



# CERTIFICATE OF COMPLIANCE

The product listed in follows was (were) tested in the BTL SAFETY Laboratory to comply with the required criteria levels of the follow-mentioned Generic Standards or the requirements of Low Voltage Directive 2006/95/EC relating to electrical equipment designed for use within certain voltage limits.

Equipment	(1) 1.3MP H.264 Super Low Lux WDR Mini Fixed Dome, (2) 2MP H.264 Super Low Lux WDR Mini Fixed Dome, (3) 2/3MP H.264 WDR Pro Mini Fixed Dome, (4) 5MP H.264 WDR Mini Fixed Dome
Model No.	(1) GV-MFD1501-XF, GV-MFDC1501-XF, (2) GV-MFD2501-XF, GV-MFDC2501-XF, (3) GV-MFD2401-XF, GV-MFDC2401-XF, GV-MFD3401-XF, GV-MFDC3401-XF, (4) GV-MFD5301-XF, GV-MFDC5301-XF (X can be 0-9, A-Z)
Brand Name	 <b>GeoVision</b>
Applicant	<b>GeoVision Inc.</b>
Address	<b>9F., No.246, Sec.1, Neihu Rd., Neihu District, Taipei City 114, Taiwan (R.O.C.)</b>
Standard(s)	<b>IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013 EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013</b>
Report(s)	<b>BTL-LVD-1-S1505206</b>

The test data, data evaluation and equipment configuration contained in our test report(s) above was(were) obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF and UL LLC according to the ISO-17025 quality assessment standard and technical standard(s). The test data contained in the referenced test report relate only to the EUT sample and item(s) tested.

Steven Chou

**Authorized Signatory**



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## EU Declaration of Conformity

Product : (1) 1.3MP H.264 Super Low Lux WDR Mini Fixed Dome,  
(2) 2MP H.264 Super Low Lux WDR Mini Fixed Dome,  
(3) 2/3MP H.264 WDR Pro Mini Fixed Dome,  
(4) 5MP H.264 WDR Mini Fixed Dome

Type Designation : (1) GV-MFD1501-XF, GV-MFDC1501-XF,  
(2) GV-MFD2501-XF, GV-MFDC2501-XF,  
(3) GV-MFD2401-XF, GV-MFDC2401-XF, GV-MFD3401-XF,  
GV-MFDC3401-XF,  
(4) GV-MFD5301-XF, GV-MFDC5301-XF (X can be 0-9, A-Z)

Manufacturer : GeoVision Inc.

Manufacturer Address : 9F., No.246, Sec.1, Neihu Rd., Neihu District, Taipei City 114,  
Taiwan (R.O.C.)

The product above is conformity with Low Voltage Directive 2006/95/EC in order to comply with the requirements in the Council Directive 2006/95/EC relating to electrical equipment designed for use within certain voltage limits.

For the safety evaluation of the compliance with this Directive 2006/95/EC, the following standard were applied:

IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013 and/or  
EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013

The following manufacturer / within Europe is responsible for this declaration:

Company Name: \_\_\_\_\_




Company Address: \_\_\_\_\_

Name: \_\_\_\_\_

Position: \_\_\_\_\_

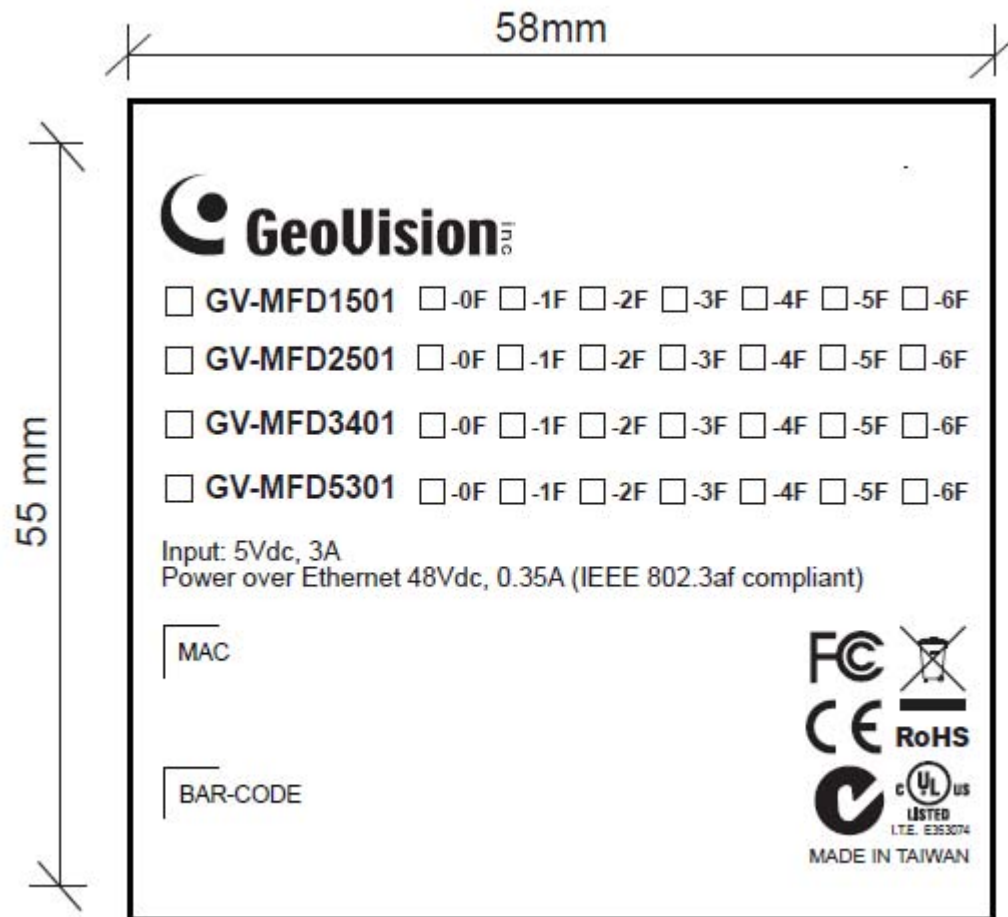
Legal Signature: \_\_\_\_\_

Place: \_\_\_\_\_ Date: \_\_\_\_\_

<p align="center"><b>TEST REPORT</b></p> <p align="center"><b>IEC/EN 60950-1</b></p> <p align="center"><b>Information technology equipment – Safety –</b></p> <p align="center"><b>Part 1: General requirements</b></p>	
Report Number.....	BTL-LVD-1-S1505206
Tested by (+ signature).....	Asimo Chang 
Approved by (+ signature) .....	Prince Chiu 
Date of issue.....	2015-06-08
Total number of pages .....	39
Testing Laboratory .....	<b>BTL Inc.</b>
Address.....	B1, No. 37, Lane 365, YangGuang St., NeiHu District 114, Taipei, Taiwan
Applicant's name .....	<b>GeoVision Inc.</b>
Address.....	9F., No.246, Sec.1, NeiHu Rd., NeiHu District, Taipei City 114, Taiwan (R.O.C.)
<b>Test specification:</b>	
Standard.....	IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013 EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013
Test procedure .....	Service of CE Marking in LVD
Non-standard test method .....	N/A
Test Report Form No. ....	IEC60950_1F (LVD)
Master TRF.....	Dated 2014-02
Test item description.....	(1) 1.3MP H.264 Super Low Lux WDR Mini Fixed Dome (2) 2MP H.264 Super Low Lux WDR Mini Fixed Dome (3) 2/3MP H.264 WDR Pro Mini Fixed Dome (4) 5MP H.264 WDR Mini Fixed Dome
Trade Mark .....	
Manufacturer .....	GeoVision Inc. 9F., No.246, Sec.1, NeiHu Rd., NeiHu District, Taipei City 114, Taiwan (R.O.C.)
Model/Type reference .....	(1) GV-MFD1501-XF, GV-MFDC1501-XF, (2) GV-MFD2501-XF, GV-MFDC2501-XF, (3) GV-MFD2401-XF, GV-MFDC2401-XF, GV-MFD3401-XF, GV-MFDC3401-XF, (4) GV-MFD5301-XF, GV-MFDC5301-XF (X can be 0-9, A-Z)
Ratings .....	I/P: 5 Vdc, 3 A or PoE 48 Vdc, 0.35 A (optional)

**List of Attachments (including a total number of pages in each attachment):**

- European Group difference and nation differences (35 pages)
- Photos documentation (3 pages)



<b>Test item particulars .....</b> :	
<b>Equipment mobility .....</b> :	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input checked="" type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in
<b>Connection to the mains .....</b> :	<input type="checkbox"/> pluggable equipment <input type="checkbox"/> type A <input type="checkbox"/> type B <input type="checkbox"/> permanent connection <input type="checkbox"/> detachable power supply cord <input type="checkbox"/> non-detachable power supply cord <input checked="" type="checkbox"/> not directly connected to the mains
<b>Operating condition .....</b> :	<input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time:
<b>Access location .....</b> :	<input checked="" type="checkbox"/> operator accessible <input type="checkbox"/> restricted access location
<b>Over voltage category (OVC) .....</b> :	<input type="checkbox"/> OVC I <input type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input checked="" type="checkbox"/> other: not directly connected to the mains
<b>Mains supply tolerance (%) or absolute mains supply values .....</b> :	N.A.
<b>Tested for IT power systems .....</b> :	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>IT testing, phase-phase voltage (V) .....</b> :	N.A.
<b>Class of equipment .....</b> :	<input type="checkbox"/> Class I <input type="checkbox"/> Class II <input checked="" type="checkbox"/> Class III <input type="checkbox"/> Not classified
<b>Considered current rating of protective device as part of the building installation (A) .....</b> :	Not directly connected to the mains
<b>Pollution degree (PD) .....</b> :	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
<b>IP protection class .....</b> :	IPX0
<b>Altitude during operation (m) .....</b> :	Up to 2000 m
<b>Altitude of test laboratory (m) .....</b> :	Not over 2000m
<b>Mass of equipment (kg) .....</b> :	Approx.0.2 kg
<b>Possible test case verdicts:</b>	
- test case does not apply to the test object .....	N/A (or N)
- test object does meet the requirement .....	P (Pass)
- test object does not meet the requirement.....	F (Fail)
<b>Testing .....</b>	
<b>Date of receipt of test item.....</b>	2015-05-22
<b>Date(s) of performance of tests .....</b>	2015-05-22 to 2015-05-29
<b>General remarks:</b>	
<p>"(See Enclosure #)" refers to additional information appended to the report.</p> <p>"(See appended table)" refers to a table appended to the report.</p> <p>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p>	


<b>Name and address of factory (ies) .....</b>	GeoVision Inc.  5F., No. 211, Nanyang St., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)				
<b>General product information:</b>					
<b>Report Summary</b> - All applicable tests according to the referenced standard(s) have been carried out.					
<b>Product Description</b> - The equipment Dome to use with information technology equipment. - Electrical components are mounted on PWB, which are enclosed by metal enclosure and supplied by adapter or PoE which provided LPS and SELV. - The test samples were pre-production samples without serial numbers.					
<b>Model Differences</b>					
Model Name	GV-MFD1501-XF, GV-MFDC1501-XF	GV-MFD2501-XF, GV-MFDC2501-XF	GV-MFD2401-XF, GV-MFDC2401-XF,	GV-MFD3401-XF, GV-MFDC3401-XF	GV-MFD5301-XF, GV-MFDC5301-XF
Pixel	100 Mega	200 Mega	200 Mega	300 Mega	300 Mega
Sensor 1	V	V	--	--	--
Sensor 2	--	--	V	V	--
Sensor 3	--	--	--	--	V
- All models are identical except for pixels, sensor and model designation for marketing purpose. - Unless otherwise specified, all tests were performed on model GV-MFD3401-1F to represent the other similar models.					
<b>Technical Considerations</b> - The product was submitted and tested for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 40 °C - The test samples were pre-production samples without serial numbers.					
<b>Abbreviations used in the report:</b>					
- normal conditions	<b>N.C.</b>	- single fault conditions	<b>S.F.C</b>		
- functional insulation	<b>OP</b>	- basic insulation	<b>BI</b>		
- double insulation	<b>DI</b>	- supplementary insulation	<b>SI</b>		
- between parts of opposite polarity	<b>BOP</b>	- reinforced insulation	<b>RI</b>		
<b>Indicate used abbreviations (if any)</b>					

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
<b>1</b>	<b>GENERAL</b>		<b>P</b>

<b>1.5</b>	<b>Components</b>		<b>P</b>
1.5.1	General		<b>P</b>
	Comply with IEC 60950-1 or relevant component standard	Components which were found to affect safety aspects comply with the requirements of this standard or within the safety aspects of the relevant IEC component standards. (see appended table 1.5.1)	<b>P</b>
1.5.2	Evaluation and testing 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 present in the equipment.	<b>P</b>
1.5.3	Thermal controls		<b>N/A</b>
1.5.4	Transformers		<b>N/A</b>
1.5.5	Interconnecting cables	Interconnecting cables comply with the relevant requirements of this standard.	<b>P</b>
1.5.6	Capacitors bridging insulation		<b>N/A</b>
1.5.7	Resistors bridging insulation		<b>N/A</b>
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		<b>N/A</b>
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		<b>N/A</b>
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		<b>N/A</b>
1.5.8	Components in equipment for IT power systems		<b>N/A</b>
1.5.9	Surge suppressors		<b>N/A</b>
1.5.9.1	General		<b>N/A</b>
1.5.9.2	Protection of VDRs		<b>N/A</b>
1.5.9.3	Bridging of functional insulation by a VDR		<b>N/A</b>
1.5.9.4	Bridging of basic insulation by a VDR		<b>N/A</b>
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		<b>N/A</b>

<b>1.6</b>	<b>Power interface</b>		<b>P</b>
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IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6.1	AC power distribution systems		N/A
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment		N/A
1.6.4	Neutral conductor		N/A

<b>1.7</b>	<b>Marking and instructions</b>		<b>P</b>
1.7.1	Power rating and identification markings		<b>P</b>
1.7.1.1	Power rating marking	See below.	<b>P</b>
	Multiple mains supply connections.....:		<b>N/A</b>
	Rated voltage(s) or voltage range(s) (V) .....	5 Vdc or PoE 48 Vdc (optional)	<b>P</b>
	Symbol for nature of supply, for d.c. only .....		<b>N/A</b>
	Rated frequency or rated frequency range (Hz) .....		<b>N/A</b>
	Rated current (mA or A) .....	3A for 5 Vdc, 0.35A for 48Vdc (optional)	<b>P</b>
1.7.1.2	Identification markings		<b>P</b>
	Manufacturer's name or trade-mark or identification mark .....		<b>P</b>
	Model identification or type reference .....	GV-MFD1501-XF, GV-MFDC1501-XF, GV-MFD2501-XF, GV-MFDC2501-XF, GV-MFD2401-XF, GV-MFDC2401-XF, GV-MFD3401-XF, GV-MFDC3401-XF, GV-MFD5301-XF, GV-MFDC5301-XF (X can be 0-9, A-Z)	<b>P</b>
	Symbol for Class II equipment only .....		<b>N/A</b>
	Other markings and symbols .....	The additional marking does not give rise to misunderstandings.	<b>P</b>
1.7.1.3	Use of graphical symbols		<b>N/A</b>
1.7.2	Safety instructions and marking	See below.	<b>P</b>
1.7.2.1	General	Safety instruction provided.	<b>P</b>
1.7.2.2	Disconnect devices		<b>N/A</b>
1.7.2.3	Overcurrent protective device		<b>N/A</b>
1.7.2.4	IT power distribution systems		<b>N/A</b>
1.7.2.5	Operator access with a tool		<b>N/A</b>
1.7.2.6	Ozone		<b>N/A</b>



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.3	Short duty cycles	Equipment is designed for continuous operation.	N/A
1.7.4	Supply voltage adjustment .....	No adjustment provided.	N/A
	Methods and means of adjustment; reference to installation instructions .....		N/A
1.7.5	Power outlets on the equipment .....	No power outlets.	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) .....		N/A
1.7.7	Wiring terminals	See below.	N/A
1.7.7.1	Protective earthing and bonding terminals .....	Class III equipment.	N/A
1.7.7.2	Terminals for a.c. mains supply conductors	No direct connection to AC mains supply.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors	No direct connection to DC mains supply.	N/A
1.7.8	Controls and indicators	See below.	P
1.7.8.1	Identification, location and marking .....	The function of controls affecting safety is obvious without knowledge of language etc.	P
1.7.8.2	Colours .....	For functional indicator use colour.	P
1.7.8.3	Symbols according to IEC 60417 .....		N/A
1.7.8.4	Markings using figures .....		N/A
1.7.9	Isolation of multiple power sources .....		N/A
1.7.10	Thermostats and other regulating devices .....		N/A
1.7.11	Durability	The label was subjected to the permanence of marking test. The label was rubbed with cloth soaked with water for 15 sec. and then again for 15 sec. with the cloth soaked with petroleum spirit.  After this test there was no damage to the label. The marking on the label did not fade. There was no curling nor lifting of the label edge.	P
1.7.12	Removable parts	No removable part.	N/A
1.7.13	Replaceable batteries .....	The required warning is in both the operation and service manuals.	P

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Language(s) .....	Only English language reviewed. May be provided in other languages upon request from the manufacturer.	—
1.7.14	Equipment for restricted access locations.....	Equipment not intended for installation in a RESTRICTED ACCESS LOCATION.	N/A

<b>2</b>	<b>PROTECTION FROM HAZARDS</b>		<b>P</b>
<b>2.1</b>	<b>Protection from electric shock and energy hazards</b>		<b>P</b>
2.1.1	Protection in operator access areas	The equipment includes SELV circuits only.	<b>P</b>
2.1.1.1	Access to energized parts		<b>N/A</b>
	Test by inspection .....		<b>N/A</b>
	Test with test finger (Figure 2A) .....		<b>N/A</b>
	Test with test pin (Figure 2B) .....		<b>N/A</b>
	Test with test probe (Figure 2C) .....		<b>N/A</b>
2.1.1.2	Battery compartments		<b>N/A</b>
2.1.1.3	Access to ELV wiring	No ELV wiring in operator accessible area.	<b>N/A</b>
	Working voltage (V <sub>peak</sub> or V <sub>rms</sub> ); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring		<b>N/A</b>
2.1.1.5	Energy hazards .....	No energy hazardous parts in operator access area.	<b>P</b>
2.1.1.6	Manual controls		<b>N/A</b>
2.1.1.7	Discharge of capacitors in equipment		<b>N/A</b>
	Measured voltage (V); time-constant (s) .....		—
2.1.1.8	Energy hazards – d.c. mains supply		<b>N/A</b>
	a) Capacitor connected to the d.c. mains supply ..		<b>N/A</b>
	b) Internal battery connected to the d.c. mains supply .....		<b>N/A</b>
2.1.1.9	Audio amplifiers .....		<b>N/A</b>
2.1.2	Protection in service access areas	No service access areas.	<b>N/A</b>
2.1.3	Protection in restricted access locations	The unit is not intended to be used in restricted locations.	<b>N/A</b>

<b>2.2</b>	<b>SELV circuits</b>		<b>P</b>
2.2.1	General requirements	See below.	<b>P</b>

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.2.2	Voltages under normal conditions (V) .....	All accessible voltages are less than 42.4 Vp or 60 V dc and are classified as SELV.	<b>P</b>
2.2.3	Voltages under fault conditions (V) .....		<b>N/A</b>
2.2.4	Connection of SELV circuits to other circuits .....	SELV circuits only connected to other secondary circuits.	<b>P</b>

<b>2.3</b>	<b>TNV circuits</b>		<b>N/A</b>
2.3.1	Limits		<b>N/A</b>
	Type of TNV circuits .....		—
2.3.2	Separation from other circuits and from accessible parts		<b>N/A</b>
2.3.2.1	General requirements		<b>N/A</b>
2.3.2.2	Protection by basic insulation		<b>N/A</b>
2.3.2.3	Protection by earthing		<b>N/A</b>
2.3.2.4	Protection by other constructions .....		<b>N/A</b>
2.3.3	Separation from hazardous voltages		<b>N/A</b>
	Insulation employed.....		—
2.3.4	Connection of TNV circuits to other circuits		<b>N/A</b>
	Insulation employed.....		—
2.3.5	Test for operating voltages generated externally		<b>N/A</b>

<b>2.4</b>	<b>Limited current circuits</b>		<b>N/A</b>
2.4.1	General requirements		<b>N/A</b>
2.4.2	Limit values		<b>N/A</b>
	Frequency (Hz) .....		—
	Measured current (mA).....		—
	Measured voltage (V) .....		—
	Measured circuit capacitance (nF or µF).....		—
2.4.3	Connection of limited current circuits to other circuits		<b>N/A</b>

<b>2.5</b>	<b>Limited power sources</b>		<b>P</b>
	a) Inherently limited output	Signal only.	<b>P</b>
	b) Impedance limited output		<b>N/A</b>
	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition		<b>P</b>

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Use of integrated circuit (IC) current limiters		N/A
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA)..... :	(see appended table 2.5)	—
	Current rating of overcurrent protective device (A) .:		—

<b>2.6</b>	<b>Provisions for earthing and bonding</b>		<b>N/A</b>
2.6.1	Protective earthing	Class III equipment.	N/A
2.6.2	Functional earthing		N/A
	Use of symbol for functional earthing .....		N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG .....		—
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG .....		—
	Protective current rating (A), cross-sectional area (mm <sup>2</sup> ), AWG .....		N/A
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min) .....		N/A
2.6.3.5	Colour of insulation .....		N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type, nominal thread diameter (mm) .....		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A

<b>2.7</b>	<b>Overcurrent and earth fault protection in primary circuits</b>		<b>N/A</b>
2.7.1	Basic requirements		N/A
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7		N/A
2.7.3	Short-circuit backup protection		N/A
2.7.4	Number and location of protective devices ..... :		N/A
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel..... :		N/A

<b>2.8</b>	<b>Safety interlocks</b>		<b>N/A</b>
2.8.1	General principles		N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
	Protection against extreme hazard		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches, relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm) .....:		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

<b>2.9</b>	<b>Electrical insulation</b>		<b>P</b>
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic materials are not used.	P
2.9.2	Humidity conditioning		N/A
	Relative humidity (%), temperature (°C) ..... :		—

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.9.3	Grade of insulation	The adequate levels of safety insulation is provided and maintained to comply with the requirements of this standard.	<b>P</b>
2.9.4	Separation from hazardous voltages		<b>N/A</b>
	Method(s) used .....		<b>—</b>

<b>2.10</b>	<b>Clearances, creepage distances and distances through insulation</b>		<b>P</b>
2.10.1	General	All circuits are SELV. Only functional insulation has been required.	<b>P</b>
2.10.1.1	Frequency .....		<b>N/A</b>
2.10.1.2	Pollution degrees .....		<b>N/A</b>
2.10.1.3	Reduced values for functional insulation	See sub-clause 5.3.4(c).	<b>P</b>
2.10.1.4	Intervening unconnected conductive parts		<b>N/A</b>
2.10.1.5	Insulation with varying dimensions		<b>N/A</b>
2.10.1.6	Special separation requirements		<b>N/A</b>
2.10.1.7	Insulation in circuits generating starting pulses		<b>N/A</b>
2.10.2	Determination of working voltage		<b>N/A</b>
2.10.2.1	General		<b>N/A</b>
2.10.2.2	RMS working voltage		<b>N/A</b>
2.10.2.3	Peak working voltage		<b>N/A</b>
2.10.3	Clearances		<b>N/A</b>
2.10.3.1	General		<b>N/A</b>
2.10.3.2	Mains transient voltages		<b>N/A</b>
	a) AC mains supply .....		<b>N/A</b>
	b) Earthed d.c. mains supplies .....		<b>N/A</b>
	c) Unearthed d.c. mains supplies .....		<b>N/A</b>
	d) Battery operation .....		<b>N/A</b>
2.10.3.3	Clearances in primary circuits		<b>N/A</b>
2.10.3.4	Clearances in secondary circuits	See sub-clause 2.10.1.3.	<b>P</b>
2.10.3.5	Clearances in circuits having starting pulses		<b>N/A</b>
2.10.3.6	Transients from a.c. mains supply .....		<b>N/A</b>
2.10.3.7	Transients from d.c. mains supply .....		<b>N/A</b>
2.10.3.8	Transients from telecommunication networks and cable distribution systems .....		<b>N/A</b>
2.10.3.9	Measurement of transient voltage levels		<b>N/A</b>
	a) Transients from a mains supply		<b>N/A</b>

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Clause	Requirement + Test	Result - Remark	Verdict
	For an a.c. mains supply .....		N/A
	For a d.c. mains supply .....		N/A
	b) Transients from a telecommunication network :		N/A
2.10.4	Creepage distances		N/A
2.10.4.1	General		N/A
2.10.4.2	Material group and comparative tracking index		N/A
	CTI tests .....		—
2.10.4.3	Minimum creepage distances		N/A
2.10.5	Solid insulation		N/A
2.10.5.1	General		N/A
2.10.5.2	Distances through insulation		N/A
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices		N/A
2.10.5.5.	Cemented joints		N/A
2.10.5.6	Thin sheet material – General		N/A
2.10.5.7	Separable thin sheet material		N/A
	Number of layers (pcs) .....		—
2.10.5.8	Non-separable thin sheet material		N/A
2.10.5.9	Thin sheet material – standard test procedure		N/A
	Electric strength test		—
2.10.5.10	Thin sheet material – alternative test procedure		N/A
	Electric strength test		—
2.10.5.11	Insulation in wound components		N/A
2.10.5.12	Wire in wound components		N/A
	Working voltage .....		N/A
	a) Basic insulation not under stress .....		N/A
	b) Basic, supplementary, reinforced insulation .....		N/A
	c) Compliance with Annex U .....		N/A
	Two wires in contact inside wound component; angle between 45° and 90° .....		N/A
2.10.5.13	Wire with solvent-based enamel in wound components		N/A
	Electric strength test		—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		N/A
	Working voltage .....		N/A
	- Basic insulation not under stress .....		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- Supplementary, reinforced insulation .....		N/A
2.10.6	Construction of printed boards		N/A
2.10.6.1	Uncoated printed boards		N/A
2.10.6.2	Coated printed boards		N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs).....		N/A
2.10.7	Component external terminations		N/A
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts		N/A

<b>3</b>	<b>WIRING, CONNECTIONS AND SUPPLY</b>		<b>P</b>
<b>3.1</b>	<b>General</b>		<b>P</b>
3.1.1	Current rating and overcurrent protection	All internal wires are UL recognized wiring which is PVC insulated, rated VW-1, minimum 60 °C. Internal wiring gauge is suitable for current intended to be carried.	<b>P</b>
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges and heatsinks which could damage the insulation and cause hazard.	<b>P</b>
3.1.3	Securing of internal wiring	The wires are secured by soldering, solder pins and quick connect terminals so that a loosening of the terminal connection is unlikely.	<b>P</b>
3.1.4	Insulation of conductors		<b>N/A</b>



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Clause	Requirement + Test	Result - Remark	Verdict
3.1.5	Beads and ceramic insulators	Not used.	N/A
3.1.6	Screws for electrical contact pressure	Not used.	N/A
3.1.7	Insulating materials in electrical connections		N/A
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors	All terminations are fixed reliable.	P
	10 N pull test	Complied.	P
3.1.10	Sleeving on wiring	No sleeving used to provide supplementary insulation.	N/A

<b>3.2</b>	<b>Connection to a mains supply</b>		<b>N/A</b>
3.2.1	Means of connection	Class III equipment.	N/A
3.2.1.1	Connection to an a.c. mains supply		N/A
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter of cable and conduits (mm) .....		—
3.2.4	Appliance inlets		N/A
3.2.5	Power supply cords		N/A
3.2.5.1	AC power supply cords		N/A
	Type .....		—
	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG .....		—
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N) .....		—
	Longitudinal displacement (mm) .....		—
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards		N/A
	Diameter or minor dimension D (mm); test mass (g) .....		—
	Radius of curvature of cord (mm) .....		—
3.2.9	Supply wiring space		N/A

<b>3.3</b>	<b>Wiring terminals for connection of external conductors</b>		<b>N/A</b>
3.3.1	Wiring terminals	Class III equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm <sup>2</sup> )..... :		—
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type, nominal thread diameter (mm) ..... :		—
3.3.6	Wiring terminal design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A

<b>3.4</b>	<b>Disconnection from the mains supply</b>		<b>N/A</b>
3.4.1	General requirement		N/A
3.4.2	Disconnect devices		N/A
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized		N/A
3.4.5	Switches in flexible cords		N/A
3.4.6	Number of poles - single-phase and d.c. equipment		N/A
3.4.7	Number of poles - three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A

<b>3.5</b>	<b>Interconnection of equipment</b>		<b>P</b>
3.5.1	General requirements		P
3.5.2	Types of interconnection circuits ..... :	Interconnection circuits are SELV CIRCUITS.	P
3.5.3	ELV circuits as interconnection circuits		N/A
3.5.4	Data ports for additional equipment	See clause 2.5.	P

<b>4</b>	<b>PHYSICAL REQUIREMENTS</b>		<b>P</b>
<b>4.1</b>	<b>Stability</b>		<b>P</b>
	Angle of 10°		N/A
	Test force (N) ..... :	Equipment is not a floor standing unit.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

<b>4.2</b>	<b>Mechanical strength</b>		<b>P</b>
4.2.1	General	No energy hazards and no hazardous voltage inside the equipment.	<b>P</b>
	Rack-mounted equipment		<b>N/A</b>
4.2.2	Steady force test, 10 N		<b>N/A</b>
4.2.3	Steady force test, 30 N		<b>N/A</b>
4.2.4	Steady force test, 250 N		<b>N/A</b>
4.2.5	Impact test		<b>N/A</b>
	Fall test		<b>N/A</b>
	Swing test		<b>N/A</b>
4.2.6	Drop test; height (mm) .....		<b>N/A</b>
4.2.7	Stress relief test		<b>N/A</b>
4.2.8	Cathode ray tubes	No cathode ray tubes.	<b>N/A</b>
	Picture tube separately certified .....		<b>N/A</b>
4.2.9	High pressure lamps	No high pressure lamp.	<b>N/A</b>
4.2.10	Wall or ceiling mounted equipment; force (N) .....	50N applied for downward through the geometric centre. No damaged and no hazards.	<b>P</b>

<b>4.3</b>	<b>Design and construction</b>		<b>P</b>
4.3.1	Edges and corners	Edges and corners of the enclosure are rounded.	<b>P</b>
4.3.2	Handles and manual controls; force (N)..... :		<b>N/A</b>
4.3.3	Adjustable controls	No control device.	<b>N/A</b>
4.3.4	Securing of parts	No loosening of parts impairing creepage distances or clearances is likely to occur.	<b>P</b>
4.3.5	Connection by plugs and sockets		<b>N/A</b>
4.3.6	Direct plug-in equipment	Not direct plug-in type.	<b>N/A</b>
	Torque .....		—
	Compliance with the relevant mains plug standard .....		<b>N/A</b>
4.3.7	Heating elements in earthed equipment	No heating element.	<b>N/A</b>
4.3.8	Batteries		<b>P</b>
	- Overcharging of a rechargeable battery	(see appended table 5.3)	<b>P</b>

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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
4.3.9	Oil and grease	No oil or grease.	N/A
4.3.10	Dust, powders, liquids and gases	The equipment in intended use not considered to be exposed to dust, powers, liquids and gases.	N/A
4.3.11	Containers for liquids or gases	No container for liquid or gas.	N/A
4.3.12	Flammable liquids .....	No flammable liquid.	N/A
	Quantity of liquid (l) .....	Ditto.	N/A
	Flash point (°C) .....	Ditto.	N/A
4.3.13	Radiation		N/A
4.3.13.1	General		N/A
4.3.13.2	Ionizing radiation	The equipment does not generate ionizing radiation.	N/A
	Measured radiation (pA/kg) .....		—
	Measured high-voltage (kV) .....		—
	Measured focus voltage (kV) .....		—
	CRT markings .....		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	The equipment does not produce significant UV radiation.	N/A
	Part, property, retention after test, flammability classification .....		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....	The equipment does not produce significant UV radiation.	N/A
4.3.13.5	Lasers (including laser diodes) and LEDs		N/A
4.3.13.5.1	Lasers (including laser diodes)		N/A
	Laser class .....		—
4.3.13.5.2	Light emitting diodes (LEDs)		N/A
4.3.13.6	Other types .....		N/A
<b>4.4</b>	<b>Protection against hazardous moving parts</b>		<b>N/A</b>
4.4.1	General		N/A
4.4.2	Protection in operator access areas .....		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Household and home/office document/media shredders		N/A
4.4.3	Protection in restricted access locations .....		N/A
4.4.4	Protection in service access areas		N/A
4.4.5	Protection against moving fan blades		N/A
4.4.5.1	General		N/A
	Not considered to cause pain or injury. a).....:		N/A
	Is considered to cause pain, not injury. b) ....:		N/A
	Considered to cause injury. c) ....:		N/A
4.4.5.2	Protection for users		N/A
	Use of symbol or warning .....		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning .....		N/A

<b>4.5</b>	<b>Thermal requirements</b>		<b>P</b>
4.5.1	General		<b>P</b>
4.5.2	Temperature tests	(see appended table 4.5)	<b>P</b>
	Normal load condition per Annex L .....		—
4.5.3	Temperature limits for materials	(see appended table 4.5)	<b>P</b>
4.5.4	Touch temperature limits	(see appended table 4.5)	<b>P</b>
4.5.5	Resistance to abnormal heat .....		<b>N/A</b>

<b>4.6</b>	<b>Openings in enclosures</b>		<b>P</b>
4.6.1	Top and side openings	No openings.	<b>P</b>
	Dimensions (mm) .....		—
4.6.2	Bottoms of fire enclosures	No openings.	<b>N/A</b>
	Construction of the bottom, dimensions (mm) ....:		—
4.6.3	Doors or covers in fire enclosures		<b>N/A</b>
4.6.4	Openings in transportable equipment		<b>N/A</b>
4.6.4.1	Constructional design measures		<b>N/A</b>
	Dimensions (mm) .....		—
4.6.4.2	Evaluation measures for larger openings		<b>N/A</b>
4.6.4.3	Use of metallized parts		<b>N/A</b>
4.6.5	Adhesives for constructional purposes		<b>N/A</b>
	Conditioning temperature (°C), time (weeks) .....		—

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Clause	Requirement + Test	Result - Remark	Verdict
<b>4.7</b>	<b>Resistance to fire</b>		<b>P</b>
4.7.1	Reducing the risk of ignition and spread of flame	See below.	<b>P</b>
	Method 1, selection and application of components wiring and materials	Use of materials with the required flammability classes.	<b>P</b>
	Method 2, application of all of simulated fault condition tests	Method 2 no used.	<b>N/A</b>
4.7.2	Conditions for a fire enclosure	See below.	<b>P</b>
4.7.2.1	Parts requiring a fire enclosure	See 4.7.2.2.	<b>N/A</b>
4.7.2.2	Parts not requiring a fire enclosure	The appliance with: Supply of components in the secondary circuit by a limited power source. The components are mounted on PCB material of flammability rating V-1 min., the fire enclosure construction is not required.	<b>P</b>
4.7.3	Materials	See below.	<b>P</b>
4.7.3.1	General	PCB rated V-1 or better.	<b>P</b>
4.7.3.2	Materials for fire enclosures	See appended table 1.5.1 for enclosure material.	<b>P</b>
4.7.3.3	Materials for components and other parts outside fire enclosures		<b>N/A</b>
4.7.3.4	Materials for components and other parts inside fire enclosures		<b>N/A</b>
4.7.3.5	Materials for air filter assemblies	No air filter assemblies.	<b>N/A</b>
4.7.3.6	Materials used in high-voltage components	No high voltage component.	<b>N/A</b>

<b>5</b>	<b>ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS</b>		<b>P</b>
<b>5.1</b>	<b>Touch current and protective conductor current</b>		<b>N/A</b>
5.1.1	General	Class III equipment.	<b>N/A</b>
5.1.2	Configuration of equipment under test (EUT)		<b>N/A</b>
5.1.2.1	Single connection to an a.c. mains supply		<b>N/A</b>
5.1.2.2	Redundant multiple connections to an a.c. mains supply		<b>N/A</b>
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		<b>N/A</b>
5.1.3	Test circuit		<b>N/A</b>
5.1.4	Application of measuring instrument		<b>N/A</b>
5.1.5	Test procedure		<b>N/A</b>
5.1.6	Test measurements		<b>N/A</b>

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Clause	Requirement + Test	Result - Remark	Verdict
	Supply voltage (V) .....		—
	Measured touch current (mA) .....		—
	Max. allowed touch current (mA) .....		—
	Measured protective conductor current (mA) .....		—
	Max. allowed protective conductor current (mA) .....		—
5.1.7	Equipment with touch current exceeding 3,5 mA		N/A
5.1.7.1	General .....		N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N/A
	Supply voltage (V) .....		—
	Measured touch current (mA) .....		—
	Max. allowed touch current (mA) .....		—
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports .....		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

<b>5.2</b>	<b>Electric strength</b>		<b>N/A</b>
5.2.1	General	Class III equipment.	N/A
5.2.2	Test procedure		N/A

<b>5.3</b>	<b>Abnormal operating and fault conditions</b>		<b>P</b>
5.3.1	Protection against overload and abnormal operation		N/A
5.3.2	Motors		N/A
5.3.3	Transformers	No safety isolation transformer.	N/A
5.3.4	Functional insulation.....	Method c).	P
5.3.5	Electromechanical components	No electromechanical component.	N/A
5.3.6	Audio amplifiers in ITE .....		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.3.7	Simulation of faults	The unit intended to be supplied by SELV and considered no hazard generated within unit.	<b>P</b>
5.3.8	Unattended equipment	Neither thermostat or temperature limiter nor thermal cut-out provided.	<b>N/A</b>
5.3.9	Compliance criteria for abnormal operating and fault conditions		<b>N/A</b>
5.3.9.1	During the tests		<b>N/A</b>
5.3.9.2	After the tests		<b>N/A</b>

<b>6</b>	<b>CONNECTION TO TELECOMMUNICATION NETWORKS</b>		<b>N/A</b>
<b>6.1</b>	<b>Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment</b>		<b>N/A</b>
6.1.1	Protection from hazardous voltages		<b>N/A</b>
6.1.2.1	Requirements		<b>N/A</b>
	Supply voltage (V) .....		—
	Current in the test circuit (mA) .....		—
6.1.2.2	Exclusions .....		<b>N/A</b>

<b>6.2</b>	<b>Protection of equipment users from overvoltages on telecommunication networks</b>		<b>N/A</b>
6.2.1	Separation requirements		<b>N/A</b>
6.2.2	Electric strength test procedure		<b>N/A</b>
6.2.2.1	Impulse test		<b>N/A</b>
6.2.2.2	Steady-state test		<b>N/A</b>
6.2.2.3	Compliance criteria		<b>N/A</b>

<b>6.3</b>	<b>Protection of the telecommunication wiring system from overheating</b>		<b>N/A</b>
	Max. output current (A) .....		—
	Current limiting method .....		—

<b>7</b>	<b>CONNECTION TO CABLE DISTRIBUTION SYSTEMS</b>		<b>N/A</b>
<b>7.1</b>	<b>General</b>		<b>N/A</b>
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		<b>N/A</b>



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Clause	Requirement + Test	Result - Remark	Verdict
7.3	Protection of equipment users from overvoltages on the cable distribution system		<b>N/A</b>
7.4	Insulation between primary circuits and cable distribution systems		<b>N/A</b>
7.4.1	General		<b>N/A</b>
7.4.2	Voltage surge test		<b>N/A</b>
7.4.3	Impulse test		<b>N/A</b>

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Clause	Requirement + Test	Result - Remark	Verdict
<b>A</b>	<b>ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE</b>		<b>N/A</b>
<b>A.1</b>	<b>Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)</b>		<b>N/A</b>
A.1.1	Samples.....:		<b>N/A</b>
	Wall thickness (mm) .....		—
A.1.2	Conditioning of samples; temperature (°C) .....		<b>N/A</b>
A.1.3	Mounting of samples .....		<b>N/A</b>
A.1.4	Test flame (see IEC 60695-11-3)		<b>N/A</b>
	Flame A, B, C or D .....		—
A.1.5	Test procedure		<b>N/A</b>
A.1.6	Compliance criteria		<b>N/A</b>
	Sample 1 burning time (s) .....		—
	Sample 2 burning time (s) .....		—
	Sample 3 burning time (s) .....		—
<b>A.2</b>	<b>Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)</b>		<b>N/A</b>
A.2.1	Samples, material.....:		<b>N/A</b>
	Wall thickness (mm) .....		—
A.2.2	Conditioning of samples; temperature (°C) .....		<b>N/A</b>
A.2.3	Mounting of samples .....		<b>N/A</b>
A.2.4	Test flame (see IEC 60695-11-4)		<b>N/A</b>
	Flame A, B or C .....		—
A.2.5	Test procedure		<b>N/A</b>
A.2.6	Compliance criteria		<b>N/A</b>
	Sample 1 burning time (s) .....		—
	Sample 2 burning time (s) .....		—
	Sample 3 burning time (s) .....		—
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		<b>N/A</b>
	Sample 1 burning time (s) .....		—
	Sample 2 burning time (s) .....		—
	Sample 3 burning time (s) .....		—
<b>A.3</b>	<b>Hot flaming oil test (see 4.6.2)</b>		<b>N/A</b>
A.3.1	Mounting of samples		<b>N/A</b>
A.3.2	Test procedure		<b>N/A</b>

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Clause	Requirement + Test	Result - Remark	Verdict
A.3.3	Compliance criterion		N/A

<b>B</b>	<b>ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)</b>		<b>N/A</b>
<b>B.1</b>	<b>General requirements</b>		<b>N/A</b>
	Position .....		—
	Manufacturer .....		—
	Type .....		—
	Rated values .....		—
<b>B.2</b>	<b>Test conditions</b>		<b>N/A</b>
<b>B.3</b>	<b>Maximum temperatures</b>		<b>N/A</b>
<b>B.4</b>	<b>Running overload test</b>		<b>N/A</b>
<b>B.5</b>	<b>Locked-rotor overload test</b>		<b>N/A</b>
	Test duration (days) .....		—
	Electric strength test: test voltage (V) .....		—
<b>B.6</b>	<b>Running overload test for d.c. motors in secondary circuits</b>		<b>N/A</b>
B.6.1	General		<b>N/A</b>
B.6.2	Test procedure		<b>N/A</b>
B.6.3	Alternative test procedure		<b>N/A</b>
B.6.4	Electric strength test; test voltage (V) .....		<b>N/A</b>
<b>B.7</b>	<b>Locked-rotor overload test for d.c. motors in secondary circuits</b>		<b>N/A</b>
B.7.1	General		<b>N/A</b>
B.7.2	Test procedure		<b>N/A</b>
B.7.3	Alternative test procedure		<b>N/A</b>
B.7.4	Electric strength test; test voltage (V) .....		<b>N/A</b>
<b>B.8</b>	<b>Test for motors with capacitors</b>		<b>N/A</b>
<b>B.9</b>	<b>Test for three-phase motors</b>		<b>N/A</b>
<b>B.10</b>	<b>Test for series motors</b>		<b>N/A</b>
	Operating voltage (V) .....		—

<b>C</b>	<b>ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)</b>		<b>N/A</b>
	Position .....		—
	Manufacturer .....		—
	Type .....		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Rated values .....		—
	Method of protection.....		—
<b>C.1</b>	<b>Overload test</b>		<b>N/A</b>
<b>C.2</b>	<b>Insulation</b>		<b>N/A</b>
	Protection from displacement of windings.....		<b>N/A</b>

<b>D</b>	<b>ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)</b>		<b>N/A</b>
<b>D.1</b>	<b>Measuring instrument</b>		<b>N/A</b>
<b>D.2</b>	<b>Alternative measuring instrument</b>		<b>N/A</b>

<b>E</b>	<b>ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)</b>		<b>N/A</b>
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<b>F</b>	<b>ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)</b>		<b>N/A</b>
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<b>G</b>	<b>ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES</b>		<b>N/A</b>
<b>G.1</b>	<b>Clearances</b>		<b>N/A</b>
G.1.1	General		<b>N/A</b>
G.1.2	Summary of the procedure for determining minimum clearances		<b>N/A</b>
<b>G.2</b>	<b>Determination of mains transient voltage (V)</b>		<b>N/A</b>
G.2.1	AC mains supply .....		<b>N/A</b>
G.2.2	Earthed d.c. mains supplies .....		<b>N/A</b>
G.2.3	Unearthed d.c. mains supplies .....		<b>N/A</b>
G.2.4	Battery operation .....		<b>N/A</b>
<b>G.3</b>	<b>Determination of telecommunication network transient voltage (V) .....</b>		<b>N/A</b>
<b>G.4</b>	<b>Determination of required withstand voltage (V)</b>		<b>N/A</b>
G.4.1	Mains transients and internal repetitive peaks .....		<b>N/A</b>
G.4.2	Transients from telecommunication networks .....		<b>N/A</b>
G.4.3	Combination of transients		<b>N/A</b>
G.4.4	Transients from cable distribution systems		<b>N/A</b>
<b>G.5</b>	<b>Measurement of transient voltages (V)</b>		<b>N/A</b>
	a) Transients from a mains supply		<b>N/A</b>
	For an a.c. mains supply		<b>N/A</b>

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Clause	Requirement + Test	Result - Remark	Verdict
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
<b>G.6</b>	<b>Determination of minimum clearances .....</b> :		<b>N/A</b>

<b>H</b>	<b>ANNEX H, IONIZING RADIATION (see 4.3.13)</b>		<b>N/A</b>
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<b>J</b>	<b>ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)</b>		<b>N/A</b>
	Metal(s) used .....		—

<b>K</b>	<b>ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)</b>		<b>N/A</b>
K.1	Making and breaking capacity		<b>N/A</b>
K.2	Thermostat reliability; operating voltage (V) .....		<b>N/A</b>
K.3	Thermostat endurance test; operating voltage (V) :		<b>N/A</b>
K.4	Temperature limiter endurance; operating voltage (V) .....		<b>N/A</b>
K.5	Thermal cut-out reliability		<b>N/A</b>
K.6	Stability of operation		<b>N/A</b>

<b>L</b>	<b>ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)</b>		<b>P</b>
L.1	Typewriters		<b>N/A</b>
L.2	Adding machines and cash registers		<b>N/A</b>
L.3	Erasers		<b>N/A</b>
L.4	Pencil sharpeners		<b>N/A</b>
L.5	Duplicators and copy machines		<b>N/A</b>
L.6	Motor-operated files		<b>N/A</b>
L.7	Other business equipment		<b>P</b>

<b>M</b>	<b>ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)</b>		<b>N/A</b>
M.1	Introduction		<b>N/A</b>
M.2	Method A		<b>N/A</b>
M.3	Method B		<b>N/A</b>
M.3.1	Ringling signal		<b>N/A</b>
M.3.1.1	Frequency (Hz) .....		—
M.3.1.2	Voltage (V) .....		—
M.3.1.3	Cadence; time (s), voltage (V) .....		—

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Clause	Requirement + Test	Result - Remark	Verdict
M.3.1.4	Single fault current (mA) .....		—
M.3.2	Tripping device and monitoring voltage .....		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V) .....		N/A

<b>N</b>	<b>ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)</b>		<b>N/A</b>
N.1	ITU-T impulse test generators		<b>N/A</b>
N.2	IEC 60065 impulse test generator		<b>N/A</b>

<b>P</b>	<b>ANNEX P, NORMATIVE REFERENCES</b>		—
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<b>Q</b>	<b>ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)</b>		<b>N/A</b>
	- Preferred climatic categories .....		<b>N/A</b>
	- Maximum continuous voltage .....		<b>N/A</b>
	- Combination pulse current .....		<b>N/A</b>
	Body of the VDR Test according to IEC60695-11-5.....		<b>N/A</b>
	Body of the VDR. Flammability class of material ( min V-1).....		<b>N/A</b>

<b>R</b>	<b>ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES</b>		<b>N/A</b>
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		<b>N/A</b>
R.2	Reduced clearances (see 2.10.3)		<b>N/A</b>

<b>S</b>	<b>ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)</b>		<b>N/A</b>
S.1	Test equipment		<b>N/A</b>
S.2	Test procedure		<b>N/A</b>
S.3	Examples of waveforms during impulse testing		<b>N/A</b>

<b>T</b>	<b>ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)</b>		<b>P</b>
		IP67. (see separate report)	—

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Clause	Requirement + Test	Result - Remark	Verdict
<b>U</b>	<b>ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)</b>		<b>N/A</b>
			—

<b>V</b>	<b>ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)</b>		<b>N/A</b>
V.1	Introduction		<b>N/A</b>
V.2	TN power distribution systems		<b>N/A</b>

<b>W</b>	<b>ANNEX W, SUMMATION OF TOUCH CURRENTS</b>		<b>N/A</b>
W.1	Touch current from electronic circuits		<b>N/A</b>
W.1.1	Floating circuits		<b>N/A</b>
W.1.2	Earthed circuits		<b>N/A</b>
W.2	Interconnection of several equipments		<b>N/A</b>
W.2.1	Isolation		<b>N/A</b>
W.2.2	Common return, isolated from earth		<b>N/A</b>
W.2.3	Common return, connected to protective earth		<b>N/A</b>

<b>X</b>	<b>ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)</b>		<b>N/A</b>
X.1	Determination of maximum input current		<b>N/A</b>
X.2	Overload test procedure		<b>N/A</b>

<b>Y</b>	<b>ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)</b>		<b>N/A</b>
Y.1	Test apparatus .....		<b>N/A</b>
Y.2	Mounting of test samples .....		<b>N/A</b>
Y.3	Carbon-arc light-exposure apparatus .....		<b>N/A</b>
Y.4	Xenon-arc light exposure apparatus .....		<b>N/A</b>

<b>Z</b>	<b>ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)</b>		<b>N/A</b>
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<b>AA</b>	<b>ANNEX AA, MANDREL TEST (see 2.10.5.8)</b>		<b>N/A</b>
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<b>BB</b>	<b>ANNEX BB, CHANGES IN THE SECOND EDITION</b>		—
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<b>CC</b>	<b>ANNEX CC, Evaluation of integrated circuit (IC) current limiters</b>		<b>N/A</b>
CC.1	General		<b>N/A</b>

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Clause	Requirement + Test	Result - Remark	Verdict
CC.2	Test program 1.....:		N/A
CC.3	Test program 2.....:		N/A
CC.4	Test program 3.....:		N/A
CC.5	Compliance.....:		N/A

<b>DD</b>	<b>ANNEX DD, Requirements for the mounting means of rack-mounted equipment</b>		<b>N/A</b>
DD.1	General		N/A
DD.2	Mechanical strength test, variable N.....:		N/A
DD.3	Mechanical strength test, 250N, including end stops.....:		N/A
DD.4	Compliance.....:		N/A

<b>EE</b>	<b>ANNEX EE, Household and home/office document/media shredders</b>		<b>N/A</b>
EE.1	General		N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols.....:		N/A
	Information of user instructions, maintenance and/or servicing instructions.....:		N/A
EE.3	Inadvertent reactivation test.....:		N/A
EE.4	Disconnection of power to hazardous moving parts:		N/A
	Use of markings or symbols.....:		N/A
EE.5	Protection against hazardous moving parts		N/A
	Test with test finger (Figure 2A) .....:		N/A
	Test with wedge probe (Figure EE1 and EE2) .....:		N/A



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Clause	Requirement + Test			Result - Remark	Verdict
<b>1.5.1</b>	<b>TABLE: List of critical components</b>				<b>P</b>
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity <sup>1)</sup>
Enclosure	Interchangeable	Interchangeable	Metal, min 1.5 mm thickness.	--	--
Plastic enclosure	Interchangeable	Interchangeable	HB or better, min 1.5 mm thickness	UL 94	UL
PWB	Interchangeable	Interchangeable	V-1 or better, 105 °C	UL 796	UL
RTC Battery (BAT1)	Seiko Instruments Inc Micro-Energy Div	MS412FE	Rated 3.0 V, max charging voltage/current 3.4 Vdc/300 mA	UL 1642	UL
Switching Power Adapter (Optional)	Interchangeable	Interchangeable	O/P: 5Vdc, 3.0A min., LPS, 40°C	IEC 60950-1: 2005+A1, EN 60950-1: 2006+A11+A1+A12	CB by TÜV, TÜV
Supplementary information:					
1) An asterisk indicates a mark that assures the agreed level of surveillance.					

<b>1.5.1</b>	<b>TABLE: Opto Electronic Devices</b>	<b>N/A</b>
Manufacturer .....		
Type .....		
Separately tested .....		
Bridging insulation .....		
External creepage distance .....		
Internal creepage distance .....		
Distance through insulation .....		
Tested under the following conditions .....		
Input .....		
Output .....		
supplementary information		

IEC/EN 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
<b>1.6.2</b>	<b>TABLE: Electrical data (in normal conditions)</b>					<b>P</b>
U (V)	I (A)	I <sub>rated</sub> (A)	P (W)	Fuse #	I <sub>fuse</sub> (A)	Condition/status
Model: GV-MFD1501-1F						
5Vdc	0.89	3.0	4.45	--	--	Maximum normal load
48Vdc (PoE)	0.126	0.35	6.048	--	--	Maximum normal load
Model: GV-MFD2401-1F						
5Vdc	1.01	3.0	5.05	--	--	Maximum normal load
48Vdc (PoE)	0.141	0.35	6.768	--	--	Maximum normal load
Model: GV-MFD2501-1F						
5Vdc	0.97	3.0	4.85	--	--	Maximum normal load
48Vdc (PoE)	0.136	0.35	6.528	--	--	Maximum normal load
Model: GV-MFD3401-1F						
5Vdc	1.08	3.0	5.4	--	--	Maximum normal load
48Vdc (PoE)	0.146	0.35	7.008	--	--	Maximum normal load
Model: GV-MFD5301-1F						
5Vdc	0.93	3.0	4.65	--	--	Maximum normal load
48Vdc (PoE)	0.126	0.35	6.048	--	--	Maximum normal load
Supplementary information:						
Maximum normal load: Considered as a PC peripheral and operation continuously.						

<b>2.1.1.5 c) 1)</b>	<b>TABLE: max. V, A, VA test</b>				<b>N/A</b>
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
supplementary information:					

<b>2.1.1.5 c) 2)</b>	<b>TABLE: stored energy</b>			<b>N/A</b>
Capacitance C (μF)	Voltage U (V)		Energy E (J)	

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
supplementary information:			

2.2	TABLE: evaluation of voltage limiting components in SELV circuits			N/A
Component (measured between)		max. voltage (V) (normal operation)		Voltage Limiting Components
		V peak	V d.c.	
Fault test performed on voltage limiting components		Voltage measured (V) in SELV circuits (V peak or V d.c.)		
supplementary information:				

2.5	TABLE: Limited power sources					P
Circuit output tested: see below						
Note: Measured Uoc (V) with all load circuits disconnected:						
Components	Sample No.	Uoc (V)	I <sub>sc</sub> (A)		VA	
			Meas.	Limit	Meas.	Limit
Normal condition, LAN (J8), Pin 1-8	--	0	--	8	--	100
Normal condition, J7, Pin 1	--	4.94	1.5	8	4.5	100
Single fault condition (F1 short), J7, Pin 1	--	4.94	3.07	8	11.052	100
Normal condition, J7, Pin 2-6	--	0	--	8	--	100
supplementary information:						
Input voltage: 48Vdc or 5Vdc						

2.10.2	Table: working voltage measurement			N/A
Location		RMS voltage (V)	Peak voltage (V)	Comments

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
<b>2.10.2</b>	<b>Table: working voltage measurement</b>		<b>N/A</b>
supplementary information:			

<b>2.10.3 and 2.10.4</b>	<b>TABLE: Clearance and creepage distance measurements</b>						<b>N/A</b>
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
Functional:							
Basic/supplementary:							
Reinforced:							
Supplementary information:							

<b>2.10.5</b>	<b>TABLE: Distance through insulation measurements</b>						<b>N/A</b>
Distance through insulation (DTI) at/of:	U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)		
Supplementary information:							

4.3.8	TABLE: Batteries								N/A	
The tests of 4.3.8 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										

IEC/EN 60950-1									
Clause	Requirement + Test					Result - Remark			Verdict
Max. current during fault condition									
Supplementary information:									
Test results:									Verdict
- 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:									

<b>4.3.8</b>	<b>TABLE: Batteries</b>	<b>N/A</b>
Battery category .....: Manufacturer .....: Type / model .....: Voltage .....: Capacity .....: Tested and Certified by (incl. Ref. No.) .....: Circuit protection diagram:		

**MARKINGS AND INSTRUCTIONS (1.7.12, 1.7.15)**

Remark: Correct subclause reference for IEC 60950-1:2005/A1 is 1.7.2.1, 1.7.13.

Location of replaceable battery	
Language(s) .....	
Close to the battery .....	
In the servicing instructions .....	
In the operating instructions .....	

<b>4.5</b>	<b>TABLE: Thermal requirements</b>	<b>P</b>
	Supply voltage (V) ..... : 5Vdc (wall mount)    5Vdc (ceiling mount)    PoE 48Vdc (wall mount)	—
	Ambient T <sub>min</sub> (°C) ..... :    --    --    --	—
	Ambient T <sub>max</sub> (°C) ..... :    --    --    --	—
Maximum measured temperature T of part/at::		Allowed T <sub>max</sub> (°C)

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Clause	Requirement + Test			Result - Remark			Verdict
01. T60 Coil		66.0		59.8		69.0	105
02. PWB near U2		73.2		65.8		74.1	105
03. Body of BAT1		81.7		74.9		69.7	100
04. Plastic Inside enclosure near Top		50.1		48.1		45.3	95
05. External metal enclosure near U2		66.3		58.1		59.5	70
06. Ambient		40.0		40.0		41.4	--
Actual ambient		24.1		24.3		41.4	--
Supplementary information:							
1. The temperatures were measured under the worst case of normal mode defined in sub-clause 1.2.2.1 and as described in sub-clause 1.6.2 at voltages as described above. 2. With a specified ambient temperature of + 40 °C. Therefore the maximum temperatures measured are recalculated as follows: $T + (40 - T_{amb})$ , where T is the maximum temperature measured during test and Tamb is the ambient temperature during the test.							
Temperature T of winding:	$t_1$ (°C)	$R_1$ (Ω)	$t_2$ (°C)	$R_2$ (Ω)	T (°C)	Allowed $T_{max}$ (°C)	Insulation class
Supplementary information:							

4.5.5	TABLE: Ball pressure test of thermoplastic parts			N/A
	Allowed impression diameter (mm) .....	≤ 2 mm		—
Part		Test temperature (°C)	Impression diameter (mm)	
Supplementary information:				

4.6.1, 4.6.2	TABLE: Enclosure openings		P
Location		Size (mm)	Comments
--		--	--
Supplementary information: No openings.			

4.7	TABLE: Resistance to fire					N/A
Part		Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence
Supplementary information:						

<b>5.1</b>	<b>TABLE: touch current measurement</b>					<b>N/A</b>
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IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
Measured between:	Measured (mA)	Limit (mA)	Comments/conditions
supplementary information:			
Input voltage:			
Input frequency:			
Overall capacity:			

<b>5.2</b>	<b>TABLE: Electric strength tests, impulse tests and voltage surge tests</b>			<b>N/A</b>
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No// Insulation resistor
supplementary information				

<b>5.3</b>	<b>TABLE: Fault condition tests</b>					<b>P</b>
	Ambient temperature (°C) .....		See below		—	
	Power source for EUT: Manufacturer, model/type, output rating .....		See appended table 1.5.1 for details		—	
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
RTC battery	Normal	PoE 48 Vdc	--	--	--	Charging current = 0.002 mA, no hazards.
RTC battery	R244 short	PoE 48 Vdc	--	--	--	Charging current = 0.2 mA, no hazards.
Supplementary information:						

<b>C.2</b>	<b>TABLE: transformers</b>	<b>N/A</b>
Transformer		



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

**List of test equipment used:**

A completed list of used test equipment shall be provided in the Test Reports when a Manufacturer Testing Laboratory according to TMP/CTF stage 1 or WMT/CTF stage 2 procedure has been used.

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<p align="center"><b>ATTACHMENT TO TEST REPORT IEC 60950-1</b>  <b>EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES</b>  Information technology equipment – Safety –  Part 1: General requirements</p>			
<b>Differences according to</b> ..... : EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013			
<b>Attachment Form No.</b> ..... : EU_GD_IEC60950_1F			
<b>Attachment Originator</b> ..... : SGS Fimko Ltd			
<b>Master Attachment</b> ..... : Dated 2014-02			
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<b>EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013 – CENELEC COMMON MODIFICATIONS</b>
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<b>IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
	Clauses, subclauses, notes, tables and figures which are additional to those in IEC60950-1 and it's amendmets are prefixed "Z"		P
Contents  (A2:2013)	Add the following annexes: Annex ZA (normative)      Normative references to international publications with their corresponding European publications Annex ZB (normative)      Special national conditions Annex ZD (informative)    IEC and CENELEC code designations for flexible cords		P
General	Delete all the "country" notes in the reference document (IEC 60950-1:2005) according to the following list: 1.4.8 Note 2      1.5.1 Note 2 & 3      1.5.7.1 Note 1.5.8 Note 2      1.5.9.4 Note      1.7.2.1 Note 4, 5 & 6 2.2.3 Note      2.2.4 Note      2.3.2 Note 2.3.2.1 Note 2      2.3.4 Note 2      2.6.3.3 Note 2 & 3 2.7.1 Note      2.10.3.2 Note 2      2.10.5.13 Note 3 3.2.1.1 Note      3.2.4 Note 3.      2.5.1 Note 2 4.3.6 Note 1 & 2      4.7 Note 4      4.7.2.2 Note 4.7.3.1 Note 2      5.1.7.1 Note 3 & 4      5.3.7 Note 1 6 Note 2 & 5      6.1.2.1 Note 2      6.1.2.2 Note 6.2.2 Note      6.2.2.1 Note 2      6.2.2.2 Note 7.1 Note 3      7.2 Note      7.3 Note 1 & 2 G.2.1 Note 2      Annex H Note 2		P
General (A1:2010)	Delete all the "country" notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list: 1.5.7.1 Note      6.1.2.1 Note 2 6.2.2.1 Note 2      EE.3 Note		P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
<b>IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
General (A2:2013)	Delete all the "country" notes in the reference document (IEC 60950-1:2005/A2:2013) according to the following list: 2.7.1 Note * 2.10.3.1 Note 2 6.2.2. Note * Note of secretary: Text of Common Modification remains unchanged.		P
1.1.1 (A1:2010)	<b>Replace</b> the text of NOTE 3 by the following. NOTE 3 The requirements of EN 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment. For television sets EN 60065 applies.		P
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for "one package equipment", and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.	Not a portable sound system.	N/A
(A12:2011)	In EN 60950-1:2006/A12:2011 Delete the addition of 1.3.Z1 / EN 60950-1:2006 Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010	Delete.	N/A
1.5.1  (Added info*)	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC. New Directive 2011/65/11 *	Added.	P
1.7.2.1 (A1:2010)	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.	Not a portable sound system.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict


IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1 (A12.2011)	In EN 60950-1:2006/A12:2011 Delete NOTE Z1 and the addition for Portable Sound System. Add the following clause and annex to the existing standard and amendments.	Delete.	N/A
	<b>Zx Protection against excessive sound pressure from personal music players</b>		N/A
	<p><b>Zx.1 General</b> This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players.</p> <p>A personal music player is a portable equipment for personal use, that:</p> <ul style="list-style-type: none"> <li>– is designed to allow the user to listen to recorded or broadcast sound or video; and</li> <li>– primarily uses headphones or earphones that can be worn in or on or around the ears; and</li> <li>– allows the user to walk around while in use.</li> </ul> <p>NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment.</p> <p>A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause.</p> <p>The requirements in this sub-clause are valid for music or video mode only.</p> <p>The requirements do not apply:</p> <ul style="list-style-type: none"> <li>– while the personal music player is connected to an external amplifier; or</li> <li>– while the headphones or earphones are not used.</li> </ul> <p>NOTE 2 An external amplifier is an amplifier which is not part of the personal music player or the listening device, but which is intended to play the music as a standalone music player.</p> <p>The requirements do not apply to:</p> <ul style="list-style-type: none"> <li>– hearing aid equipment and professional equipment;</li> </ul> <p>NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.</p>		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>– analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015.</p> <p>NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies.</p> <p>For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.</p>		
	<p><b>Zx.2 Equipment requirements</b></p> <p>No safety provision is required for equipment that complies with the following:</p> <ul style="list-style-type: none"> <li>– equipment provided as a package (personal music player with its listening device), where the acoustic output <math>L_{Aeq,T}</math> is <math>\leq 85</math> dBA measured while playing the fixed “programme simulation noise” as described in EN 50332-1; and</li> <li>– a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is <math>\leq 27</math> mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” as described in EN 50332-1.</li> </ul> <p>NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level <math>L_{Aeq,T}</math> is meant. See also Zx.5 and Annex Zx.</p> <p>All other equipment shall:</p> <ul style="list-style-type: none"> <li>a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and</li> <li>b) have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and</li> </ul>		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>c) provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output exceeding those mentioned above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and</p> <p>NOTE 2 Examples of means include visual or audible signals. Action from the user is always required.</p> <p>NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off.</p> <p>d) have a warning as specified in Zx.3; and</p> <p>e) not exceed the following:</p> <ol style="list-style-type: none"> <li>1) equipment provided as a package (player with its listening device), the acoustic output shall be <math>\leq 100</math> dBA measured while playing the fixed "programme simulation noise" described in EN 50332-1; and</li> <li>2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be <math>\leq 150</math> mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" described in EN 50332-1.</li> </ol> <p>For music where the average sound pressure (long term <math>L_{Aeq,T}</math>) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song.</p> <p>NOTE 4 Classical music typically has an average sound pressure (long term <math>L_{Aeq,T}</math>) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA.</p> <p>For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA.</p>		

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p><b>Zx.3 Warning</b></p> <p>The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following:</p> <ul style="list-style-type: none"> <li>– the symbol of Figure 1 with a minimum height of 5 mm; and</li> <li>– the following wording, or similar:</li> </ul> <p>“To prevent possible hearing damage, do not listen at high volume levels for long periods.”</p>  <p><b>Figure 1 – Warning label (IEC 60417-6044)</b></p> <p>Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.</p>		N/A
	<b>Zx.4 Requirements for listening devices (headphones and earphones)</b>		N/A
	<p><b>Zx.4.1 Wired listening devices with analogue input</b></p> <p>With 94 dBA sound pressure output <math>L_{Aeq,T}</math>, the input voltage of the fixed “programme simulation noise” described in EN 50332-2 shall be <math>\geq 75</math> mV.</p> <p>This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control).</p> <p>NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.</p>		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p><b>Zx.4.2 Wired listening devices with digital input</b>            With any playing device playing the fixed “programme simulation noise” described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output <math>L_{Aeq,T}</math> of the listening device shall be <math>\leq 100</math> dBA.</p> <p>This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.).</p> <p>NOTE An example of a wired listening device with digital input is a USB headphone.</p>		N/A
	<p><b>Zx.4.3 Wireless listening devices</b>            In wireless mode:</p> <ul style="list-style-type: none"> <li>– with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and</li> <li>– respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and</li> <li>– with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output <math>L_{Aeq,T}</math> of the listening device shall be <math>\leq 100</math> dBA.</li> </ul> <p>NOTE An example of a wireless listening device is a Bluetooth headphone.</p>		N/A
	<p><b>Zx.5 Measurement methods</b>            Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s.</p> <p>NOTE Test method for wireless equipment provided without listening device should be defined.</p>		N/A



IEC60950_1F - ATTACHMENT									
Clause	Requirement + Test	Result - Remark	Verdict						
IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)									
Clause	Requirement + Test	Result - Remark	Verdict						
2.7.1	<p>Replace the subclause as follows:</p> <p>Basic requirements</p> <p>To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, 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 5.3 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>	Replaced.	N/A						
	<p>c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, 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 PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.</p>		N/A						
2.7.2	This subclause has been declared 'void'.	Declared.	N/A						
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.	Delete.	N/A						
3.2.5.1	<p>Replace "60245 IEC 53" by "H05 RR-F";</p> <p>"60227 IEC 52" by "H03 VV-F or H03 VVH2-F";</p> <p>"60227 IEC 53" by "H05 VV-F or H05 VVH2-F2".</p> <p>In Table 3B, replace the first four lines by the following:</p> <table><tr><td>Up to and including 6  </td><td>0,75 <sup>a)</sup>  </td></tr><tr><td>Over 6 up to and including 10  (0,75) <sup>b)</sup></td><td>1,0  </td></tr><tr><td>Over 10 up to and including 16  (1,0) <sup>c)</sup></td><td>1,5  </td></tr></table> <p>In the conditions applicable to Table 3B delete the words "in some countries" in condition <sup>a)</sup>.</p> <p>In NOTE 1, applicable to Table 3B, delete the second sentence.</p>	Up to and including 6	0,75 <sup>a)</sup>	Over 6 up to and including 10  (0,75) <sup>b)</sup>	1,0	Over 10 up to and including 16  (1,0) <sup>c)</sup>	1,5	Replaced.	N/A
Up to and including 6	0,75 <sup>a)</sup>								
Over 6 up to and including 10  (0,75) <sup>b)</sup>	1,0								
Over 10 up to and including 16  (1,0) <sup>c)</sup>	1,5								

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Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.5.1 (A2:2013)	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD		
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following:  Over 10 up to and including 16   1,5 to 2,5   1,5 to 4  Delete the fifth line: conductor sizes for 13 to 16 A	Delete.	N/A
4.3.13.6 (A1:2010)	Replace the existing NOTE by the following: NOTE Z1 Attention is drawn to:  1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz, and  2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation).	Replaced.	N/A
	Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A
Annex H	Replace the last paragraph of this annex by:  At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see NOTE). Account is taken of the background level.  Replace the notes as follows: NOTE These values appear in Directive 96/29/Euratom. Delete NOTE 2.	Replaced.	N/A
Bibliography	Additional EN standards.	Added.	—

<b>ZA</b>	<b>NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS</b>	—
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ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.2.4.1	In <b>Denmark</b> , certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.	No power supply cord provided.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
1.2.13.14 (A11:2009)	In <b>Norway</b> and <b>Sweden</b> , for requirements see 1.7.2.1 and 7.3 of this annex.	The equipment is not connected to the cable distribution systems.	N/A
1.5.7.1 (A11:2009)	In <b>Finland, Norway</b> and <b>Sweden</b> , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.	No such resistors.	N/A
1.5.8	In <b>Norway</b> , due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A
1.5.9.4	In <b>Finland, Norway</b> and <b>Sweden</b> , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1	<p>In <b>Finland, Norway</b> and <b>Sweden</b>, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet.</p> <p>The marking text in the applicable countries shall be as follows:</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> <p>In <b>Norway</b> and <b>Sweden</b>, the screen of the cable 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 need 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 e.g. a retailer.</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:</p> <p>"Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)."</p>	Shall be evaluated during the national approval.	N/A
1.7.2.1 (A11:2009)			

ZB ANNEX (normative)			
SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>NOTE In Norway, due to regulation for installations of cable distribution systems, 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):</p> <p>“Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkøpet utstyr – og er tilkøpet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel- TV nettet.”</p> <p>Translation to Swedish:</p> <p>”Utrustning 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 utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”</p>		
1.7.2.1 (A2:2013)	<p>In <b>Denmark</b>, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet.</p> <p>The marking text in <b>Denmark</b> shall be as follows: In <b>Denmark</b>: “Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.”</p>		N/A
1.7.5  1.7.5 (A11:2009)	<p>In <b>Denmark</b>, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.</p> <p>For <b>CLASS II EQUIPMENT</b> the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.</p>	No socket-outlets provided.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5 (A2:2013)	<p>In <b>Denmark</b>, socket-outlets for providing power to other equipment shall be in accordance with the DS 60884-2-D1:2011.</p> <p>For class I equipment the following Standard Sheets are applicable: DK 1-3a, DK 1-1c, DK 1-1d, DK 1-5a or DK 1-7a, with the exception for STATIONARY EQUIPMENT where the socket-outlets shall be in accordance with Standard Sheet DK 1-1b, DK 1-1c, DK 1-1d or DK 1-5a.</p> <p>Socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance with DS 60884-2-D1 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with by DS 60884-2-D1 Standard Sheet DKA 1-3a or DKA 1-3b.</p> <p>Justification the Heavy Current Regulations, 6c</p>		N/A
2.2.4	In <b>Norway</b> , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.2	In <b>Finland, Norway and Sweden</b> there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.4	In <b>Norway</b> , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.6.3.3	In the <b>United Kingdom</b> , the current rating of the circuit shall be taken as 13 A, not 16 A.		N/A
2.7.1	In the <b>United Kingdom</b> , to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.	The equipment is not direct plug-in equipment.	N/A
2.10.5.13	In <b>Finland, Norway and Sweden</b> , there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.	.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	<p>In <b>Switzerland</b>, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets:</p> <p>SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A</p> <p>SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A</p> <p>SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A</p> <p>In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998:</p> <p>SEV 5932-2.1998: Plug Type 25 , 3L+N+PE 230/400 V, 16 A</p> <p>SEV 5933-2.1998: Plug Type 21, L+N, 250 V, 16A</p> <p>SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V, 16 A</p>	No power supply cord provided.	N/A
3.2.1.1	<p>In <b>Denmark</b>, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1.</p> <p>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.</p> <p>If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.</p>	No power supply cord provided.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1 (A2:2013)	<p>In <b>Denmark</b>, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1.</p> <p>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.</p> <p>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.</p> <p>Justification the Heavy Current Regulations, 6c</p>		N/A
3.2.1.1	<p>In <b>Spain</b>, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994.</p> <p>Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993.</p> <p>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 UNE 20315:1994.</p> <p>If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.</p>	No power supply cord provided.	N/A
3.2.1.1	<p>In the <b>United Kingdom</b>, apparatus 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 and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations.</p> <p>NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.</p>	No power supply cord provided.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict

<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In <b>Ireland</b> , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.	No power supply cord provided.	N/A
3.2.4	In <b>Switzerland</b> , for requirements see 3.2.1.1 of this annex.	Shall be evaluated during the national approval.	N/A
3.2.5.1	In the <b>United Kingdom</b> , a power supply cord with conductor of 1,25 mm <sup>2</sup> is allowed for equipment with a rated current over 10 A and up to and including 13 A.	No power supply cord provided.	N/A
3.3.4	In the <b>United Kingdom</b> , the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm <sup>2</sup> to 1,5 mm <sup>2</sup> nominal cross-sectional area.	No power supply cord provided.	N/A
4.3.6	In the <b>United Kingdom</b> , the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and 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.	The equipment is not direct plug-in equipment.	N/A
4.3.6	In <b>Ireland</b> , DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.	The equipment is not direct plug-in equipment.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	<p>In <b>Finland, Norway</b> and <b>Sweden</b> TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment:</p> <ul style="list-style-type: none"> <li>• STATIONARY PLUGGABLE EQUIPMENT TYPE A that <ul style="list-style-type: none"> <li>is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and</li> <li>has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and</li> <li>is provided with instructions for the installation of that conductor by a SERVICE PERSON;</li> </ul> </li> <li>• STATIONARY PLUGGABLE EQUIPMENT TYPE B;</li> <li>• STATIONARY PERMANENTLY CONNECTED EQUIPMENT.</li> </ul>	The equipment is not such equipment.	N/A
6.1.2.1 (A1:2010)	<p>In <b>Finland, Norway</b> and <b>Sweden</b>, add the following text between the first and second paragraph of the compliance clause:</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>Alternatively for components, there is no distance through insulation requirements 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 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 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 1,5 kV.</li> </ul>		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b).</p> <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 EN 60950-1:2006, 6.2.2.1;</li> <li>- the additional testing shall be performed on all the test specimens as described in EN 60384-14;</li> <li>- 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>		
6.1.2.2	In <b>Finland, Norway</b> and <b>Sweden</b> , the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N/A
7.2	In <b>Finland, Norway</b> and <b>Sweden</b> , for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.	The equipment is not connected to the distribution systems.	N/A
7.3 (A11:2009)	In <b>Norway</b> and <b>Sweden</b> , for requirements see 1.2.13.14 and 1.7.2.1 of this annex.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

**Annex ZD  
(informative)**

**IEC and CENELEC code designations for flexible cords**

Type of flexible cord	Code designations	
	IEC	CENELEC
<b>PVC insulated cords</b>		
Flat twin tinsel cord	60227 IEC 41	H03VH-Y
Light polyvinyl chloride sheathed flexible cord	60227 IEC 52	H03VV-F H03VVH2-F
Ordinary polyvinyl chloride sheathed flexible cord	60277 IEC 53	H05VV-F H05VVH2-F
<b>Rubber insulated cords</b>		
Braided cord	60245 IEC 51	H03RT-F
Ordinary tough rubber sheathed flexible cord	60245 IEC 53	H05RR-F
Ordinary polychloroprene sheathed flexible cord	60245 IEC 57	H05RN-F
Heavy polychloroprene sheathed flexible cord	60245 IEC 66	H07RN-F
<b>Cords having high flexibility</b>		
Rubber insulated and sheathed cord	60245 IEC 86	H03RR-H
Rubber insulated, crosslinked PVC sheathed cord	60245 IEC 87	H03RV4-H
Crosslinked PVC insulated and sheathed cord	60245 IEC 88	H03V4V4-H

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Clause	Requirement + Test	Result - Remark	Verdict

<p align="center"><b>ATTACHMENT TO TEST REPORT IEC 60950-1</b>  <b>EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES</b>  Information technology equipment – Safety –  Part 1: General requirements</p>			
<b>Differences according to</b> ..... : EN 60950-1:2006/A11:2009/A1:2010/A12:2011			
<b>Attachment Form No.</b> ..... : EU_GD_IEC60950_1C_II			
<b>Attachment Originator</b> ..... : SGS Fimko Ltd			
<b>Master Attachment</b> ..... : Date 2011-08			
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<b>EN 60950-1:2006/A11:2009/A1:2010/A12:2011 – CENELEC COMMON MODIFICATIONS</b>
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IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
Contents	Add the following annexes: Annex ZA (normative)      Normative references to international publications with their corresponding European publications Annex ZB (normative)      Special national conditions		P
General	Delete all the “country” notes in the reference document (IEC 60950-1:2005) according to the following list: 1.4.8 Note 2      1.5.1      Note 2 & 3      1.5.7.1      Note 1.5.8 Note 2      1.5.9.4      Note      1.7.2.1      Note 4, 5 & 6 2.2.3 Note      2.2.4      Note      2.3.2      Note 2.3.2.1 Note 2      2.3.4      Note 2      2.6.3.3      Note 2 & 3 2.7.1 Note      2.10.3.2      Note 2      2.10.5.13      Note 3 3.2.1.1 Note      3.2.4      Note 3.      2.5.1      Note 2 4.3.6 Note 1 & 2      4.7      Note 4      4.7.2.2      Note 4.7.3.1 Note 2      5.1.7.1      Note 3 & 4      5.3.7      Note 1 6      Note 2 & 5      6.1.2.1      Note 2      6.1.2.2      Note 6.2.2 Note      6.2.2.1      Note 2      6.2.2.2      Note 7.1 Note 3      7.2      Note      7.3      Note 1 & 2 G.2.1 Note 2      Annex H      Note 2		P
General (A1:2010)	Delete all the “country” notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list: 1.5.7.1      Note      6.1.2.1      Note 2 6.2.2.1      Note 2      EE.3      Note		P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.3.Z1	<p>Add the following subclause:</p> <p>1.3.Z1 Exposure to excessive sound pressure</p> <p>The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones.</p> <p>NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for "one package equipment", and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.</p>	Added.	N/A
(A12:2011)	<p>In EN 60950-1:2006/A12:2011</p> <p>Delete the addition of 1.3.Z1 / EN 60950-1:2006</p> <p>Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010</p>	Delete.	N/A
1.5.1	<p>Add the following NOTE:</p> <p>NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC</p>	Added.	P
1.7.2.1 (A1:2010)	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.	Added.	N/A
1.7.2.1 (A12:2011)	<p>In EN 60950-1:2006/A12:2011</p> <p>Delete NOTE Z1 and the addition for Portable Sound System.</p> <p>Add the following clause and annex to the existing standard and amendments.</p>	Added.	N/A
	<b>Zx Protection against excessive sound pressure from personal music players</b>		


IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p><b>Zx.1 General</b></p> <p>This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players.</p> <p>A personal music player is a portable equipment for personal use, that:</p> <ul style="list-style-type: none"> <li>- is designed to allow the user to listen to recorded or broadcast sound or video; and</li> <li>- primarily uses headphones or earphones that can be worn in or on or around the ears; and</li> <li>- allows the user to walk around while in use.</li> </ul> <p>NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment.</p> <p>A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause.</p> <p>The requirements in this sub-clause are valid for music or video mode only.</p> <p>The requirements do not apply:</p> <ul style="list-style-type: none"> <li>- while the personal music player is connected to an external amplifier; or</li> <li>- while the headphones or earphones are not used.</li> </ul> <p>NOTE 2 An external amplifier is an amplifier which is not part of the personal music player or the listening device, but which is intended to play the music as a standalone music player.</p> <p>The requirements do not apply to:</p> <ul style="list-style-type: none"> <li>- hearing aid equipment and professional equipment;</li> </ul> <p>NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.</p> <ul style="list-style-type: none"> <li>- analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015.</li> </ul> <p>NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies.</p> <p>For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.</p>		

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p><b>Zx.2 Equipment requirements</b></p> <p>No safety provision is required for equipment that complies with the following:</p> <ul style="list-style-type: none"> <li>- equipment provided as a package (personal music player with its listening device), where the acoustic output <math>L_{Aeq,T}</math> is <math>\leq 85</math> dBA measured while playing the fixed "programme simulation noise" as described in EN 50332-1; and</li> <li>- a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is <math>\leq 27</math> mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" as described in EN 50332-1.</li> </ul> <p>NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level <math>L_{Aeq,T}</math> is meant. See also Zx.5 and Annex Zx.</p> <p>All other equipment shall:</p> <ul style="list-style-type: none"> <li>a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and</li> <li>b) have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and</li> <li>c) provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output exceeding those mentioned above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and</li> </ul> <p>NOTE 2 Examples of means include visual or audible signals. Action from the user is always required.</p> <p>NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off.</p> <ul style="list-style-type: none"> <li>d) have a warning as specified in Zx.3; and</li> <li>e) not exceed the following: <ul style="list-style-type: none"> <li>1) equipment provided as a package (player with its listening device), the acoustic output shall be <math>\leq 100</math> dBA measured while playing the fixed "programme simulation noise" described in EN 50332-1; and</li> </ul> </li> </ul>		



IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be <math>\leq 150</math> mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" described in EN 50332-1.</p> <p>For music where the average sound pressure (long term <math>L_{Aeq,T}</math>) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song.</p> <p>NOTE 4 Classical music typically has an average sound pressure (long term <math>L_{Aeq,T}</math>) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA.</p> <p>For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA.</p> <p><b>Zx.3 Warning</b></p> <p>The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following:</p> <ul style="list-style-type: none"> <li>- the symbol of Figure 1 with a minimum height of 5 mm; and</li> <li>- the following wording, or similar:</li> </ul> <p>"To prevent possible hearing damage, do not listen at high volume levels for long periods."</p> <div data-bbox="485 1525 751 1787" data-label="Image">  </div> <p><b>Figure 1 – Warning label (IEC 60417-6044)</b></p> <p>Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.</p>		
	<b>Zx.4 Requirements for listening devices (headphones and earphones)</b>		

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p><b>Zx.4.1 Wired listening devices with analogue input</b></p> <p>With 94 dBA sound pressure output <math>L_{Aeq,T}</math>, the input voltage of the fixed “programme simulation noise” described in EN 50332-2 shall be <math>\geq 75</math> mV.</p> <p>This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control).</p> <p>NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.</p> <p><b>Zx.4.2 Wired listening devices with digital input</b></p> <p>With any playing device playing the fixed “programme simulation noise” described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output <math>L_{Aeq,T}</math> of the listening device shall be <math>\leq 100</math> dBA.</p> <p>This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.).</p> <p>NOTE An example of a wired listening device with digital input is a USB headphone.</p>		
	<p><b>Zx.4.3 Wireless listening devices</b></p> <p>In wireless mode:</p> <ul style="list-style-type: none"> <li>- with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and</li> <li>- respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and</li> <li>- with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output <math>L_{Aeq,T}</math> of the listening device shall be <math>\leq 100</math> dBA.</li> </ul> <p>NOTE An example of a wireless listening device is a Bluetooth headphone.</p>		

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p><b>Zx.5 Measurement methods</b></p> <p>Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s.</p> <p>NOTE Test method for wireless equipment provided without listening device should be defined.</p>		
2.7.1	<p>Replace the subclause as follows:</p> <p>Basic requirements</p> <p>To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, 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 5.3 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 PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, 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 PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.</p>		N/A
2.7.2	This subclause has been declared 'void'.	Declared.	N/A
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.	Delete.	N/A

IEC60950_1F - ATTACHMENT									
Clause	Requirement + Test	Result - Remark	Verdict						
IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)									
Clause	Requirement + Test	Result - Remark	Verdict						
3.2.5.1	<p>Replace “60245 IEC 53” by “H05 RR-F”; “60227 IEC 52” by “H03 VV-F or H03 VVH2-F”; “60227 IEC 53” by “H05 VV-F or H05 VVH2-F2”.</p> <p>In Table 3B, replace the first four lines by the following:</p> <table><tr><td>Up to and including 6  </td><td>0,75 <sup>a)</sup>  </td></tr><tr><td>Over 6 up to and including 10   (0,75) <sup>b)</sup></td><td>1,0  </td></tr><tr><td>Over 10 up to and including 16   (1,0) <sup>c)</sup></td><td>1,5  </td></tr></table> <p>In the conditions applicable to Table 3B delete the words “in some countries” in condition <sup>a)</sup>.</p> <p>In NOTE 1, applicable to Table 3B, delete the second sentence.</p>	Up to and including 6	0,75 <sup>a)</sup>	Over 6 up to and including 10   (0,75) <sup>b)</sup>	1,0	Over 10 up to and including 16   (1,0) <sup>c)</sup>	1,5	Replaced.	N/A
Up to and including 6	0,75 <sup>a)</sup>								
Over 6 up to and including 10   (0,75) <sup>b)</sup>	1,0								
Over 10 up to and including 16   (1,0) <sup>c)</sup>	1,5								
3.3.4	<p>In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following:</p> <p>Over 10 up to and including 16   1,5 to 2,5   1,5 to 4  </p> <p>Delete the fifth line: conductor sizes for 13 to 16 A</p>	Delete.	N/A						
4.3.13.6 (A1:2010)	<p>Replace the existing NOTE by the following:</p> <p>NOTE Z1 Attention is drawn to:</p> <p>1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz, and</p> <p>2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation).</p> <p>Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.</p>	Replaced.	N/A						
Annex H	<p>Replace the last paragraph of this annex by:</p> <p>At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see NOTE). Account is taken of the background level.</p> <p>Replace the notes as follows:</p> <p>NOTE These values appear in Directive 96/29/Euratom.</p> <p>Delete NOTE 2.</p>	Replaced.	N/A						
Bibliography	Additional EN standards.		—						

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
<b>ZA</b>	<b>NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS</b>		—

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.2.4.1	In <b>Denmark</b> , certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.	No power supply cord provided.	N/A
1.2.13.14	In <b>Norway</b> and <b>Sweden</b> , for requirements see 1.7.2.1 and 7.3 of this annex.	The equipment is not connected to the cable distribution systems.	N/A
1.5.7.1	In <b>Finland</b> , <b>Norway</b> and <b>Sweden</b> , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.	No such resistors.	N/A
1.5.8	In <b>Norway</b> , due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A
1.5.9.4	In <b>Finland</b> , <b>Norway</b> and <b>Sweden</b> , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1	<p>In <b>Finland, Norway and Sweden</b>, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet.</p> <p>The marking text in the applicable countries shall be as follows:</p> <p>In Finland: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"</p> <p>In Norway: "Apparatet må tilkoples jordet stikkontakt"</p> <p>In Sweden: "Apparaten skall anslutas till jordat uttag"</p> <p>In <b>Norway and Sweden</b>, the screen of the cable 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 need 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 e.g. a retailer.</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:</p> <p>"Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)."</p>		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>NOTE In Norway, due to regulation for installations of cable distribution systems, 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):</p> <p>“Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplede utstyr – og er tilkoplede et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel- TV nettet.”</p> <p>Translation to Swedish:</p> <p>”Utrustning 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 utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”</p>		
1.7.5	<p>In <b>Denmark</b>, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.</p> <p>For <b>CLASS II EQUIPMENT</b> the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.</p>	No socket-outlets provided.	N/A
2.2.4	In <b>Norway</b> , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.2	In <b>Finland, Norway and Sweden</b> there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.4	In <b>Norway</b> , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.6.3.3	In the <b>United Kingdom</b> , the current rating of the circuit shall be taken as 13 A, not 16 A.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	In the <b>United Kingdom</b> , to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.	The equipment is not direct plug-in equipment.	N/A
2.10.5.13	In <b>Finland, Norway and Sweden</b> , there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A
3.2.1.1	<p>In <b>Switzerland</b>, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets:</p> <p>SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A</p> <p>SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A</p> <p>SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A</p> <p>In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998:</p> <p>SEV 5932-2.1998: Plug Type 25 , 3L+N+PE 230/400 V, 16 A</p> <p>SEV 5933-2.1998: Plug Type 21, L+N, 250 V, 16A</p> <p>SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V, 16 A</p>	No power supply cord provided.	N/A



IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	<p>In <b>Denmark</b>, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1.</p> <p>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.</p> <p>If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.</p>	No power supply cord provided.	N/A
3.2.1.1	<p>In <b>Spain</b>, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994.</p> <p>Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993.</p> <p>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 UNE 20315:1994.</p> <p>If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.</p>	No power supply cord provided.	N/A
3.2.1.1	<p>In the <b>United Kingdom</b>, apparatus 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 and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations.</p> <p>NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.</p>	No power supply cord provided.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In <b>Ireland</b> , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.	No power supply cord provided.	N/A
3.2.4	In <b>Switzerland</b> , for requirements see 3.2.1.1 of this annex.	Shall be evaluated during the national approval.	N/A
3.2.5.1	In the <b>United Kingdom</b> , a power supply cord with conductor of 1,25 mm <sup>2</sup> is allowed for equipment with a rated current over 10 A and up to and including 13 A.	No power supply cord provided.	N/A
3.3.4	In the <b>United Kingdom</b> , the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm <sup>2</sup> to 1,5 mm <sup>2</sup> nominal cross-sectional area.	No power supply cord provided.	N/A
4.3.6	In the <b>United Kingdom</b> , the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and 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.	The equipment is not direct plug-in equipment.	N/A
4.3.6	In <b>Ireland</b> , DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.	The equipment is not direct plug-in equipment.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	<p>In <b>Finland, Norway</b> and <b>Sweden</b> TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment:</p> <ul style="list-style-type: none"> <li>• STATIONARY PLUGGABLE EQUIPMENT TYPE A that <ul style="list-style-type: none"> <li>is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and</li> <li>has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and</li> <li>is provided with instructions for the installation of that conductor by a SERVICE PERSON;</li> </ul> </li> <li>• STATIONARY PLUGGABLE EQUIPMENT TYPE B;</li> <li>• STATIONARY PERMANENTLY CONNECTED EQUIPMENT.</li> </ul>	The equipment is not such equipment.	N/A
6.1.2.1 (A1:2010)	<p>In <b>Finland, Norway</b> and <b>Sweden</b>, add the following text between the first and second paragraph of the compliance clause:</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>Alternatively for components, there is no distance through insulation requirements 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 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and</li> <li>- is subject to ROUTINE TESTING for electric</li> </ul>		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

<b>ZB ANNEX (normative)</b> <b>SPECIAL NATIONAL CONDITIONS (EN)</b>			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>strength during manufacturing, using a test voltage of 1,5 kV.</p> <p>It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b).</p> <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 EN 60950-1:2006, 6.2.2.1;</li> <li>- the additional testing shall be performed on all the test specimens as described in EN 60384-14;</li> <li>- 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>		
6.1.2.2	<p>In <b>Finland, Norway and Sweden</b>, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.</p>		N/A
7.2	<p>In <b>Finland, Norway and Sweden</b>, for requirements see 6.1.2.1 and 6.1.2.2 of this annex.</p> <p>The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.</p>	The equipment is not connected to the distribution systems.	N/A
7.3	<p>In <b>Norway and Sweden</b>, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.</p>		N/A
7.3	<p>In <b>Norway</b>, for installation conditions see EN 60728-11:2005.</p>		N/A

PHOTOS



Overall view



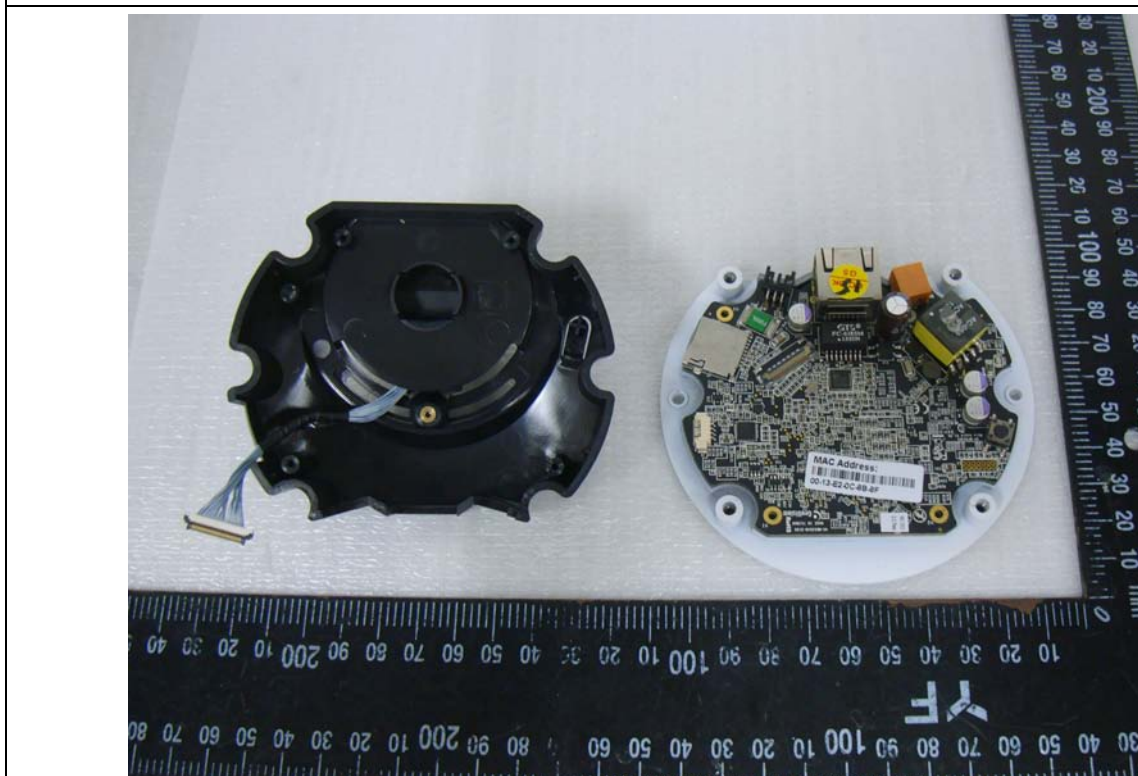
Overall view



PHOTOS

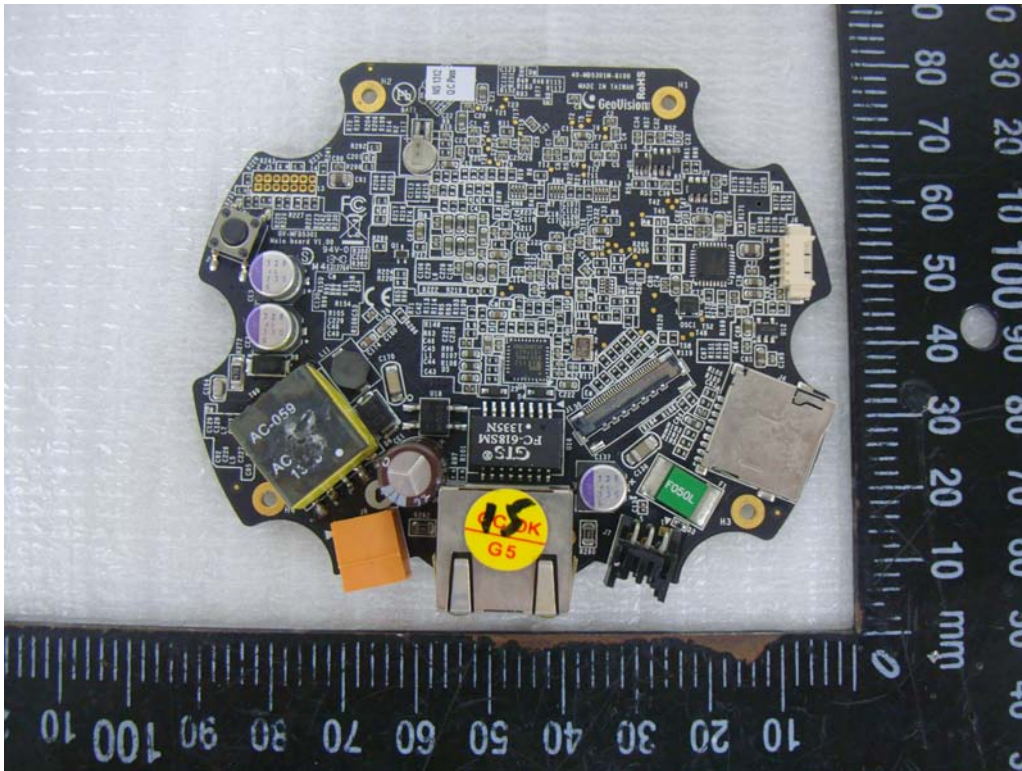


Internal view

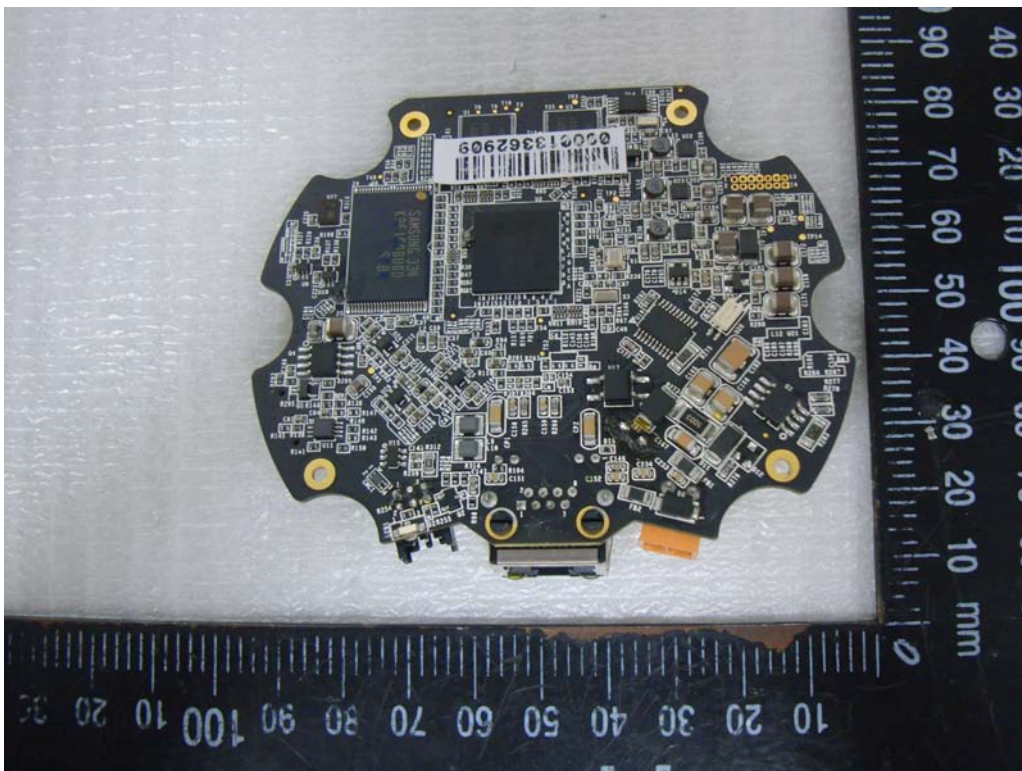


Internal view

PHOTOS



Main board



Main board