding conductor terminals		N/A
F.3.6.2	Class II equipment (IEC60417-5172)		N/A
F.3.6.2.1	Class II equipment with or without functional earth		N/A
F.3.6.2.2	Class II equipment with functional earth terminal marking		N/A
F.3.7	Equipment IP rating marking .....	IPX0	—
F.3.8	External power supply output marking		N/A
F.3.9	Durability, legibility and permanence of marking	The marking on equipment is durability, legibility and easy to be identified.	P
F.3.10	Test for permanence of markings	The marking withstands the required test.	P
F.4	Instructions		P
	a) Equipment for use in locations where children not likely to be present - marking		N/A
	b) Instructions given for installation or initial use	Provided in user manual.	P
	c) Equipment intended to be fastened in place		N/A
	d) Equipment intended for use only in restricted access area	Equipment is not intended for use in restricted access area.	N/A
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1	No audio equipment terminals classified as ES1.	N/A
	f) Protective earthing employed as safeguard	Class III equipment.	N/A
	g) Protective earthing conductor current exceeding ES 2 limits	Class III equipment.	N/A
	h) Symbols used on equipment		N/A
	i) Permanently connected equipment not provided with all-pole mains switch	No permanently connected equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	j) Replaceable components or modules providing safeguard function	No such part in the equipment.	N/A
F.5	Instructional safeguards		P
	Where “instructional safeguard” is referenced in the test report it specifies the required elements, location of marking and/or instruction		P
<b>G</b>	<b>COMPONENTS</b>		—
<b>G.1</b>	<b>Switches</b>		N/A
G.1.1	General requirements	No switches in the equipment.	N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
<b>G.2</b>	<b>Relays</b>		N/A
G.2.1	General requirements	No relays in the equipment.	N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supply power		N/A
G.2.4	Mains relay, modified as stated in G.2		N/A
<b>G.3</b>	<b>Protection Devices</b>		N/A
G.3.1	Thermal cut-offs	No thermal cut-offs in the equipment.	N/A
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Thermal cut-off connections maintained and secure		N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691	No thermal links in the equipment.	N/A
G.3.2.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H) .....	Not applicable.	—
	Single Fault Condition .....	Not applicable.	—
	Test Voltage (V) and Insulation Resistance (Ω). :	Not applicable.	—
G.3.3	PTC Thermistors	No PTC in the equipment.	N/A
G.3.4	Overcurrent protection devices	No overcurrent protective device in the equipment.	N/A
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided	No non-resettable devices in the equipment.	N/A
G.3.5.2	Single faults conditions.....		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
<b>G.4</b>	<b>Connectors</b>		N/A
G.4.1	Spacings	No such components	N/A
G.4.2	Mains connector configuration .....	Not applicable.	N/A
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		N/A
<b>G.5</b>	<b>Wound Components</b>		N/A
G.5.1	Wire insulation in wound components.....	No such wound components in the equipment.	N/A
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°		N/A
G.5.1.2 b)	Construction subject to routine testing		N/A
G.5.2	Endurance test on wound components		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Time (s) .....	Not applicable.	—
	Temperature (°C) .....	Not applicable.	—
G.5.2.3	Wound Components supplied by mains		N/A
<b>G.5.3</b>	<b>Transformers</b>		N/A
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1).....	No such transformers in the equipment.	N/A
	Position .....	Not applicable.	—
	Method of protection .....	Not applicable.	—
G.5.3.2	Insulation		N/A
	Protection from displacement of windings.....	Not applicable.	—
G.5.3.3	Overload test .....	Not applicable.	N/A
G.5.3.3.1	Test conditions		N/A
G.5.3.3.2	Winding Temperatures testing in the unit		N/A
G.5.3.3.3	Winding Temperatures - Alternative test method		N/A
<b>G.5.4</b>	<b>Motors</b>		N/A
G.5.4.1	General requirements	No motor in the equipment.	N/A
	Position .....	Not applicable.	—
G.5.4.2	Test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4	Locked-rotor overload test		N/A
	Test duration (days) .....	Not applicable.	—

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V) .....	Not applicable.	—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h) .....		N/A
	Electric strength test (V) .....	Not applicable.	—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature .....	Not applicable.	N/A
	Electric strength test (V) .....	Not applicable.	N/A
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h) .....	Not applicable.	N/A
	Electric strength test (V) .....	Not applicable.	N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage .....	Not applicable.	—
<b>G.6</b>	<b>Wire Insulation</b>		N/A
G.6.1	General	All circuitry or parts are considered as ES1.	N/A
G.6.2	Solvent-based enamel wiring insulation	No solvent-based enamel wiring insulation in the equipment.	N/A
<b>G.7</b>	<b>Mains supply cords</b>		N/A
G.7.1	General requirements	Class III equipment, not used mains supply cords.	N/A
	Type.....	Not applicable.	—
	Rated current (A) .....	Not applicable.	—
	Cross-sectional area (mm <sup>2</sup> ), (AWG).....	Not applicable.	—
G.7.2	Compliance and test method		N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N) .....	Not applicable.	—
G.7.3.2.2	Strain relief mechanism failure		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.7.3.2.3	Cord sheath or jacket position, distance (mm) ....:	Not applicable.	—
G.7.3.2.4	Strain relief comprised of polymeric material		N/A
G.7.4	Cord Entry .....	Not applicable.	N/A
G.7.5	Non-detachable cord bend protection	No non-detachable cord in the equipment.	N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Mass (g) .....	Not applicable.	—
	Diameter (m) .....	Not applicable.	—
	Temperature (°C) .....	Not applicable.	—
G.7.6	Supply wiring space		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Test with 8 mm strand		N/A
<b>G.8</b>	<b>Varistors</b>		N/A
G.8.1	General requirements	No varistors in the equipment.	N/A
G.8.2	Safeguard against shock		N/A
G.8.3	Safeguard against fire		N/A
G.8.3.2	Varistor overload test .....	Not applicable.	N/A
G.8.3.3	Temporary overvoltage .....	Not applicable.	N/A
<b>G.9</b>	<b>Integrated Circuit (IC) Current Limiters</b>		N/A
G.9.1 a)	Manufacturer defines limit at max. 5A.	No such component in the equipment, not applicable.	N/A
G.9.1 b)	Limiters do not have manual operator or reset	No such component in the equipment, not applicable.	N/A
G.9.1 c)	Supply source does not exceed 250 VA .....	No such component in the equipment, not applicable.	—
G.9.1 d)	IC limiter output current (max. 5A) .....	No such component in the equipment, not applicable.	—
G.9.1 e)	Manufacturers' defined drift .....	No such component in the equipment, not applicable.	—
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
<b>G.10</b>	<b>Resistors</b>		N/A
G.10.1	General requirements	Class III equipment, resistor is not used as safeguard or bridged basic, supplementary insulation.	N/A
G.10.2	Resistor test	Not applicable.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N/A
G.10.3.1	General requirements		N/A
G.10.3.2	Voltage surge test		N/A
G.10.3.3	Impulse test		N/A
<b>G.11</b>	<b>Capacitor and RC units</b>		N/A
G.11.1	General requirements	No capacitor and RC unit serving as safeguard in the equipment.	N/A
G.11.2	Conditioning of capacitors and RC units		N/A
G.11.3	Rules for selecting capacitors		N/A
<b>G.12</b>	<b>Optocouplers</b>		N/A
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results) .....	No optocouplers in the equipment.	N/A
	Type test voltage Vini .....	Not applicable.	—
	Routine test voltage, Vini,b .....	Not applicable.	—
<b>G.13</b>	<b>Printed boards</b>		P
G.13.1	General requirements	Functional insulation only	P
G.13.2	Uncoated printed boards		P
G.13.3	Coated printed boards		N/A
G.13.4	Insulation between conductors on the same inner surface	No such parts.	N/A
	Compliance with cemented joint requirements (Specify construction) .....	Not applicable.	—
G.13.5	Insulation between conductors on different surfaces	No such part.	N/A
	Distance through insulation .....	Not applicable.	N/A
	Number of insulation layers (pcs) .....	Not applicable.	—
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2a)	Thermal conditioning		N/A
G.13.6.2b)	Electric strength test		N/A
G.13.6.2c)	Abrasion resistance test		N/A
<b>G.14</b>	<b>Coating on components terminals</b>		N/A
G.14.1	Requirements .....	No coatings in the equipment.	N/A
<b>G.15</b>	<b>Liquid filled components</b>		N/A

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G.15.1	General requirements	No liquid filled components in the equipment.	N/A
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
<b>G.16</b>	<b>IC including capacitor discharge function (ICX)</b>		N/A
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours	No IC including capacitor discharge function (ICX) in the equipment.	N/A
b)	Impulse test using circuit 2 with $U_c =$ to transient voltage .....	Not applicable.	N/A
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N/A
C2)	Test voltage .....	Not applicable.	—
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N/A
D2)	Capacitance .....	Not applicable.	—
D3)	Resistance .....	Not applicable.	—
<b>H</b>	<b>CRITERIA FOR TELEPHONE RINGING SIGNALS</b>		—
H.1	General	Not used an analogue telephone network ringing signal in the equipment.	N/A
H.2	Method A		N/A
H.3	Method B		N/A
H.3.1	Ringing signal		N/A
H.3.1.1	Frequency (Hz) .....	Not applicable.	—
H.3.1.2	Voltage (V) .....	Not applicable.	—
H.3.1.3	Cadence; time (s) and voltage (V) .....	Not applicable.	—
H.3.1.4	Single fault current (mA):.....	Not applicable.	—
H.3.2	Tripping device and monitoring voltage .....	Not applicable.	N/A

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H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V) .....	Not applicable.	—
<b>J</b>	<b>INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION</b>		—
	General requirements	No insulated winding wires in the equipment.	N/A
<b>K</b>	<b>SAFETY INTERLOCKS</b>		—
K.1	General requirements	No safety interlocks in the equipment.	N/A
K.2	Components of safety interlock safeguard mechanism .....	Not applicable.	N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance .....	Not applicable.	N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method .....	Not applicable.	N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location) .....		N/A
K.7.2	Overload test, Current (A) .....	Not applicable.	N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test .....	Not applicable.	N/A
<b>L</b>	<b>DISCONNECT DEVICES</b>		—
L.1	General requirements	Class III equipment, not connected to the mains.	N/A
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized		N/A
L.4	Single phase equipment		N/A
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices		N/A
L.8	Multiple power sources		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
<b>M</b>	<b>EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS</b>		—
M.1	General requirements	No battery in the equipment.	N/A
M.2	Safety of batteries and their cells		N/A
M.2.1	Requirements		N/A
M.2.2	Compliance and test method (identify method) .. :	Not applicable.	N/A
M.3	Protection circuits		N/A
M.3.1	Requirements		N/A
M.3.2	Tests		N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
M.3.3	Compliance .....	Not applicable.	N/A
M.4	Additional safeguards for equipment containing secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Charging operating limits		N/A
M.4.2.2a)	Charging voltage, current and temperature .....	Not applicable.	—
M.4.2.2 b)	Single faults in charging circuitry .....	Not applicable.	—
M.4.3	Fire Enclosure		N/A
M.4.4	Endurance of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation		N/A
M.4.4.3	Drop and charge/discharge function tests		N/A
	Drop		N/A
	Charge		N/A
	Discharge		N/A
M.4.4.4	Charge-discharge cycle test		N/A
M.4.4.5	Result of charge-discharge cycle test		N/A
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A
M.6	Prevention of short circuits and protection from other effects of electric current		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
M.6.1	Short circuits		N/A
M.6.1.1	General requirements		N/A
M.6.1.2	Test method to simulate an internal fault		N/A
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method) .....	Not applicable.	N/A
M.6.2	Leakage current (mA) .....	Not applicable.	N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
M.7.2	Compliance and test method		N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A
M.8.1	General requirements		N/A
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume $V_z$ (m <sup>3</sup> /s).....	Not applicable.	—
M.8.2.3	Correction factors .....	Not applicable.	—
M.8.2.4	Calculation of distance $d$ (mm) .....	Not applicable.	—
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) .....	No battery in the equipment, not applicable.	N/A
<b>N</b>	<b>ELECTROCHEMICAL POTENTIALS</b>		—
	Metal(s) used .....	Not relevant, class III equipment.	—
<b>O</b>	<b>MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES</b>		—
	Figures O.1 to O.20 of this Annex applied .....	Only functional insulation inside of equipment.	—
<b>P</b>	<b>SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS</b>		—
P.1	General requirements	EUT is intended for building-in and determined in the end-use product.	N/A
P.2.2	Safeguards against entry of foreign object		N/A
	Location and Dimensions (mm) .....	Not applicable.	—
P.2.3	Safeguard against the consequences of entry of foreign object		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
P.2.3.1	Safeguards against the entry of a foreign object		N/A
	Openings in transportable equipment		N/A
	Transportable equipment with metalized plastic parts .....	Not applicable.	N/A
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard) .....	Not applicable.	N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts		N/A
P.4.2 a)	Conditioning testing		N/A
	Tc (°C) .....	Not applicable.	—
	Tr (°C) .....	Not applicable.	—
	Ta (°C) .....	Not applicable.	—
P.4.2 b)	Abrasion testing .....	Not applicable.	N/A
P.4.2 c)	Mechanical strength testing .....	Not applicable.	N/A
<b>Q</b>	<b>CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING</b>		—
Q.1	Limited power sources		N/A
Q.1.1 a)	Inherently limited output		N/A
Q.1.1 b)	Impedance limited output		N/A
	- Regulating network limited output under normal operating and simulated single fault condition		N/A
Q.1.1 c)	Overcurrent protective device limited output		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method		N/A
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A) .....	Not applicable.	—
	Current limiting method .....	Not applicable.	—
<b>R</b>	<b>LIMITED SHORT CIRCUIT TEST</b>		—
R.1	General requirements		N/A
R.2	Determination of the overcurrent protective device and circuit		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
R.3	Test method Supply voltage (V) and short-circuit current (A) .....	Not applicable.	N/A
<b>S</b>	<b>TESTS FOR RESISTANCE TO HEAT AND FIRE</b>		—
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W	EUT is intended for building-in and determined in the end-use product.	N/A
	Samples, material .....	Not applicable.	—
	Wall thickness (mm) .....	Not applicable.	—
	Conditioning (°C) .....	Not applicable.	—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material .....	Not applicable.	—
	Wall thickness (mm) .....	Not applicable.	—
	Conditioning (°C) .....	Not applicable.	—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material .....	Not applicable.	—
	Wall thickness (mm) .....	Not applicable.	—
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power exceeding 4 000 W		N/A
	Samples, material .....	Not applicable.	—
	Wall thickness (mm) .....	Not applicable.	—
	Conditioning (test condition), (°C) .....	Not applicable.	—
	Test flame according to IEC 60695-11-20 with conditions as set out		N/A
	After every test specimen was not consumed completely		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	After fifth flame application, flame extinguished within 1 min		N/A
<b>T</b>	<b>MECHANICAL STRENGTH TESTS</b>		—
T.1	General requirements	Class III equipment. EUT is intended for building-in and determined in the end-use product.	N/A
T.2	Steady force test, 10 N .....	Not applicable.	N/A
T.3	Steady force test, 30 N .....	Not applicable.	N/A
T.4	Steady force test, 100 N .....	Not applicable.	N/A
T.5	Steady force test, 250 N .....	Not applicable.	N/A
T.6	Enclosure impact test		N/A
	Fall test		N/A
	Swing test		N/A
T.7	Drop test .....	Not applicable.	N/A
T.8	Stress relief test .....	Not applicable.	N/A
T.9	Impact Test (glass)		N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		N/A
	Impact energy (J) .....	Not applicable.	—
	Height (m) .....	Not applicable.	—
T.10	Glass fragmentation test .....	Not applicable.	N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm) .....	Not applicable.	—
<b>U</b>	<b>MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION</b>		—
U.1	General requirements	No cathode ray tube in the equipment.	N/A
U.2	Compliance and test method for non-intrinsically protected CRTs		N/A
U.3	Protective Screen .....	Not applicable.	N/A
<b>V</b>	<b>DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)</b>		—
V.1	Accessible parts of equipment	EUT is intended for building-in and determined in the end-use product.	N/A
V.2	Accessible part criterion		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

4.1.2	TABLE: List of critical components					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity <sup>1</sup>	
PCB	Interchangeable	Interchangeable	V-1 or better, Min. 105°C	UL 796	UL*	
Supplementary information: 1) Provided evidence ensures the agreed level of compliance. See OD-2039. 2) Description line content is optional. Main line description needs to clearly detail the component used for testing *: License available upon request						

4.8.4, 4.8.5	TABLE: Lithium coin/button cell batteries mechanical tests			N/A
(The following mechanical tests are conducted in the sequence noted.)				
4.8.4.2	TABLE: Stress Relief test			—
Part		Material	Oven Temperature (°C)	Comments
4.8.4.3	TABLE: Battery replacement test			—
Battery part no.....:				—
Battery Installation/withdrawal		Battery Installation/Removal Cycle		Comments
		1		
		2		
		3		
		4		
		5		
		6		
		8		
		9		
10				
4.8.4.4	TABLE: Drop test			—
Impact Area		Drop Distance	Drop No.	Observations
			1	
			2	
			3	

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Clause	Requirement + Test		Result - Remark	Verdict
4.8.4, 4.8.5	TABLE: Lithium coin/button cell batteries mechanical tests			N/A
(The following mechanical tests are conducted in the sequence noted.)				
4.8.4.5	TABLE: Impact			—
Impacts per surface		Surface tested	Impact energy (Nm)	Comments
4.8.4.6	TABLE: Crush test			—
Test position		Surface tested	Crushing Force (N)	Duration force applied (s)
Supplementary information:				

4.8.5	<b>TABLE: Lithium coin/button cell batteries mechanical test result</b>		N/A
Test position	Surface tested	Force (N)	Duration force applied (s)
Supplementary information:			

5.2	Table: Classification of electrical energy sources						N/A
5.2.2.2 – Steady State Voltage and Current conditions							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				U (Vrms or Vpk)	I (Apk or Arms)	Hz	
			Normal				
			Abnormal				
			Single fault – SC/OC				
5.2.2.3 - Capacitance Limits							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class	
				Capacitance, nF	Upk (V)		
			Normal				
			Abnormal				
			Single fault – SC/OC				
5.2.2.4 - Single Pulses							

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Clause	Requirement + Test	Result - Remark	Verdict

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Duration (ms)	Upk (V)	Ipk (mA)	
			Normal				
			Abnormal				
			Single fault – SC/OC				

#### 5.2.2.5 - Repetitive Pulses

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Off time (ms)	Upk (V)	Ipk (mA)	
			Normal				
			Abnormal				
			Single fault – SC/OC				

#### Test Conditions:

Normal –

Abnormal -

Supplementary information: SC=Short Circuit, OC=Short Circuit

5.4.1.4, 6.3.2, 9.0, B.2.6	TABLE: Temperature measurements					N/A
	Supply voltage (V) .....					—
	Ambient T <sub>min</sub> (°C) .....					—
	Ambient T <sub>max</sub> (°C) .....					—
	T <sub>ma</sub> (°C) .....					—
Maximum measured temperature T of part/at:		T (°C)				Allowed T <sub>max</sub> (°C)
Supplementary information:						
Temperature T of winding:		t <sub>1</sub> (°C)	R <sub>1</sub> (Ω)	t <sub>2</sub> (°C)	R <sub>2</sub> (Ω)	T (°C)
Supplementary information:						
Note 1: T <sub>ma</sub> should be considered as directed by applicable requirement						
Note 2: T <sub>ma</sub> is not included in assessment of Touch Temperatures (Clause 9)						

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.10.2	TABLE: Vicat softening temperature of thermoplastics		N/A
Penetration (mm)..... :			—
Object/ Part No./Material		Manufacturer/t rademark	T softening (°C)
supplementary information:			

5.4.1.10.3	TABLE: Ball pressure test of thermoplastics			N/A
Allowed impression diameter (mm) .....		≤ 2 mm		—
Object/Part No./Material	Manufacturer/trademark	Test temperature (°C)	Impression diameter (mm)	
Supplementary information:				

<b>5.4.2.2, 5.4.2.4 and 5.4.3</b>	<b>TABLE: Minimum Clearances/Creepage distance</b>						N/A
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz) <sup>1</sup>	Required cl (mm)	cl (mm) <sup>2</sup>	Required <sup>3</sup> cr (mm)	cr (mm)
Supplementary information:							
Note 1: Only for frequency above 30 kHz							
Note 2: See table 5.4.2.4 if this is based on electric strength test							
Note 3: Provide Material Group							

5.4.2.3	TABLE: Minimum Clearances distances using required withstand voltage				N/A
	Overvoltage Category (OV):				
	Pollution Degree:				
Clearance distanced between:		Required withstand voltage	Required cl (mm)	Measured cl (mm)	
Supplementary information:					

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<b>5.4.2.4</b>	<b>TABLE: Clearances based on electric strength test</b>			N/A
Test voltage applied between:		Required cl (mm)	Test voltage (kV) peak/ r.m.s. / d.c.	Breakdown Yes / No
Supplementary information:				

<b>5.4.4.2, 5.4.4.5 c) 5.4.4.9</b>	<b>TABLE: Distance through insulation measurements</b>					N/A
Distance through insulation di at/of:		Peak voltage (V)	Frequency (kHz)	Material	Required DTI (mm)	DTI (mm)
Supplementary information:						

5.4.9	TABLE: Electric strength tests			N/A
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
Functional:				
Basic/supplementary:				
Reinforced:				
Routine Tests:				
Supplementary information:				

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<b>5.5.2.2</b>	<b>TABLE: Stored discharge on capacitors</b>					N/A
Supply Voltage (V), Hz	Test Location	Operating Condition (N, S)	Switch position On or off	Measured Voltage (after 2 seconds)	ES Classification	
Supplementary information: X-capacitors installed for testing are: <input type="checkbox"/> bleeding resistor rating: <input type="checkbox"/> ICX: Notes: A. Test Location: Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth B. Operating condition abbreviations: N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition						

<b>5.6.6.2</b>	<b>TABLE: Resistance of protective conductors and terminations</b>					N/A
Accessible part	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)		
Supplementary information:						

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<b>5.7.2.2, 5.7.4</b>	<b>TABLE: Earthed accessible conductive part</b>		N/A
Supply voltage .....			—
Location		Test conditions specified in 6.1 of IEC 60990 or Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7	Touch current (mA)
		1	
		2*	
		3	
		4	
		5	
		6	
		8	
Supplementary Information:			
Notes:			
[1] Supply voltage is the anticipated maximum Touch Voltage			
[2] Earthed neutral conductor [Voltage differences less than 1% or more]			
[3] Specify method used for measurement as described in IEC 60990 sub-clause 4.3			
[4] IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable.			
[5] (*) IEC60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided.			

<b>6.2.2</b>	<b>Table: Electrical power sources (PS) measurements for classification</b>				N/A
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s <sup>*)</sup>	PS Classification
A		Power (W) :			
		V <sub>A</sub> (V) :			
		I <sub>A</sub> (A) :			
B		Power (W) :			
		V <sub>A</sub> (V) :			
		I <sub>A</sub> (A) :			
C		Power (W) :			
		V <sub>A</sub> (V) :			
		I <sub>A</sub> (A) :			
D		Power (W) :			

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Clause	Requirement + Test		Result - Remark	Verdict
		V <sub>A</sub> (V) :		
		I <sub>A</sub> (A) :		
Supplementary Information:				
(*) Measurement taken only when limits at 3 seconds exceed PS1 limits				

6.2.3.1	Table: Determination of Potential Ignition Sources (Arcing PIS)				N/A
Location	Open circuit voltage After 3 s (V <sub>p</sub> )	Measured r.m.s current (I <sub>rms</sub> )	Calculated value (V <sub>p</sub> x I <sub>rms</sub> )	Arcing PIS? Yes / No	
Supplementary information:					
An Arcing PIS requires a minimum of 50 V (peak) a.c. or d.c. An Arcing PIS is established when the product of the open circuit voltage (V <sub>p</sub> ) and normal operating condition rms current (I <sub>rms</sub> ) is greater than 15.					

6.2.3.2	Table: Determination of Potential Ignition Sources (Resistive PIS)				N/A
Circuit Location (x-y)	Operating Condition (Normal / Describe Single Fault)	Measured wattage or VA During first 30 s (W / VA)	Measured wattage or VA After 30 s (W / VA)	Protective Circuit, Regulator, or PTC Operated? Yes / No (Comment)	Resistive PIS? Yes/No
Supplementary Information:					
A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter.					
If a separate voltmeter and ammeter are used, the product of (VA x IA) is used to determine Resistive PIS classification.					
A Resistive PIS: (a) dissipates more than 15 W, measured after 30 s of normal operation, <u>or</u> (b) under single fault conditions has either a power exceeding 100 W measured immediately after the introduction of the fault if electronic circuits, regulators or PTC devices are used, or has an available power exceeding 15 W measured 30 s after introduction of the fault.					

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8.5.5	TABLE: High Pressure Lamp		N/A
Description	Values	Energy Source Classification	
Lamp type .....		—	
Manufacturer .....		—	
Cat no. ....		—	
Pressure (cold) (MPa).....		MS_	
Pressure (operating) (MPa) .....		MS_	
Operating time (minutes) .....		—	
Explosion method .....		—	
Max particle length escaping enclosure (mm) .:		MS_	
Max particle length beyond 1 m (mm).....		MS_	
Overall result .....			
Supplementary information:			

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<b>B.2.5</b>	<b>TABLE: Input test</b>						N/A
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
Supplementary information: Equipment may be have rated current or rated power or both. Both should be measured							

<b>B.3</b>	<b>TABLE: Abnormal operating condition tests</b>							N/A
Ambient temperature (°C) .....								—
Power source for EUT: Manufacturer, model/type, output rating ..								—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Supplementary information: Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column "Abnormal/Fault." Specify if test condition by indicating "Abnormal" then the condition for a Clause B.3 test or "Single Fault" then the condition for Clause B.4.								

<b>B.4</b>	<b>TABLE: Fault condition tests</b>							N/A
Ambient temperature (°C) .....								—
Power source for EUT: Manufacturer, model/type, output rating ..								—
Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Supplementary information:								

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Clause	Requirement + Test			Result - Remark				Verdict	
<b>Annex M</b>	<b>TABLE: Batteries</b>								N/A
The tests of Annex M are applicable only when appropriate battery data is not available									
Is it possible to install the battery in a reverse polarity position? ..... :									
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition									
Max. current during fault condition									
Test results:									
- Chemical leaks									
- Explosion of the battery									
- Emission of flame or expulsion of molten metal									
- Electric strength tests of equipment after completion of tests									
Supplementary information:									
Verdict									

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<b>Annex M.4</b>	<b>Table: Additional safeguards for equipment containing secondary lithium batteries</b>				N/A
Battery/Cell No.	Test conditions	Measurements			Observation
		U	I (A)	Temp (C)	
	Normal				
	Abnormal				
	Single fault –SC/OC				
Supplementary Information:					
Battery identification	Charging at $T_{lowest}$ (°C)	Observation	Charging at $T_{highest}$ (°C)	Observation	
Supplementary Information:					

Annex Q.1	TABLE: Circuits intended for interconnection with building wiring (LPS)					N/A
Note: Measured UOC (V) with all load circuits disconnected:						
Output Circuit	Components	U <sub>oc</sub> (V)	I <sub>sc</sub> (A)		S (VA)	
			Meas.	Limit	Meas.	Limit
Supplementary Information: SC=Short circuit, OC=Open circuit						

<b>T.2, T.3, T.4, T.5</b>	<b>TABLE: Steady force test</b>					N/A
Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation	
Supplementary information:						

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<b>T.6, T.9</b>	<b>TABLE: Impact tests</b>			N/A
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation
Supplementary information:				

<b>T.7</b>	<b>TABLE: Drop tests</b>			N/A
Part/Location	Material	Thickness (mm)	Drop Height (mm)	Observation
Supplementary information:				

<b>T.8</b>	<b>TABLE: Stress relief test</b>				N/A
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation
Supplementary information:					

-- End of Report --

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Clause	Requirement + Test	Result - Remark	Verdict

## Attachment 1 European Group Differences And National Differences

<b>ATTACHMENT TO TEST REPORT IEC 62368-1</b> <b>EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES</b> (Audio/video, information and communication technology equipment Part 1: Safety requirements)			
<b>Differences according to</b> .....: EN 62368-1:2014 + A11: 2017			
<b>Attachment Form No.</b> .....: EU_GD_IEC62368_1B_II			
<b>Attachment Originator</b> .....: Nemko AS			
<b>Master Attachment</b> .....: Date 2017-09-22			
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	<b>CENELEC COMMON MODIFICATIONS (EN)</b>					—
	<b>Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62368-1:2014 are prefixed “Z”.</b>					P
<b>CONTENTS</b>	<b>Add the following annexes:</b> <div style="display: flex; justify-content: space-between;"> <div> <b>Annex ZA (normative)</b>  <b>publications</b>  <b>Annex ZB (normative)</b>  <b>Annex ZC (informative)</b>  <b>Annex ZD (informative)</b>  <b>flexible</b> </div> <div> <b>Normative references to international with their corresponding European</b>  <b>Special national conditions</b>  <b>A-deviations</b>  <b>IEC and CENELEC code designations for cords</b> </div> </div>					P
	<b>Delete all the “country” notes in the reference document (IEC 62368-1:2014) according to the following list:</b>					P
	0.2.1	Note	1	Note 3	4.1.15	Note
	4.7.3	Note 1 and 2	5.2.2.2	Note	5.4.2.3.2.2 Table 13	Note c
	5.4.2.3.2.4	Note 1 and 3	5.4.2.5	Note 2	5.4.5.1	Note
	5.5.2.1	Note	5.5.6	Note	5.6.4.2.1	Note 2 and 3
	5.7.5	Note	5.7.6.1	Note 1 and 2	10.2.1 Table 39	Note 2, 3 and 4
	10.5.3	Note 2	10.6.2.1	Note 3	F.3.3.6	Note 3
	<b>For special national conditions, see Annex ZB.</b>					P
1	<b>Add the following note:</b> NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2011/65/EU.					P



IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.Z1	<p><b>Add</b> the following new subclause after 4.9:</p> <p>To protect against excessive current, short-circuits and earth faults in circuits connected to an a.c. <b>mains</b>, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c):</p> <p>a) except as detailed in b) and c), protective devices necessary to comply with the requirements of B.3.1 and B.4 shall be included as parts of the equipment;</p> <p>b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;</p> <p>c) it is permitted for <b>pluggable equipment type B</b> or <b>permanently connected equipment</b>, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions.</p> <p>If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for <b>pluggable equipment type A</b> the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.</p>		N/A
5.4.2.3.2.4	<p><b>Add</b> the following to the end of this subclause:</p> <p>The requirement for interconnection with <b>external circuit</b> is in addition given in EN 50491-3:2009.</p>		N/A
10.2.1	<p>Add the following to <sup>c)</sup> and <sup>d)</sup> in table 39:</p> <p>For additional requirements, see 10.5.1.</p>		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
10.5.1	<p><b>Add</b> the following after the first paragraph:</p> <p><i>For RS 1 compliance is checked by measurement under the following conditions:</i></p> <p><i>In addition to the normal operating conditions, all controls adjustable from the outside by hand, by any object such as a tool or a coin, and those internal adjustments or presets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made.</i></p> <p>NOTE Z1 Soldered joints and paint lockings are examples of adequate locking.</p> <p><i>The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm<sup>2</sup>, at any point 10 cm from the outer surface of the apparatus.</i></p> <p><i>Moreover, the measurement shall be made under fault conditions causing an increase of the high-voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made.</i></p> <p><i>For RS1, the dose-rate shall not exceed 1 µSv/h taking account of the background level.</i></p> <p>NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.</p>		N/A
10.6.1	<p><b>Add</b> the following paragraph to the end of the subclause:</p> <p>EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.</p>		N/A
10.Z1	<p><b>Add</b> the following new subclause after 10.6.5.</p> <p><b>10.Z1 Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz</b></p> <p>The amount of non-ionizing radiation is regulated by European Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz).</p> <p>For intentional radiators, ICNIRP guidelines should be taken into account for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz). For hand-held and body-mounted devices, attention is drawn to EN 50360 and EN 50566</p>		N/A
G.7.1	<p><b>Add</b> the following note:</p> <p>NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.</p>		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Bibliography	<p><b>Add</b> the following standards:</p> <p><b>Add</b> the following notes for the standards indicated:</p> <p>IEC 60130-9 NOTE Harmonized as EN 60130-9.</p> <p>IEC 60269-2 NOTE Harmonized as HD 60269-2.</p> <p>IEC 60309-1 NOTE Harmonized as EN 60309-1.</p> <p>IEC 60364 NOTE some parts harmonized in HD 384/HD 60364 series.</p> <p>IEC 60601-2-4 NOTE Harmonized as EN 60601-2-4.</p> <p>IEC 60664-5 NOTE Harmonized as EN 60664-5.</p> <p>IEC 61032:1997 NOTE Harmonized as EN 61032:1998 (not modified).</p> <p>IEC 61508-1 NOTE Harmonized as EN 61508-1.</p> <p>IEC 61558-2-1 NOTE Harmonized as EN 61558-2-1.</p> <p>IEC 61558-2-4 NOTE Harmonized as EN 61558-2-4.</p> <p>IEC 61558-2-6 NOTE Harmonized as EN 61558-2-6.</p> <p>IEC 61643-1 NOTE Harmonized as EN 61643-1.</p> <p>IEC 61643-21 NOTE Harmonized as EN 61643-21.</p> <p>IEC 61643-311 NOTE Harmonized as EN 61643-311.</p> <p>IEC 61643-321 NOTE Harmonized as EN 61643-321.</p> <p>IEC 61643-331 NOTE Harmonized as EN 61643-331.</p>		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>ZB</b>	<b>ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)</b>		--
4.1.15	<p><b>Denmark, Finland, Norway and Sweden</b></p> <p>To the end of the subclause the following is added:</p> <p><b>Class I pluggable equipment type A</b> intended for connection to other equipment or a network shall, if safety relies on connection to reliable earthing or if surge suppressors are connected between the network terminals and <b>accessible</b> parts, have a marking stating that the equipment shall be connected to an earthed <b>mains</b> socket-outlet.</p> <p>The marking text in the applicable countries shall be as follows:</p> <p>In <b>Denmark</b>: "Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord."</p> <p>In <b>Finland</b>: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"</p> <p>In <b>Norway</b>: "Apparatet må tilkoples jordet stikkontakt"</p> <p>In <b>Sweden</b>: "Apparaten skall anslutas till jordat uttag"</p>		N/A
4.7.3	<p><b>United Kingdom</b></p> <p>To the end of the subclause the following is added:</p> <p>The torque test is performed using a socket-outlet complying with BS 1363, and the plug part shall be assessed to the relevant clauses of BS 1363. Also see Annex G.4.2 of this annex</p>		N/A
5.2.2.2	<p><b>Denmark</b></p> <p>After the 2nd paragraph add the following:</p> <p>A warning (marking <b>safeguard</b>) for high <b>touch current</b> is required if the <b>touch current</b> exceeds the limits of 3,5 mA a.c. or 10 mA d.c.</p>		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.11.1 and Annex G	<p><b>Finland and Sweden</b></p> <p>To the end of the subclause the following is added:</p> <p>For separation of the telecommunication network from earth the following is applicable:</p> <p>If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> <li>• two layers of thin sheet material, each of which shall pass the electric strength test below, or</li> <li>• one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below.</li> </ul> <p>If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that clearances and creepage distances do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"> <li>• passes the tests and inspection criteria of 5.4.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 5.4.9 shall be performed using 1,5 kV), and</li> <li>• is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5kV.</li> </ul> <p>It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2.</p> <p>A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> <li>• the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in 5.4.11;</li> <li>• the additional testing shall be performed on all the test specimens as described in EN 60384-14; the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.</li> </ul>		N/A
5.5.2.1	<p><b>Norway</b></p> <p>After the 3rd paragraph the following is added:</p> <p>Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).</p>		N/A



IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.5.6	<b>Finland, Norway and Sweden</b> To the end of the subclause the following is added: Resistors used as <b>basic safeguard</b> or bridging <b>basic insulation</b> in <b>class I pluggable equipment type A</b> shall comply with G.10.1 and the test of G.10.2.		N/A
5.6.1	<b>Denmark</b> <b>Add</b> to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. <i>Justification:</i> In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.		N/A
5.6.4.2.1	<b>Ireland and United Kingdom</b> After the indent for <b>pluggable equipment type A</b> , the following is added: – the <b>protective current rating</b> is taken to be 13 A, this being the largest rating of fuse used in the <b>mains</b> plug.		N/A
5.6.5.1	To the second paragraph the following is added: The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current over 10 A and up to and including 13 A is: 1,25 mm <sup>2</sup> to 1,5 mm <sup>2</sup> in cross-sectional area.		N/A
5.7.5	<b>Denmark</b> To the end of the subclause the following is added: The installation instruction shall be affixed to the equipment if the <b>protective conductor current</b> exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		N/A



IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.1	<p><b>Norway and Sweden</b></p> <p>To the end of the subclause the following is added: The screen of the television distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation needs to be isolated from the screen of a cable distribution system.</p> <p>It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by a retailer, for example.</p> <p>The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: “Apparatus connected to the protective earthing of the building installation through the mains connection or through other apparatus with a connection to protective earthing – and to a television distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a television distribution system therefore has to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)”</p> <p>NOTE In Norway, due to regulation for CATV-installations, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.</p> <p>Translation to Norwegian (the Swedish text will also be accepted in Norway): “Apparater som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et koaksialbasert kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av apparater til kabel-TV nett installeres en galvanisk isolator mellom apparatet og kabel-TV nettet.”</p> <p>Translation to Swedish: ”Apparater som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av apparaten till kabel-TV nät galvanisk isolator finnas mellan apparaten och kabel-TV nätet.”</p>		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.2	<b>Denmark</b> To the end of the subclause the following is added: The warning (marking safeguard) for high touch current is required if the touch current or the protective current exceed the limits of 3,5 mA .		N/A
B.3.1 and B.4	<b>Ireland and United Kingdom</b> The following is applicable: To protect against excessive currents and short-circuits in the primary circuit of <b>direct plug-in equipment</b> , tests according to Annexes B.3.1 and B.4 shall be conducted using an external miniature circuit breaker complying with EN 60898-1, Type B, rated 32A. If the equipment does not pass these tests, suitable protective devices shall be included as an integral part of the <b>direct plug-in equipment</b> , until the requirements of Annexes B.3.1 and B.4 are met		N/A
G.4.2	<b>Denmark</b> To the end of the subclause the following is added: Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1:2011. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Mains socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance DS 60884-2-D1:2011 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c. Mains socket-outlets with earth shall be in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a <i>Justification:</i> Heavy Current Regulations, Section 6c		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	<b>United Kingdom</b> To the end of the subclause the following is added: The plug part of direct plug-in equipment shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16, and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		N/A
G.7.1	<b>United Kingdom</b> To the first paragraph the following is added: Equipment which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord shall be fitted with a 'standard plug' in accordance with the Plugs and Sockets etc (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768, unless exempted by those regulations. NOTE "Standard plug" is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
G.7.1	<b>Ireland</b> To the first paragraph the following is added: Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. S.I. 525 provides for the recognition of a standard of another Member State which is equivalent to the relevant Irish Standard		N/A
G.7.2	<b>Ireland and United Kingdom</b> To the first paragraph the following is added: A power supply cord with a conductor of 1,25 mm <sup>2</sup> is allowed for equipment which is rated over 10 A and up to and including 13 A.		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>ZC</b>	<b>ANNEX ZC, NATIONAL DEVIATIONS (EN)</b>		--
10.5.2	<p><b>Germany</b></p> <p>The following requirement applies:</p> <p>For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorization is required, or application of type approval (Bauartzulassung) and marking.</p> <p><i>Justification:</i></p> <p>German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM.</p> <p><b>NOTE</b> Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int +49-531-592-6320, Internet: <a href="http://www.ptb.de">http://www.ptb.de</a></p>		N/A

-- End of Attachment 1 --

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

## Attachment 2 ITALY National Differences

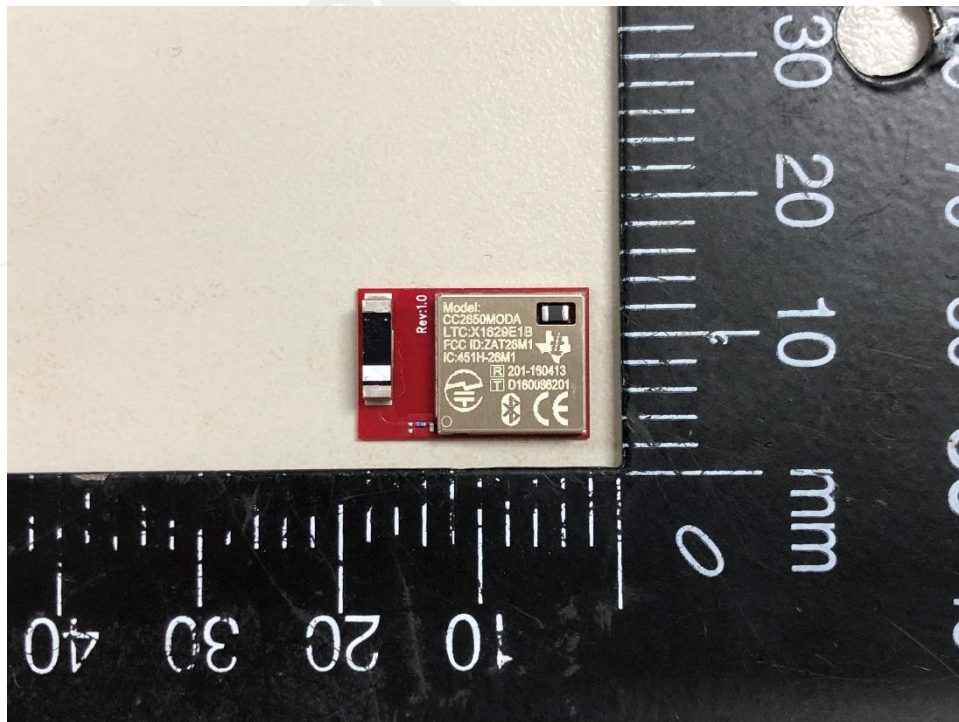
<b>ATTACHMENT TO TEST REPORT</b> <b>IEC 62368-1</b> <b>ITALY NATIONAL DIFFERENCES</b> (Audio/video, information and communication technology equipment – Part 1: Safety requirements)			
Differences according to ..... : CEI EN 62368-1:2016			
Attachment Form No. .... : IT_ND_IEC62368_1B			
Attachment Originator..... : IMQ S.p.A.			
Master Attachment ..... : Date 2020-01-31			
Copyright © 2020 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.			
	<b>National Differences</b>		—
F.1	<b>Italy</b> The following requirements shall be fulfilled: • The power consumption in Watts (W) shall be indicated on TV receivers and in their instruction for use (Measurement according to EN 60555-2). Note: <i>EN 60555-2 has since been replaced by IEC 60107-1:1997.</i>  • TV receivers shall be provided with an instruction for use, schematic diagrams and adjustments procedure in Italian language. • Marking for controls and terminals shall be in Italian language. Abbreviation and international symbols are allowed provided that they are explained in the instruction for use. • The ECC manufacturers are bound to issue a conformity declaration according to the above requirements in the instruction manual. The correct statement for conformity to be written in the instruction manual, shall be: <i>Questo apparecchio è fabbricato nella CEE nel rispetto delle disposizioni del D.M. marzo 1992 ed è in particolare conforme alle prescrizioni dell'art. 1 dello stesso D.M.</i>  • The first importers of TV receivers manufactured outside EEC are bound to submit the TV receivers for previous conformity certification to the Italian Post Ministry (PP.TT). The TV receivers shall have on the backcover the certification number in the	Not TV set.	N/A

## IEC62368\_1B - ATTACHMENT

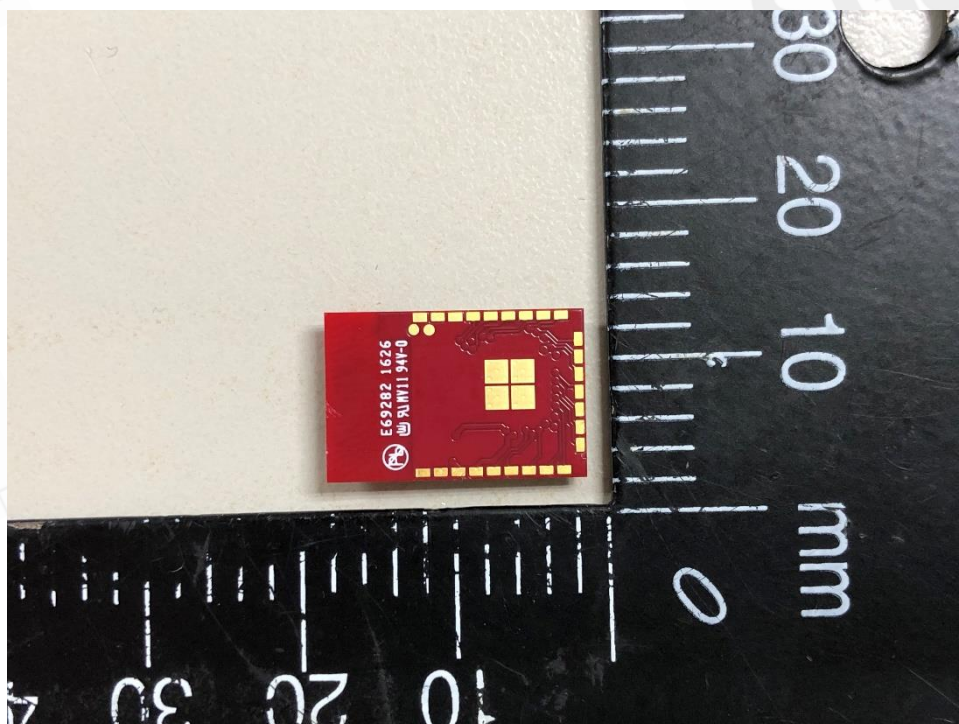
Clause	Requirement + Test	Result - Remark	Verdict
	<p>following form: D.M. 26/03/1992 xxxxx/xxxxx/S or T or pT S for stereo T for Teletext pT for retrofitable teletext</p> <p><i>Justification:</i> Ministerial Decree of 26 March 1992 : National rules for television receivers trade.</p> <p><i>NOTE/: Ministerial decree above contains additional, but not safety relevant requirements</i></p>		

-- End of Attachment 2 --

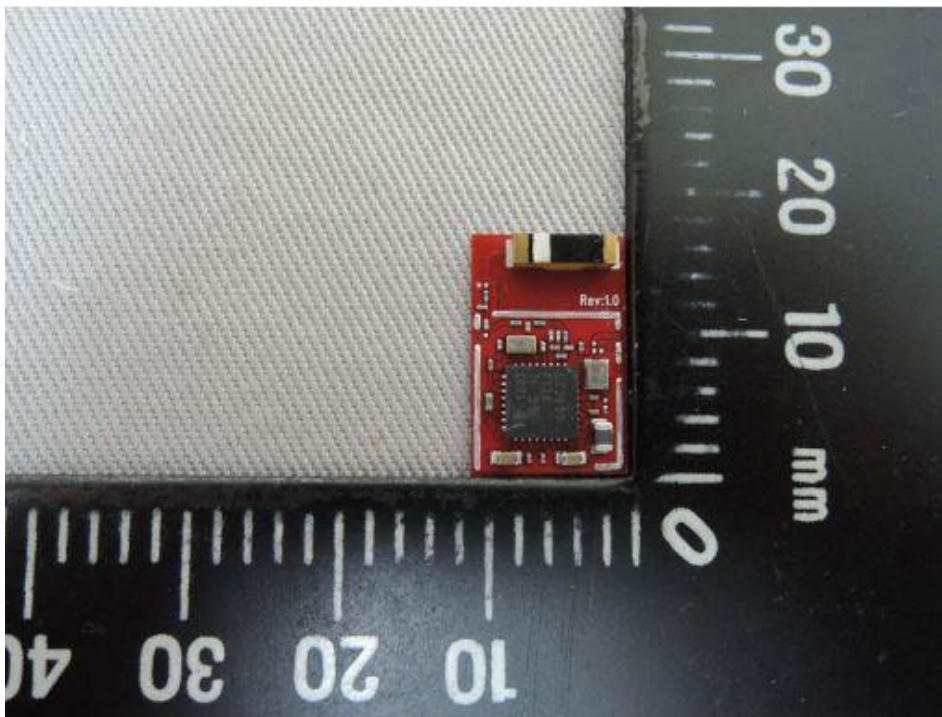


Attachment 3 Photographs

Overall view



Overall view



Overall view

-- End of Attachment 3 --