



**APPLICATION FOR LVD TEST REPORT
On Behalf of**

Power bank

**MODEL NO.: LP-1005A, LP-605A, LP-2005A, LP-1005B, LP-525A,
LP-1025A, LP-2025A, LP-507A PLUS, LP-707A PLUS,
LP-1007A PLUS, LP-1030A, LP-510A, LP-1010A, LP-1008B,
LP-613B, LP-1013B, LP-2013B**


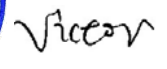
Prepared for :

**Prepared By : Accurate Technology Co., Ltd.
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Science & Industry Park, Nanshan District, Shenzhen 518057
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**Date of Test: June 08, 2017 to June 15, 2017
Date of Report: June 16, 2017
Report Number: ATS2017342**

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TEST REPORT IEC/EN 60950-1 Information technology equipment – Safety – Part 1: General requirements	
Report Number	ATS2017342
Tested by (name + signature)	Curry 
Approved by (name + signature)	Victor 
Date of issue	June 16, 2017
Testing Laboratory	Accurate Technology Co., Ltd.
Address	F1, Bldg. A&D, Changyuan New Material Port, Keyuan Rd., Science & Industry Park, Nanshan District, Shenzhen 518057 P.R. China
Applicant's name	
Address	
Test specification:	
Standard	<input type="checkbox"/> IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013 <input checked="" type="checkbox"/> EN 60950-1:2006 + Am11:2009 + Am1:2010 + Am12:2011+ Am 2:2013
Test procedure	LVD
Non-standard test method	N/A
Test Report Form No.	IEC60950_1F
Test Report Form(s) Originator	SGS Fimko Ltd
Master TRF	Dated 2014-02
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Test item description	Power bank
Trade Mark	
Manufacturer	
Address	
Model/Type reference	LP-1005A, LP-605A, LP-2005A, LP-1005B, LP-525A, LP-1025A, LP-2025A, LP-507A PLUS, LP-707A PLUS, LP-1007A PLUS, LP-1030A, LP-510A, LP-1010A, LP-1008B, LP-613B, LP-1013B, LP-2013B
Model difference	Only the appearance is difference.
Ratings	Input: 5V --- 2.0A Output: 5V --- 2.1A

TRF No. IEC60950_1F

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General disclaimer:

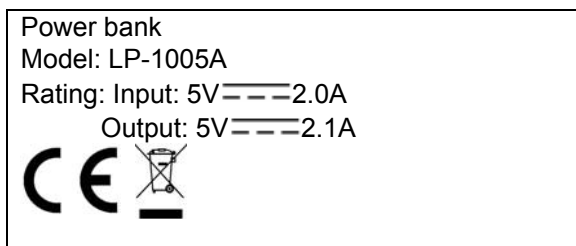
The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Testing Laboratory.

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

Appendix 1: List of equipment, 3 pages
Appendix 2: Photo documentation, 4 pages
Attachment to test report IEC 60950-1, European group differences and national differences, 19 pages

Copy of marking plate:

The artwork below may be only a draft.



Test item particulars.....:	
Equipment mobility.....:	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input checked="" type="checkbox"/> transportable <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in
Connection to the mains.....:	<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
Operating condition.....:	<input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time:
Access location	<input checked="" type="checkbox"/> operator accessible <input type="checkbox"/> restricted access location
Over voltage category (OVC)	<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:
Mains supply tolerance (%) or absolute mains supply values	N/A
Tested for IT power systems	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
IT testing, phase-phase voltage (V)	N/A
Class of equipment	<input type="checkbox"/> Class I <input type="checkbox"/> Class II <input checked="" type="checkbox"/> Class III <input type="checkbox"/> Not classified
Considered current rating of protective device as part of the building installation (A)	N/A
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
IP protection class	IP20
Altitude during operation (m)	Up to 2000m
Altitude of test laboratory (m)	Below 2000m
Mass of equipment (kg)	0.052kg
Possible test case verdicts:	
- test case does not apply to the test object.....: N/A	
- test object does meet the requirement.....: P (Pass)	
- test object does not meet the requirement.....: F (Fail)	
Testing.....:	
Date of receipt of test item	June 06, 2017
Date (s) of performance of tests	June 08, 2017 to June 15, 2017
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.	

General product information:

- The equipment built-in a rechargeable lithium secondary battery pack of 3.7V, supplied by USB port with rated DC5V, therefore, its circuits are considered as SELV of class III equipment.
- The maximum ambient temperature for the sample is considered as 25°C without declaration from manufacturer.

Abbreviations used in the report:

- normal conditions	N.C.	- single fault conditions	S.F.C
- functional insulation	OP	- basic insulation	BI
- double insulation	DI	- supplementary insulation	SI
- between parts of opposite polarity	BOP	- reinforced insulation	RI

Indicate used abbreviations (if any)

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

1	GENERAL		P
---	---------	--	---

1.5	Components		P
1.5.1	General		P
	Comply with IEC 60950-1 or relevant component standard	(see appended tables 1.5.1)	P
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.	P
1.5.3	Thermal controls	No such components	N/A
1.5.4	Transformers		N/A
1.5.5	Interconnecting cables		P
1.5.6	Capacitors bridging insulation		N/A
1.5.7	Resistors bridging insulation		N/A
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		N/A
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		N/A
1.5.8	Components in equipment for IT power systems		N/A
1.5.9	Surge suppressors		N/A
1.5.9.1	General		N/A
1.5.9.2	Protection of VDRs		N/A
1.5.9.3	Bridging of functional insulation by a VDR		N/A
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A

1.6	Power interface		P
1.6.1	AC power distribution systems	Not directly connected to the mains	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

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6.4	Neutral conductor		N/A
1.7	Marking and instructions		P
1.7.1	Power rating and identification markings		P
1.7.1.1	Power rating marking		P
	Multiple mains supply connections.....:	Single power source	N/A
	Rated voltage(s) or voltage range(s) (V)	DC5V	P
	Symbol for nature of supply, for d.c. only	==	P
	Rated frequency or rated frequency range (Hz)		N/A
	Rated current (mA or A)	2.0A	P
1.7.1.2	Identification markings	See the marking plate	P
	Manufacturer's name or trade-mark or identification mark	See the marking plate	P
	Model identification or type reference	See the marking plate	P
	Symbol for Class II equipment only	Class III equipment	P
	Other markings and symbols		P
1.7.1.3	Use of graphical symbols		P
1.7.2	Safety instructions and marking	English version was checked	P
1.7.2.1	General		P
1.7.2.2	Disconnect devices		N/A
1.7.2.3	Overcurrent protective device	Not such equipment	N/A
1.7.2.4	IT power distribution systems		N/A
1.7.2.5	Operator access with a tool	No operator accessible area that needs to be accessed by the use of a tool.	N/A
1.7.2.6	Ozone		N/A
1.7.3	Short duty cycles	Continuous operation	N/A
1.7.4	Supply voltage adjustment		N/A
	Methods and means of adjustment; reference to installation instructions		N/A
1.7.5	Power outlets on the equipment	No such outlets	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)		N/A
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals		N/A
1.7.7.2	Terminals for a.c. mains supply conductors		N/A

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.7.3	Terminals for d.c. mains supply conductors	No dc mains	N/A
1.7.8	Controls and indicators		P
1.7.8.1	Identification, location and marking.....:		P
1.7.8.2	Colours		P
1.7.8.3	Symbols according to IEC 60417.....:		P
1.7.8.4	Markings using figures		N/A
1.7.9	Isolation of multiple power sources	Single power source	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 and lifting of the label edge.	P
1.7.12	Removable parts		N/A
1.7.13	Replaceable batteries		N/A
	Language(s)		—
1.7.14	Equipment for restricted access locations.....:		N/A
2	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energy hazards		P
2.1.1	Protection in operator access areas		P
2.1.1.1	Access to energized parts		P
	Test by inspection	SELV circuits only, no such hazardous parts.	P
	Test with test finger (Figure 2A)		N/A
	Test with test pin (Figure 2B)		N/A
	Test with test probe (Figure 2C)	No TNV circuits	N/A
2.1.1.2	Battery compartments	No such components	N/A
2.1.1.3	Access to ELV wiring	No ELV wiring in operator accessible area	N/A
	Working voltage (V _{peak} or V _{rms}); minimum distance through insulation (mm)	(see appended tables 2.10.2 and 2.10.5)	—
2.1.1.4	Access to hazardous voltage circuit wiring		N/A
2.1.1.5	Energy hazards	(see appended tables 2.1.1.5)	P

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment		N/A
	Measured voltage (V); time-constant (s) :		—
2.1.1.8	Energy hazards – d.c. mains supply		N/A
	a) Capacitor connected to the d.c. mains supply . :		N/A
	b) Internal battery connected to the d.c. mains supply :		N/A
2.1.1.9	Audio amplifiers :	Not such equipment	N/A
2.1.2	Protection in service access areas	No operator accessible area that needs to be accessed by the use of a tool.	N/A
2.1.3	Protection in restricted access locations	Not used for restricted access locations.	N/A
2.2	SELV circuits		P
2.2.1	General requirements	Checked by inspection	P
2.2.2	Voltages under normal conditions (V) :		P
2.2.3	Voltages under fault conditions (V) :		P
2.2.4	Connection of SELV circuits to other circuits :		P
2.3	TNV circuits <i>No TNV circuits</i>		N/A
2.3.1	Limits		N/A
	Type of TNV circuits :		—
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions :		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed :		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed :		—
2.3.5	Test for operating voltages generated externally		N/A
2.4	Limited current circuits		N/A

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.4.1	General requirements		N/A
2.4.2	Limit values		N/A
	Frequency (Hz)		—
	Measured current (mA).....		—
	Measured voltage (V)		—
	Measured circuit capacitance (nF or μ F)		—
2.4.3	Connection of limited current circuits to other circuits		N/A

2.5	Limited power sources		N/A
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition	(see appended table 2.5)	N/A
	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).....		—
	Current rating of overcurrent protective device (A) ..		—

2.6	Provisions for earthing and bonding <i>Class III equipment, no earthing and bonding parts.</i>		N/A
2.6.1	Protective earthing		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^2), AWG		—
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm^2), AWG		—
	Protective current rating (A), cross-sectional area (mm^2), AWG.....		—

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

2.7	Overcurrent and earth fault protection in primary circuits <i>No connection to the mains supply.</i>		N/A
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

2.8	Safety interlocks <i>No safety interlock</i>		N/A
2.8.1	General principles		N/A
2.8.2	Protection requirements		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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	(see appended table 5.2)	N/A
2.8.8	Mechanical actuators		N/A

2.9	Electrical insulation		P
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic material not used.	P
2.9.2	Humidity conditioning	Not required	N/A
	Relative humidity (%), temperature (°C)		—
2.9.3	Grade of insulation	Functional insulation, checked by clause 5.3.4	P
2.9.4	Separation from hazardous voltages		N/A
	Method(s) used		—

2.10	Clearances, creepage distances and distances through insulation		P
2.10.1	General	See 2.10.3, 2.10.4 and 2.10.5	P
2.10.1.1	Frequency		N/A
2.10.1.2	Pollution degrees	2	P
2.10.1.3	Reduced values for functional insulation	See 5.3.4	P
2.10.1.4	Intervening unconnected conductive parts		N/A
2.10.1.5	Insulation with varying dimensions	No such part	N/A
2.10.1.6	Special separation requirements	No TNV	N/A
2.10.1.7	Insulation in circuits generating starting pulses	No such circuit	N/A
2.10.2	Determination of working voltage		N/A
2.10.2.1	General		N/A
2.10.2.2	RMS working voltage	(See appended table 2.10.2)	N/A
2.10.2.3	Peak working voltage	(See appended table 2.10.2)	N/A

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.3	Clearances		N/A
2.10.3.1	General		N/A
2.10.3.2	Mains transient voltages		N/A
	a) AC mains supply		N/A
	b) Earthed d.c. mains supplies		N/A
	c) Unearthed d.c. mains supplies		N/A
	d) Battery operation		N/A
2.10.3.3	Clearances in primary circuits	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.3.4	Clearances in secondary circuits	(Functional insulation required by clause 5.3.4 c)	P
2.10.3.5	Clearances in circuits having starting pulses	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.3.6	Transients from a.c. mains supply		N/A
2.10.3.7	Transients from d.c. mains supply		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems		N/A
2.10.3.9	Measurement of transient voltage levels		N/A
	a) Transients from a mains supply		N/A
	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	(Functional insulation required by clause 5.3.4 c)	P
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	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.5	Solid insulation		N/A
2.10.5.1	General		N/A
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	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	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.5.6	Thin sheet material – General		N/A

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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	(see appended table 2.10.5)	—
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
	- Supplementary, reinforced insulation		N/A
2.10.6	Construction of printed boards		N/A
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	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

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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
3	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General		P
3.1.1	Current rating and overcurrent protection		N/A
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges which could damage the insulation and cause hazard.	P
3.1.3	Securing of internal wiring	Wires are secured by soldering method and additionally fixed by glue.	P
3.1.4	Insulation of conductors	(see appended table 5.2)	N/A
3.1.5	Beads and ceramic insulators	Not used	N/A
3.1.6	Screws for electrical contact pressure	No screws provided	N/A
3.1.7	Insulating materials in electrical connections	Contact pressure not transmitted through insulating material.	N/A
3.1.8	Self-tapping and spaced thread screws	Not used	N/A
3.1.9	Termination of conductors		P
	10 N pull test	Considered	P
3.1.10	Sleeving on wiring		N/A
3.2	Connection to a mains supply <i>No connection to the mains supply</i>		N/A
3.2.1	Means of connection		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) :		—

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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 ²), 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
3.3	Wiring terminals for connection of external conductors <i>No such terminal</i>		N/A
3.3.1	Wiring terminals		N/A
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 ²).....		—
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
3.4	Disconnection from the mains supply <i>No connections to the mains supply</i>		N/A
3.4.1	General requirement		N/A
3.4.2	Disconnect devices		N/A

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized	When plug is disconnected from the ac mains , no hazardous voltage in the equipment.	P
3.4.5	Switches in flexible cords	No switch used	N/A
3.4.6	Number of poles - single-phase and d.c. equipment	AC plug disconnects both poles simultaneously.	P
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	Not such equipment	N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A
3.5	Interconnection of equipment		P
3.5.1	General requirements		P
3.5.2	Types of interconnection circuits	Interconnection circuits of SELV through the output connector.	P
3.5.3	ELV circuits as interconnection circuits		N/A
3.5.4	Data ports for additional equipment	No data ports.	N/A
4	PHYSICAL REQUIREMENTS		P
4.1	Stability		N/A
	Angle of 10°		N/A
	Test force (N)		N/A
4.2	Mechanical strength		P
4.2.1	General		P
	Rack-mounted equipment.		N/A
4.2.2	Steady force test, 10 N		N/A
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N		P
4.2.5	Impact test		N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm)		P
4.2.7	Stress relief test		N/A

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.2.8	Cathode ray tubes		N/A
	Picture tube separately certified	(see separate test report or attached certificate)	N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N)		N/A

4.3	Design and construction		P
4.3.1	Edges and corners	Edges or corners are rounded.	P
4.3.2	Handles and manual controls; force (N)..... :		N/A
4.3.3	Adjustable controls		N/A
4.3.4	Securing of parts		P
4.3.5	Connection by plugs and sockets		N/A
4.3.6	Direct plug-in equipment		N/A
	Torque		—
	Compliance with the relevant mains plug standard	See separate test report	N/A
4.3.7	Heating elements in earthed equipment	No such parts	N/A
4.3.8	Batteries		P
	- Overcharging of a rechargeable battery		P
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery	Connector has fool-proof construction	P
	- Excessive discharging rate for any battery		P
4.3.9	Oil and grease	No oil and grease	N/A
4.3.10	Dust, powders, liquids and gases	Equipment in intended use not considered to be exposed to these.	N/A
4.3.11	Containers for liquids or gases	No such parts	N/A
4.3.12	Flammable liquids	No such flammable liquids	N/A
	Quantity of liquid (l)		N/A
	Flash point (°C)		N/A
4.3.13	Radiation	No radiation	P
4.3.13.1	General		P
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg)		—
	Measured high-voltage (kV)		—

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Measured focus voltage (kV)		—
	CRT markings		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N/A
	Part, property, retention after test, flammability classification		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation		N/A
4.3.13.5	Lasers (including laser diodes) and LEDs		P
4.3.13.5.1	Lasers (including laser diodes)		N/A
	Laser class		—
4.3.13.5.2	Light emitting diodes (LEDs)	Indicating light or other similar low power devices	—
4.3.13.6	Other types		N/A

4.4	Protection against hazardous moving parts <i>No hazardous moving parts</i>		N/A
4.4.1	General		N/A
4.4.2	Protection in operator access areas		N/A
	Household and home/office document/media shredders	(see Annex EE)	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

4.5	Thermal requirements		P
4.5.1	General		P
4.5.2	Temperature tests		P
	Normal load condition per Annex L		—
4.5.3	Temperature limits for materials	(see appended table 4.5)	P

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.5.4	Touch temperature limits	(see appended table 4.5)	P
4.5.5	Resistance to abnormal heat	(see appended table 4.5.5)	N/A
4.6	Openings in enclosures		N/A
4.6.1	Top and side openings		N/A
	Dimensions (mm)		—
4.6.2	Bottoms of fire enclosures		N/A
	Construction of the bottom, dimensions (mm) ..		—
4.6.3	Doors or covers in fire enclosures	No doors or covers	N/A
4.6.4	Openings in transportable equipment	No openings	N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm)		—
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C), time (weeks)		—
4.7	Resistance to fire		P
4.7.1	Reducing the risk of ignition and spread of flame		P
	Method 1, selection and application of components wiring and materials	(see appended table 4.7)	P
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure		P
4.7.2.1	Parts requiring a fire enclosure		P
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		P
4.7.3.1	General		P
4.7.3.2	Materials for fire enclosures	See table 1.5.1 for detail	P
4.7.3.3	Materials for components and other parts outside fire enclosures		N/A
4.7.3.4	Materials for components and other parts inside fire enclosures		N/A
4.7.3.5	Materials for air filter assemblies	No such components	N/A
4.7.3.6	Materials used in high-voltage components	No high-voltage components	N/A
5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		P

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.1	Touch current and protective conductor current		N/A
5.1.1	General	(see appended Table 5.1)	N/A
5.1.2	Configuration of equipment under test (EUT)		N/A
5.1.2.1	Single connection to an a.c. mains supply		N/A
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit		N/A
5.1.4	Application of measuring instrument		N/A
5.1.5	Test procedure		N/A
5.1.6	Test measurements		N/A
	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
5.2	Electric strength		N/A
5.2.1	General	(see appended table 5.2)	N/A

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

5.2.2	Test procedure		N/A
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5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P
5.3.2	Motors		N/A
5.3.3	Transformers	(see appended Annex C)	N/A
5.3.4	Functional insulation	See table 5.3	P
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE	Not such equipment	N/A
5.3.7	Simulation of faults		P
5.3.8	Unattended equipment		N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions		P
5.3.9.1	During the tests	No fire or molten metal occurred and no deformation of enclosure during the tests.	P
5.3.9.2	After the tests	No reduction of clearance and creepage distance. Electric strength test is made on basic, supplementary and reinforced insulation after test.	P

6	CONNECTION TO TELECOMMUNICATION NETWORKS <i>No connection to TNV</i>		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements	(see appended table 5.2)	N/A
	Supply voltage (V)		—
	Current in the test circuit (mA)		—
6.1.2.2	Exclusions		N/A

6.2	Protection of equipment users from overvoltages on telecommunication networks		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A
6.3	Protection of the telecommunication wiring system from overheating		N/A
	Max. output current (A)		—
	Current limiting method		—
7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS <i>No connection to cable distribution system</i>		N/A
7.1	General		N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test		N/A
7.4.3	Impulse test		N/A
A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples		—
	Wall thickness (mm)		—
A.1.2	Conditioning of samples; temperature (°C)		N/A
A.1.3	Mounting of samples		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D		—
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Sample 3 burning time (s)		—
A.2	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)		N/A
A.2.1	Samples, material		—
	Wall thickness (mm)		—
A.2.2	Conditioning of samples; temperature (°C)		N/A
A.2.3	Mounting of samples		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C		—
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	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		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.3	Hot flaming oil test (see 4.6.2)		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A
B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		N/A
B.1	General requirements		N/A
	Position		—
	Manufacturer		—
	Type		—
	Rated values		—
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Test duration (days)		—
	Electric strength test: test voltage (V)		—
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V)		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	General		N/A
B.7.2	Test procedure		N/A
B.7.3	Alternative test procedure		N/A
B.7.4	Electric strength test; test voltage (V)		N/A
B.8	Test for motors with capacitors		N/A
B.9	Test for three-phase motors		N/A
B.10	Test for series motors		N/A
	Operating voltage (V)		—

C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		N/A
	Position		—
	Manufacturer	See table 1.5.1	—
	Type	See table 1.5.1	—
	Rated values	See table 1.5.1	—
	Method of protection	Protection circuits	—
C.1	Overload test	(see appended table 5.3)	N/A
C.2	Insulation	(see appended tables 5.2 and C2)	N/A
	Protection from displacement of windings		N/A

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

E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A
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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		N/A
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G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	Clearances		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply		N/A
G.2.2	Earthed d.c. mains supplies		N/A
G.2.3	Unearthed d.c. mains supplies		N/A
G.2.4	Battery operation		N/A
G.3	Determination of telecommunication network transient voltage (V)		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.4.1	Mains transients and internal repetitive peaks		N/A
G.4.2	Transients from telecommunication networks		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	Measurement of transient voltages (V)		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
G.6	Determination of minimum clearances		N/A

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

K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		N/A
K.1	Making and breaking capacity		N/A

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
K.2	Thermostat reliability; operating voltage (V)		N/A
K.3	Thermostat endurance test; operating voltage (V)		N/A
K.4	Temperature limiter endurance; operating voltage (V)		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A

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

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

N	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)		N/A
N.1	ITU-T impulse test generators		N/A

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
N.2	IEC 60065 impulse test generator		N/A
P	ANNEX P, NORMATIVE REFERENCES		—
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		N/A
	- Preferred climatic categories		N/A
	- Maximum continuous voltage		N/A
	- Combination pulse current		N/A
	Body of the VDR Test according to IEC60695-11-5.....		N/A
	Body of the VDR. Flammability class of material (min V-1).....		N/A
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N/A
		See separate test report	—
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		N/A
			—
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		N/A
V.1	Introduction		N/A
V.2	TN power distribution systems		N/A
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		N/A

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N/A
Y.1	Test apparatus		N/A
Y.2	Mounting of test samples		N/A
Y.3	Carbon-arc light-exposure apparatus		N/A
Y.4	Xenon-arc light exposure apparatus		N/A
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		N/A
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N/A
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—
CC	ANNEX CC, Evaluation of integrated circuit (IC) current limiters		N/A
CC.1	General		N/A
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
DD	ANNEX DD, Requirements for the mounting means of rack-mounted equipment		N/A
DD.1	General		N/A
DD.2	Mechanical strength test, variable N.....		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
DD.3	Mechanical strength test, 250N, including end stops.....:		N/A
DD.4	Compliance.....:		N/A
EE	ANNEX EE, Household and home/office document/media shredders		N/A
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

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

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾	
Enclosure	Various	Various	V-1 or better, min. 95°C	UL 94	UL	
PCB	Various	Various	V-0, 130°C	UL 796	UL	
Internal wire	Various	Various	Min. 80°C, min. 22AWG	UL 758	UL	
Battery	Shenzhen Grand Powersource Co., Ltd.	105568	3.7V, 5000mAh, 18.5 Wh	IEC 62133: 2012	LCS170420141 AS	
Supplementary information:						
¹⁾ Provided evidence ensures the agreed level of compliance.						

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

1.6.2	TABLE: Electrical data (in normal conditions)						P
U (V)	I (A)	I rated (A)	P (W)	Fuse #	I fuse (A)	Condition/status	
DC5.0	1.56	2.0	--	--	--	Normal charging	
Supplementary information:							

2.1.1.5 c) 1)	TABLE: max. V, A, VA test						P
------------------	---------------------------	--	--	--	--	--	---

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

Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)
5	2.0	5.17	2.62	13.5
supplementary information:				

2.1.1.5 c) 2)	TABLE: stored energy	N/A
Capacitance C (μF)	Voltage U (V)	Energy E (J)
--	--	--
--	--	--
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					N/A
Circuit output tested: output						
Note: Measured Uoc (V) with all load circuits disconnected:						
Components	Sample No.	Uoc (V)	I _{sc} (A)		VA	
			Meas.	Limit	Meas.	Limit
--	--	--	--	--	--	--
supplementary information:						
Sc=Short circuit, Oc=Open circuit						

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

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

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						N/A
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)	
--	--	--	--	--	--	--	
Supplementary information:							

2.10.5	TABLE: Distance through insulation measurements						N/A
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								P
The tests of 4.3.8 are applicable only when appropriate battery data is not available					--				P
Is it possible to install the battery in a reverse polarity position?					No				P
	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	--	--	--	1.89	--	3.85	--	--	--
Max. current during fault condition	--	--	--	8.73	--	3.92	--	--	--
Test results:									Verdict

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- Chemical leaks	No	P
	- Explosion of the battery	No	P
	- Emission of flame or expulsion of molten metal	No	P
	- Electric strength tests of equipment after completion of tests	N/A	N/A
Supplementary information:			

4.5	TABLE: Thermal requirements					P	
	Supply voltage (V):	DC4.2V	DC5.0V	--	—		
	Ambient Tmin (°C):	23.4	23.5	--	—		
	Ambient Tmax (°C):	23.9	23.7	--	—		
Maximum measured temperature T of part/at.....:		T (°C)			Allowed Tmax (°C)		
PCB near U1		94.1	43.1	--	130		
L1		82.7	47.8	--	120		
PCB near U2		76.0	45.4	--	130		
Internal wire		43.2	37.9	--	80		
PCB near BU3		77.4	45.6	--	130		
Body of battery		38.3	30.6	--	Ref.		
Enclosure near battery		33.3	29.6	--	95		
Key button		50.2	26.7	--	85		
Supplementary information:							
Temperature T of winding:	t1 (°C)	R1 (Ω)	t2 (°C)	R2 (Ω)	T (°C)	Allowed Tmax (°C)	Insulation class
--	--	--	--	--	--	--	--
Supplementary information: ma							

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:				

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

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

--	--	--	--
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Supplementary information: See table 1.5.1

5.1	TABLE: touch current measurement	N/A
------------	---	-----

Measured between:	Measured (mA)	Limit (mA)	Comments/conditions
--	--	--	--
supplementary information:			

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests	N/A
------------	--	-----

Test voltage applied between:	Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
--	--	--	--
Supplementary information:			

5.3	TABLE: Fault condition tests	P
------------	-------------------------------------	---

	Ambient temperature (°C)					24.7	—
	Power source for EUT: Manufacturer, model/type, output rating					See the marking	—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation	
BU1(2-4) Sc Battery	Overcharge	DC5.0	7hours	--	1.56	Unit normal operation, no hazards	
Battery	Overcharge	DC5.3	7hours	--	1.85	Become steady, no hazards Max. temperature: PCB: 62.9°C Internal wire: 31.3°C Key button: 38.2°C	
U1(1-6) Sc Battery	Overcharge	DC5.0	7hours	--	8.73	Become steady, no hazards Max. temperature: PCB: 95.8°C Internal wire: 53.6°C Key button: 57.7°C	
BU1(2-4) Sc Battery	Over discharge	DC4.2	7hours	--	3.89	Unit normal operation, no hazards	

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IEC 60950-1						
Clause	Requirement + Test				Result - Remark	
Output	Sc	DC4.2	10 minutes	--	0	Unit shut down immediately, no damaged, no hazard.
U1(6-8) Sc Battery	Over discharge	DC4.2	7hours	--	2.1	Unit normal operation, only the output voltage decrease to 4.2V, no hazards
Supplementary information: Sc=Short circuit, Oc=Open circuit						

C.2	TABLE: transformers						N/A
Loc.	Tested insulation	Working voltage peak / V (2.10.2)	Working voltage rms / V (2.10.2)	Required electric strength (5.2)	Required clearance / mm (2.10.3)	Required creepage distance / mm (2.10.4)	Required distance thr. insul. (2.10.5)
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
--	--	--	--	--	--	--	--
supplementary information:							

Appendix 1

List of equipment

No.	Equipment	Manufacturer	Model No.	Serial No.	Calibration date	Calibration due date
01	Hybrid Recorder	Yokogawa	DR130	27D216293	2017.1.3	2018.1.2
02	Hybrid Recorder	Yokogawa	DR130	27D216294	2017.1.3	2018.1.2
03	Data Acquisition / Switch Unit	Agilent	34970A	MY41027365	2017.1.3	2018.1.2
04	Data Acquisition / Switch Unit	Agilent	34970A	MY41025924	2017.1.3	2018.1.2
05	Temp. & Humid. Chamber	Gongwen	HSD-500	0109	2017.1.3	2018.1.2
13	Oscilloscope	Tektronix	TDS2012	C035606	2017.1.3	2018.1.2
14	Oscilloscope	Tektronix	TDS3012B	B035855	2017.1.3	2018.1.2
15	Digital Power Meter	Qingzhi	8716C	870307119	2017.1.3	2018.1.2
16	Digital Power Meter	Ainuo	8715B	038710069	2017.1.3	2018.1.2
17	Digital Power Meter	Everfine	YF9901	405075	2017.1.3	2018.1.2
18	Ohm Meter	Yang Zi	YD2511	794	2017.1.3	2018.1.2
19	Multi Meter	Fluke	111	85150263	2017.1.3	2018.1.2
22	Desktop Multi Meter	Fluke	45	8392013	2017.1.3	2018.1.2
25	Hi-Pot Tester	Ainuo	9604	039609405	2017.1.3	2018.1.2
26	Grounding Bond Meter	Ainuo	9613B	039606212	2017.1.3	2018.1.2
27	Leakage Current Meter	EXTECH	7611	1330308	2017.1.3	2018.1.2
29	Insulation Resistance Tester	Yang Zhi	YD2683	030	2017.1.3	2018.1.2
30	Digital Power Meter	Qingzhi	8716C	870307126	2017.1.3	2018.1.2
32	Push-Pull Scale	Japan Instrumentation	NK-300	49779	2017.1.3	2018.1.2
33	Test hook	Zhilitong	TH-1	W8L180T1	2017.1.3	2018.1.2
40	Tumbling Barrel	Zhilitong	GT-1	G010104	2017.1.3	2018.1.2
41	Audio Generator	Good Will	GAG-810	D913311	2017.1.3	2018.1.2
42	Noise Generator	DM	DM8898	D826715	2017.1.3	2018.1.2
43	Plug Torque Tester	Zhilitong	LJ-1	LJ010104	2017.1.3	2018.1.2
44	Shot Test Pin Probe	Zhilitong	ZP-1	44/ATCS-44	2017.1.3	2018.1.2
45	Test Probe 41	Zhilitong	ZT-1	D30L80/ATCS-45	2017.1.3	2018.1.2
46	Finger Nail Probe	Zhilitong	ZJ-1	D14N30/ATCS-46	2017.1.3	2018.1.2
47	Test Finger Probe	Zhilitong	ZF-1	X010106/ATCS-47	2017.1.3	2018.1.2
48	Accessibility Probe	Zhilitong	ZA-1	A010102/ATCS-48	2017.1.3	2018.1.2
49	UL Finger Probe	America	ULP-01	A01/ATCS-49	2017.1.3	2018.1.2
50	Rigid Finger Probe	Zhilitong	TZ-1	L010304	2017.1.3	2018.1.2
51	Test Probe	Zhilitong	TZ-11	D4L100/ATCS-51	2017.1.3	2018.1.2
52	Test Probe	Zhilitong	TZ-12	D3L100/ATCS-52	2017.1.3	2018.1.2
53	Test Probe	Zhilitong	TZ-13	D1L20/ATCS-53	2017.1.3	2018.1.2
54	Test Probe	Zhilitong	TZ-14	D40/ATCS-54	2017.1.3	2018.1.2
55	Steel Ball	Zhilitong	ZB-1	D5W500	2017.1.3	2018.1.2
58	DC Power Supply	All Power	IP50-20D	401024	—	—
60	Isolating Transformer	Kong Tel	5KVA	002	—	—
61	Hammer	Guangdong Zhijian	CJ-2	24003	2017.1.3	2018.1.2
62	Hammer	Zhilitong	CJ-2	C021204	2017.1.3	2018.1.2
63	Hammer	Guangdong Zhijian	CJ-2	24004	2017.1.3	2018.1.2
64	Hammer	Zhilitong	CJ-2	C021104	2017.1.3	2018.1.2
65	Torque Driver	kanon	30LTDK	04C175	2017.1.3	2018.1.2
66	Torque Driver	kanon	12LTDK	04A037	2017.1.3	2018.1.2
67	AC Voltage Stabilizer	Sanke Electrical	SVC-30KVA	31208433081	—	—
68	AC Voltage Stabilizer	Sanke Electrical	SVC-30KVA	31208455481	—	—
69	Frequency Converter Power Supply	All Power	AFC-220	890411	—	—
74	Switching Mode Power Supply	Manson	SIM-9106	350400004	2017.1.3	2018.1.2
75	Tape line	Great Wall	GW-589E	18955	2017.1.3	2018.1.2
76	Platform Scale	Shanghai	TGT-100	ATCS-76	2017.1.3	2018.1.2
77	Timer	Tian Fu	PC396	AT24H	2017.1.3	2018.1.2
78	Digital Power Meter	Qingzhi	8716C	870512009	2017.1.3	2018.1.2
79	Digital Power Meter	Qingzhi	8716C	870512012	2017.1.3	2018.1.2

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No.	Equipment	Manufacturer	Model No.	Serial No.	Calibrati on date	Calibrati on due date
80	Digital Power Meter	Everfine	PF9805	301020	2017.1.3	2018.1.2
81	Digital Power Meter	iDRC	CP-280	280887	2017.1.3	2018.1.2
82	Data Acquisition / Switch Unit	Agilent	34970A	MY44008068	2017.1.3	2018.1.2
83	Glow Wire Test Set	Zhilitong	GTR-B	R024007	2017.1.3	2018.1.2
84	Needle Flame Test Set	Zhilitong	ZY-2	Y021507	2017.1.3	2018.1.2
87	Switching Mode Power Supply	Manson	SIM-9303	G290700126	—	—
88	Ball Pressure Tester	Zhilitong	QY-1	Q013408/ATCS-88	2017.1.3	2018.1.2
89	Ball Pressure Tester	Zhilitong	QY-1	Q013508/ATCS-89	2017.1.3	2018.1.2
90	Oscilloscope voltage probe (100X)	Tektronix	P5100	23489-6	2017.1.3	2018.1.2
91	K type thermocouple	OMEGA	TT-K-30-1000	ATCS-91	2017.1.3	2018.1.2
92	J type thermocouple	OMEGA	TT-J-30-1000	ATCS-92	2017.1.3	2018.1.2
93	Small finger probe (Φ8.6)	HUANAN	EX-A02	ATCS-93	2017.1.3	2018.1.2
94	Small finger probe (Φ5.6)	HUANAN	EX-A02	ATCS-94	2017.1.3	2018.1.2
95	Draught-proof enclosure	Shanghai Jingtian	DMS-B12	DAMS2009110136	2017.1.3	2018.1.2
96	Proof tracking Test Apparatus	Shenzhen Demaisheng	LD-H	TI09101201	2017.1.3	2018.1.2
97	228 meter	SIMPSON	228	10-866030	2017.1.3	2018.1.2
98	Digital Caliper	Guang Lu	(0-150mm)/ 0.01mm	090074695	2017.1.3	2018.1.2
99	Torque Driver	Kanon	10DPSK	0907005	2017.1.3	2018.1.2
100	Digital Power Meter	Yokogawa	WT110	12VC26618M	2017.1.3	2018.1.2
101	Desktop Multi Meter	Fluke	45	7664009	2017.1.3	2018.1.2
102	Steel Ball	XINNA	YD2810B	11051101	2017.1.3	2018.1.2
104	Digital Power Meter	Qingzhi	8716C	871102401	2017.1.3	2018.1.2
105	Data Acquisition / Switch Unit	Agilent	34970A	MY44060502	2017.1.3	2018.1.2
106	K type thermocouple	OMEGA	TT-K-30	ATCS-106	2017.1.3	2018.1.2
107	E27 Cap "GO" Gauge	Guangzhou Gerui	7006-27B-1	GRT110727002	2017.1.3	2018.1.2
108	E27 Cap "NOT GO" Gauge	Guangzhou Gerui	7006-28A-1	110711012	2017.1.3	2018.1.2
109	E27 Cap "GO" Gauge for dimension S1	Guangzhou Gerui	7006-27C-1	110720005	2017.1.3	2018.1.2
110	E27 Cap Gauge for testing contact making	Guangzhou Gerui	7006-50-1	110711013	2017.1.3	2018.1.2
111	E27 Cap Gauge for testing contact making	Guangzhou Gerui	7006-51-2	110711005	2017.1.3	2018.1.2
112	E27 Cap Gauge for testing protection against accidental contact during insertion	Guangzhou Gerui	7006-51A-2	110720008	2017.1.3	2018.1.2
113	E14 Cap "GO" Gauge	Guangzhou Gerui	7006-27F-1	110711046	2017.1.3	2018.1.2
114	E14 Cap "NOT GO" Gauge	Guangzhou Gerui	7006-28B-1	110711044	2017.1.3	2018.1.2
115	E14 Cap "GO" Gauge for dimension S1	Guangzhou Gerui	7006-27G-1	110711050	2017.1.3	2018.1.2
116	E14 Cap Gauge for testing contact making	Guangzhou Gerui	7006-54-2	110711040	2017.1.3	2018.1.2
117	E14 Cap Gauge for testing protection against accidental contact	Guangzhou Gerui	7006-55-2	110711037	2017.1.3	2018.1.2
118	G13 "GO" Gauge	Guangzhou Gerui	7006-45-4	GRT11092730	2017.1.3	2018.1.2
119	G13 "GO" and "NOT GO" Gauge	Guangzhou Gerui	7006-44-4	GRT11092731	2017.1.3	2018.1.2
120	Power cord flexing and swivel tester	DEMAISHENG	DMS-801H	2011DMS-801H0902	2017.1.3	2018.1.2
121	10 kV surge tester	CEPREI	1065A	1108AG41	2017.1.3	2018.1.2
122	Cylindrical contact plane(Φ12.7)	Zhilitong	Φ12.7mm	ATCS-122	2017.1.3	2018.1.2
123	Cylindrical contact plane(Φ30)	Zhilitong	Φ30mm	ATCS-123	2017.1.3	2018.1.2
124	0.1Ω constant resistance	Zhilitong	0.1Ω	ATCS-124	2017.1.3	2018.1.2
125	30A Current Shunt	Agilent	34330A	0418	2017.1.3	2018.1.2
126	Test Probe	Zhilitong	ZLT-I23	I231201	2017.1.3	2018.1.2
127	Test A Probe	Zhilitong	ZLT-I01	I011201	2017.1.3	2018.1.2
128	Test C Probe	Zhilitong	ZLT-I03	I031201	2017.1.3	2018.1.2

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No.	Equipment	Manufacturer	Model No.	Serial No.	Calibrati on date	Calibrati on due date
129	Test D Probe	Zhilitong	ZLT-I04	I041203	2017.1.3	2018.1.2
130	Test 31 Probe	Zhilitong	ZLT-I14	I141201	2017.1.3	2018.1.2
131	Wedge-shaped test probe	Zhilitong	ZLT-U14	U141202	2017.1.3	2018.1.2
132	Hammer	Zhilitong	ZLT-CJ1	C011208	2017.1.3	2018.1.2
133	Steel Ball(Φ12.5)	Zhilitong	ZLT-I06	I061201	2017.1.3	2018.1.2
134	Tumbling Barrel	Zhilitong	ZLT-GT2	G021202	2017.1.3	2018.1.2
136	Transformer bump testing appliance	SHENZHEN GANGWEI	ATCS-136	ATCS-136	2017.1.3	2018.1.2
137	HOT WIRE ANEMOMETER	Lutron	AM-4204	Q619466	2017.1.3	2018.1.2
138	Magnifier	ZHONGXUN	ATCS-138	3001003939	2017.1.3	2018.1.2
139	Digital Protractor	GUANGZHOU XINHE	82201B-00	ATCS-139	2017.1.3	2018.1.2
140	Test chain	GUANGZHOU XINHE	SH3306	50612	2017.1.3	2018.1.2
141	G13 lamp holder test fixture	SHENZHEN GANGWEI	ATCS-141	ATCS-141	—	—
142	Digital Power Meter	YOKOGAWA	WT210	91F603491	2017.1.3	2018.1.2
143	Leakage Current Meter	CHANGSHENG	CS5520E	1109203-002	2017.1.3	2018.1.2
144	Oscilloscope voltage probe (1000X)	Tektronix	P6015	010-0131-00	2017.1.3	2018.1.2
145	Electronic Scale	XIANGSHAN	ACS-6-ZE1	3050111	2017.1.3	2018.1.2
146	High-frequency spark generator	SPKM	SPKM-M15	19121366236	—	—
147	Frequency Converter Power Supply	APE	AFR-230	991787	—	—
148	Touch Current Meter	CEPREI	421A	1309AG20	2017.1.3	2018.1.2
149	Hi-Pot Tester	KIKUSUI	TOS5051	EL003517	2017.1.3	2018.1.2
150	Electronic Thermo-Hygrometer	YINDU	YD-HT818J	YD1404172	2017.1.3	2018.1.2
151	Electronic load	Chroma	6304	63044415	2017.1.3	2018.1.2
152	Digital Caliper	Guang Lu	(0~150mm)/0. 01mm	K14M019684	2017.1.3	2018.1.2
153	Digital Caliper	Guang Lu	(0~150mm)/0. 01mm	K14M019452	2017.1.3	2018.1.2
154	DIGITAL ILLUMINANCE METER	TES	TES-1335	141207331	2017.1.3	2018.1.2
155	Luminance Meter	TES	TES-137	150105221	2017.1.3	2018.1.2
158	Crush test apparatus	DONGGUAN JIANCIE	ATCS-158	ATCS-158	2017.1.3	2018.1.2
159	E27 Test Lampholder	DONGGUAN JIANCIE	E27	ATCS-159	—	—
160	E14/20 Test Lampholder	DONGGUAN JIANCIE	E14/20	ATCS-160	—	—
161	Centre Punch	HANDUN	59558	ATCS-161	—	—
162	Electronic load	Chroma	8604	53045123	2017.1.3	2018.1.2
163	Oven Chamber	YIHENG	DHG-9245A	151143120	2017.1.3	2018.1.2
164	Desktop Multi Meter	HEWLETT PACKARD	34401A	US36067693	2017.1.3	2018.1.2
E30	LCR bridge	YANGZHI	YD2810B	272	2017.1.3	2018.1.2
E53	Exposure level tester	NARDA	2304/03	B-0138	2017.1.3	2018.1.2
E54	Magnetic field probe 100cm2	NARDA	2300/90.10	B-0137	2017.1.3	2018.1.2

Appendix 2
Photo documentation

Photo 1

View:

- ☐ front
- ☐ rear
- ☐ right side
- ☐ left side
- ☒ top
- ☐ bottom
- ☐ internal



Photo 2

View:

- ☐ front
- ☐ rear
- ☐ right side
- ☐ left side
- ☐ top
- ☒ bottom
- ☐ internal



Photo documentation

Photo 3

View:

- ☐ front
- ☒ rear
- ☐ right side
- ☐ left side
- ☐ top
- ☐ bottom
- ☐ internal



Photo 4

View:

- ☐ front
- ☐ rear
- ☐ right side
- ☐ left side
- ☐ top
- ☐ bottom
- ☒ internal



Photo documentation

Photo 5

View:

- ☐ front
- ☐ rear
- ☐ right side
- ☐ left side
- ☐ top
- ☐ bottom
- ☒ internal



Photo 6

View:

- ☐ front
- ☐ rear
- ☐ right side
- ☐ left side
- ☐ top
- ☐ bottom
- ☒ internal

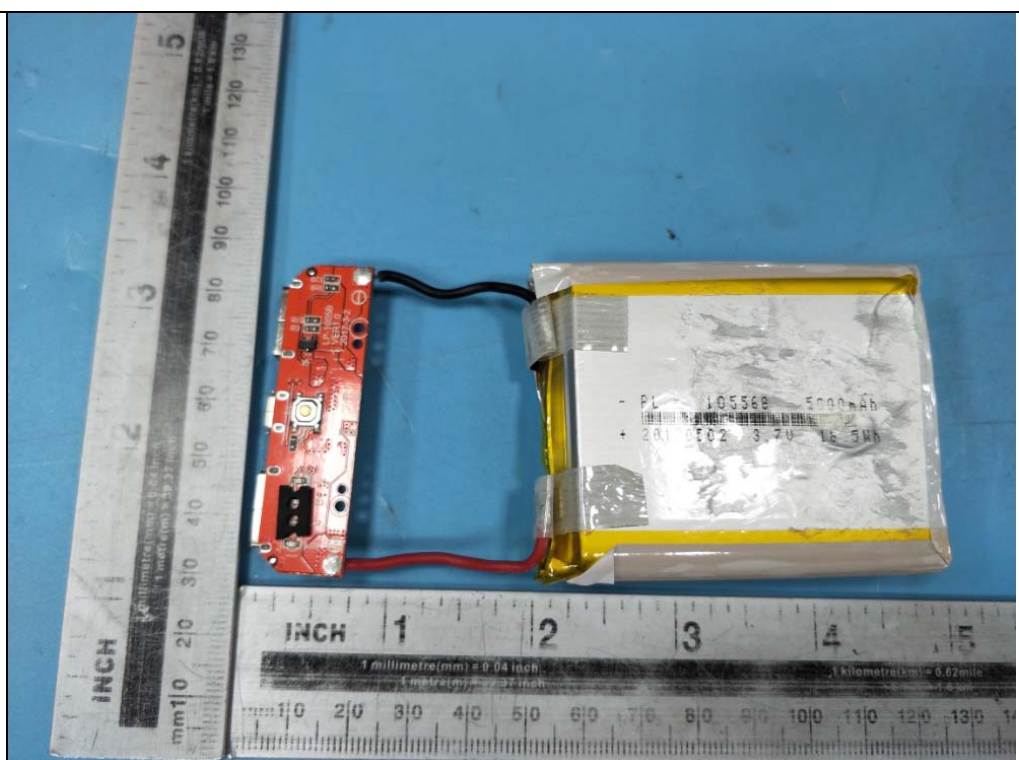


Photo documentation

Photo 7

View:

- ☐ front
- ☐ rear
- ☐ right side
- ☐ left side
- ☐ top
- ☐ bottom
- ☒ internal

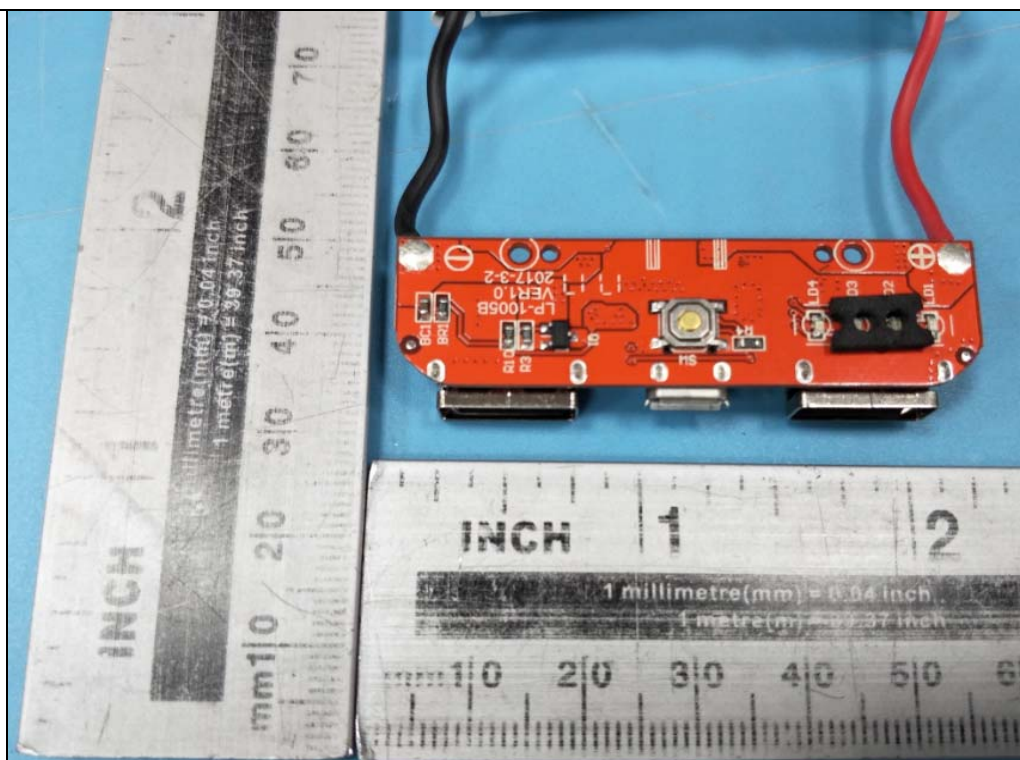
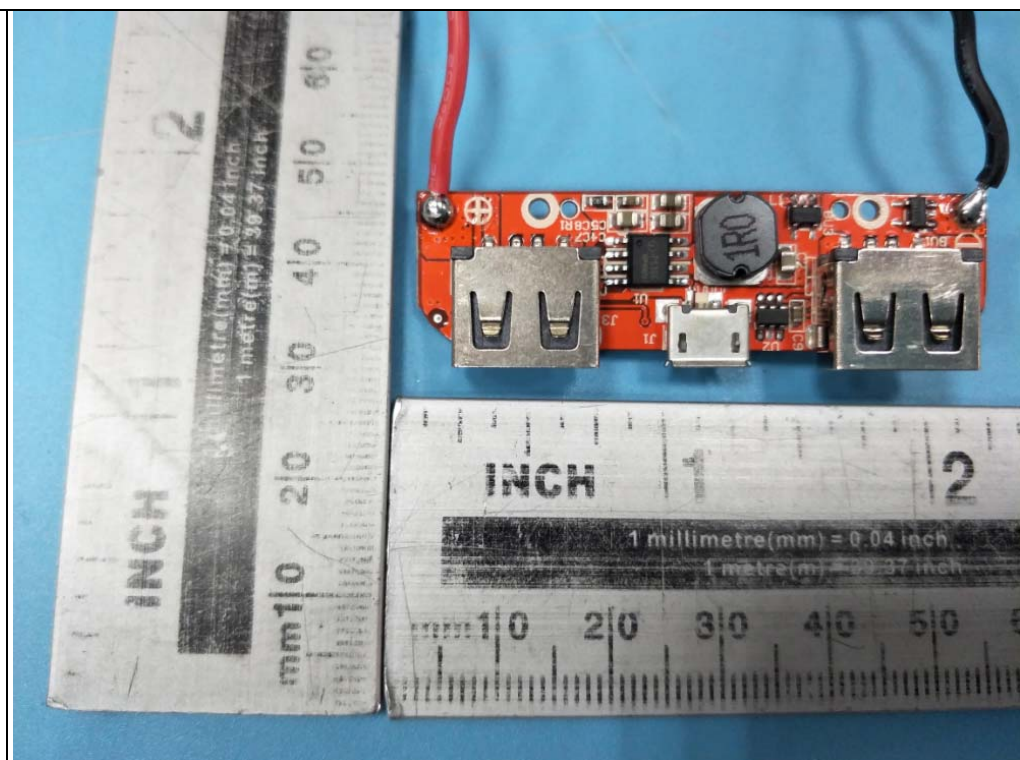


Photo 8

View:

- ☐ front
- ☐ rear
- ☐ right side
- ☐ left side
- ☐ top
- ☐ bottom
- ☒ internal



IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....: EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013

Attachment Form No......: EU_GD_IEC60950_1F

Attachment Originator: SGS Fimko Ltd

Master Attachment: Date 2014-02

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EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013 – CENELEC COMMON MODIFICATIONS

IEC 60950-1, GROUP DIFFERENCES (CENELEC COMMON MODIFICATIONS EN)			
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		N/A
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.		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
1.1.1 (A1:2010)	Replace 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.		N/A
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.		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		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 *		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.		N/A
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.		N/A
	Zx Protection against excessive sound pressure from personal music players		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>Zx.1 General</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"> – is designed to allow the user to listen to recorded or broadcast sound or video; and – primarily uses headphones or earphones that can be worn in or on or around the ears; and – allows the user to walk around while in use. <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"> – while the personal music player is connected to an external amplifier; or – while the headphones or earphones are not used. <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"> – hearing aid equipment and professional equipment; <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
	<ul style="list-style-type: none"> – 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>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>		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>Zx.2 Equipment requirements</p> <p>No safety provision is required for equipment that complies with the following:</p> <ul style="list-style-type: none"> – equipment provided as a package (personal music player with its listening device), where the acoustic output $L_{Aeq,T}$ is ≤ 85 dBA measured while playing the fixed “programme simulation noise” as described in EN 50332-1; and – a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” as described in EN 50332-1. <p>NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level $L_{Aeq,T}$ is meant. See also Zx.5 and Annex Zx.</p> <p>All other equipment shall:</p> <ul style="list-style-type: none"> a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and 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 		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"> 1) equipment provided as a package (player with its listening device), the acoustic output shall be ≤ 100 dBA measured while playing the fixed "programme simulation noise" described in EN 50332-1; and 2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ≤ 150 mV measured as described in EN 50332-2, while playing the fixed "programme simulation noise" described in EN 50332-1. <p>For music where the average sound pressure (long term $L_{Aeq,T}$) 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 $L_{Aeq,T}$) 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>		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>Zx.3 Warning</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"> – the symbol of Figure 1 with a minimum height of 5 mm; and – the following wording, or similar: <p>“To prevent possible hearing damage, do not listen at high volume levels for long periods.”</p>  <p>Figure 1 – Warning label (IEC 60417-6044)</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
	Zx.4 Requirements for listening devices (headphones and earphones)		N/A
	<p>Zx.4.1 Wired listening devices with analogue input</p> <p>With 94 dBA sound pressure output $L_{Aeq,T}$, the input voltage of the fixed “programme simulation noise” described in EN 50332-2 shall be ≥ 75 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>Zx.4.2 Wired listening devices with digital input</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 $L_{Aeq,T}$ of the listening device shall be ≤ 100 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>Zx.4.3 Wireless listening devices</p> <p>In wireless mode:</p> <ul style="list-style-type: none"> – with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and – respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and – 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 $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. <p>NOTE An example of a wireless listening device is a Bluetooth headphone.</p>		N/A
	<p>Zx.5 Measurement methods</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>		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>		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'.		N/A
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.		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> <p>Up to and including 6 0,75 ^{a)} Over 6 up to and including 10 (0,75) ^{b)} 1,0 Over 10 up to and including 16 (1,0) ^{c)} 1,5 </p> <p>In the conditions applicable to Table 3B delete the words "in some countries" in condition ^{a)}.</p> <p>In NOTE 1, applicable to Table 3B, delete the second sentence.</p>		N/A
3.2.5.1 (A2:2013)	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD		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
3.3.4	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		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).		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.		N/A
Bibliography	Additional EN standards.		—

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS		—
ZB ANNEX (NORMATIVE) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.2.4.1	In Denmark , 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.		N/A
1.2.13.14 (A11:2009)	In Norway and Sweden , for requirements see 1.7.2.1 and 7.3 of this annex.		N/A
1.5.7.1 (A11:2009)	In Finland , Norway and Sweden , 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.		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
1.5.8	In Norway , 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 Finland, Norway and Sweden , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A
1.7.2.1	In Finland, Norway and Sweden , 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. The marking text in the applicable countries shall be as follows: In Finland : "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In Norway : "Apparatet må tilkoples jordet stikkontakt" In Sweden : "Apparaten skall anslutas till jordat uttag"		N/A
1.7.2.1 (A11:2009)	In Norway and Sweden , 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. 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. 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: "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)."		

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>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 jordtilkoplet utstyr – og er tilkoplet 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>		N/A
1.7.2.1 (A2:2013)	<p>In Denmark, 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 Denmark shall be as follows: In Denmark: “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 Denmark, 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 CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.</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
1.7.5 (A2:2013)	In Denmark , socket-outlets for providing power to other equipment shall be in accordance with the DS 60884-2-D1:2011. 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. 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. Justification the Heavy Current Regulations, 6c		N/A
2.2.4	In Norway , 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 Finland, Norway and Sweden 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 Norway , 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 United Kingdom , the current rating of the circuit shall be taken as 13 A, not 16 A.		N/A
2.7.1	In the United Kingdom , 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.		N/A
2.10.5.13	In Finland, Norway and Sweden , 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	In Switzerland , 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: SEV 6532-2:1991 Plug Type 15 3P+N+PE 250/400 V, 10 A		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>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>		N/A
3.2.1.1	<p>In Denmark, 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>		N/A
3.2.1.1 (A2:2013)	<p>In Denmark, 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

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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
3.2.1.1	<p>In Spain, 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>		N/A
3.2.1.1	<p>In the United Kingdom, 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>		N/A
3.2.1.1	<p>In Ireland, 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.</p>		N/A
3.2.4	<p>In Switzerland, for requirements see 3.2.1.1 of this annex.</p>		N/A
3.2.5.1	<p>In the United Kingdom, a power supply cord with conductor of 1,25 mm² is allowed for equipment with a rated current over 10 A and up to and including 13 A.</p>		N/A
3.3.4	<p>In the United Kingdom, 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:</p> <ul style="list-style-type: none"> • 1,25 mm² to 1,5 mm² nominal cross-sectional area. 		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
4.3.6	In the United Kingdom , 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.		N/A
4.3.6	In Ireland , 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.		N/A
5.1.7.1	In Finland, Norway and Sweden TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: <ul style="list-style-type: none"> • STATIONARY PLUGGABLE EQUIPMENT TYPE A that is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT. 		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
6.1.2.1 (A1:2010)	<p>In Finland, Norway and Sweden, 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"> - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. <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"> - 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 - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. 		N/A
	<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"> - 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; - the additional testing shall be performed on all the test specimens as described in EN 60384-14: - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14. 		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
6.1.2.2	In Finland, Norway and Sweden , 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 Finland, Norway and Sweden , 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.		N/A
7.3 (A11:2009)	In Norway and Sweden , for requirements see 1.2.13.14 and 1.7.2.1 of this annex.		N/A

Annex ZD (informative)

IEC and CENELEC code designations for flexible cords

Type of flexible cord	Code designations	
	IEC	CENELEC
PVC insulated cords		
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
Rubber insulated cords		
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
Cords having high flexibility		
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