

Safety Test Report

Report No.: AGC04494190401ES01

PRODUCT DESIGNATION: Bobby tech(wireless charger)

BRAND NAME : N/A

MODEL NAME : P705.251

CLIENT : Xindao B.V.

DATE OF ISSUE: May.05, 2019

STANDARD(S) : EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013

REPORT VERSION: V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd.

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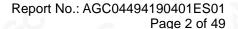




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TEST REPORT

EN 60950-1

Information technology equipment-Safety-Part 1: General requirements

Report Reference No...... AGC04494190401ES01

Tested by (+ signature) Richie Fan

Reviewed by (+ signature) Byron Wang

Matte He

Approved by (+signature)(Authorized Officer)

Date of issue May.05, 2019

Contents...... Total 49 pages.

Testing laboratory

Name...... Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping

Community, Fuhai Street, Bao 'an District, Shenzhen, Guangdong, China

Richie Fan Byron Wang mette He

Testing location...... Same as above.

Applicant

Name....: Xindao B.V.

Address P.O. Box 3082, 2280 GB, Rijswijk, The Netherlands

Manufacturer

Name.....: Xindao B.V.

Address P.O. Box 3082, 2280 GB, Rijswijk, The Netherlands

Factory

Name.....: Xindao B.V.

Address P.O. Box 3082, 2280 GB, Rijswijk, The Netherlands

Test specification

Standard...... EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013

Test procedure Type test

Procedure deviation..... N/A

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

Test Report Form/blank test report

Test Report Form No...... AGC60950A9

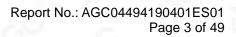
Test Report Form(s) Originator...... AGC



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Xixiang, Bao'an District, Shenzhen, Guangdong, China





Master TRF	Dated 2018-09
Test item	
Product designation:	Bobby tech(wireless charger)
Brand name:	N/A
Test model	P705.251
Series model	N/A
Rating(s):	Input: 5V , 2A/ 9V , 1.67A Output Power: 5V , 2A/ 9V , 1.1A
Particulars	
Equipment mobility	. ⊠movable ☐ hand-held ⊠transportable ☐ stationary ☐ for building-in ☐ direct plug-in
Connection to the mains	. □pluggable equipment □ type A □type B
	☐permanent connection☐detachable power supply cord
	non-detachable power supply cord
	⊠not directly connected to the mains
Operating condition	. ⊠continuous □rated operating/ resting time:
Access location	
	restricted access location
Over voltage category(OVC)	: □OVC I □OVC II □OVC IV ☑other
Mains supply tolerance(%) or absolute values	
Tested for IT power systems	: □Yes ⊠No
IT testing, phase-phase voltage(V)	
Class of Equipment	. □Class I □Class II □Class III □not classified
Considered current rating of protective of the building installation (A)	
Pollution degree(PD)	: □PD 1 □PD3
Protection against ingress of water	: IPX0
Altitude during operation (m)	: 2000m
Altitude of test laboratory (m)	: <500m
Mass of equipment (kg)	: <1kg
Test case verdicts	
Test case does not apply to the test ob	ject: N (/A)
Test item does meet the requirement	: P (ass)
Test item does not meet the requireme	nt: F (ail)
Testing	
Date of receipt of test item	: Apr.17, 2019
Date(s) of performance of test	: Apr.17 – Apr.24, 2019







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Attachment A.....: Photos of product

General remarks

This report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item tested.

"(See remark #)" refers to a remark appended to the report.

"(See appended table)" refers to a table appended to the report.

Throughout this report a comma is used as the decimal separator.

Report Revise Re	cord:	100	-,0	
Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	CH	May.05, 2019	Valid	Initial release

General product information

The product supplied by approved adapter, it is considered as stationary and Class III (supplied by SELV). Instructions and equipment marking related to safety is applied in the language that is acceptable in the country in which the equipment is to be sold.

The product was submitted and tested for use at the manufacturer's recommended ambient temperature (Tma) of 40°C.

Summary of testing

The test item passed.

Copy of marking plates

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

Bobby tech(wireless charger)

Model: P705.251

Input: 5V ===, 2A 9V ===, 1.67A

Output Power: 5V ---, 2A 9V ---, 1.1A

Xindao B.V.

P.O. Box 3082. 2280 GB.Rijswijk, The Netherlands

Importer: XXXXXXXX

Address: XXXXXXXX Made In China

Remark:

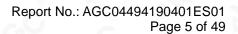
- 1) The CE marking and WEEE symbol (if any) should be at least 5mm and 7mm respectively in height.
- 2) The markings and instructions are the minimum requirements required by safety standard. For final production samples, the additional markings which do not give rise to misunderstanding may be added.
- 3) As declared by the applicant, the importer (and manufacturer, if it is different)'s name, registered trade name or mark and the postal address will be marked on the products before being place on the market.
- 4) Marking on the packaging or in a document accompanying the electrical equipment is only acceptable if it is not possible to place such markings on the product.



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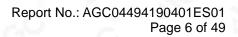
		EN 60950-1		
Clause	Requirement – Test		Result – Remark	Verdict

1	GENERAL		Р
1	GENERAL		

1.5	Components		Р
1.5.1	General	L C	Р
,C	Comply with IEC 60950 or relevant component standard	Components which were found to affect safety aspects comply with the requirements of this standard or with the safety aspects of the relevant IEC/EN component standards. (see appended table 1.5.1)	P
1.5.2	Evaluation and testing of components	Components which are certified to IEC/EN and/or national standards are used correctly within their ratings. Components not covered by IEC/EN standards are tested under the conditions present in the equipment.	P
1.5.3	Thermal controls	No any thermal controls.	N
1.5.4	Transformers	No transformers	N
1.5.5	Interconnecting cables	V 700 - C	N
1.5.6	Capacitors bridging insulation	No such capacitor.	N
1.5.7	Resistors bridging insulation	No such components.	N
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	200	N
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains antenna or coaxial cable	100 LCC C	N
1.5.8	Components in equipment for IT power systems		N
1.5.9	Surge suppressors	No such parts.	N
1.5.9.1	General		N
1.5.9.2	Protection of VDRs		N
1.5.9.3	Bridging of functional insulation by a VDR	G P P	N
1.5.9.4	Bridging of basic insulation by a VDR		N
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR	P 20 10	N

1.6	Power interface	NO CO C	Р
1.6.1	AC power distribution systems	No direct mains connection.	N



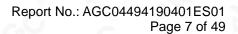




	EN 60	950-1	
Clause	Requirement – Test	Result – Remark	Verdict
1.6.2	Input current	(See appended table 1.6.2)	Р
1.6.3	Voltage limit of hand-held equipment		N
1.6.4	Neutral conductor	Class III equipment, no neutral conductor.	N

1.7	Marking and instructions		P
1.7.1	Power rating	See below	Р
	Rated voltage(s) or voltage range(s) (V)	See marking plate	
	Symbol for nature of supply, for d.c. only:	See marking plate	
- (Rated frequency or rated frequency range (Hz):	J _ C	
10	Rated current (mA or A)	See marking plate	
1.7.1.2	Identification markings		Р
60	Manufacturer's name or trademark or identification mark	See marking plate	
	Type/model or type reference:	See marking plate	
0	Symbol for Class II equipment only:		
0	Other marking and symbols:	See marking plate.	
1.7.1.3	Use of graphical symbols	- 10 - 20	Р
1.7.2	Safety instructions and marking	Provided.	Р
1.7.2.1	General	See below.	Р
1.7.2.2	Disconnect devices	No such devices	_© N
1.7.2.3	Overcurrent protective device	100	N
1.7.2.4	IT power distribution systems	。	N
1.7.2.5	Operator access with a tool	60	N
1.7.2.6	Ozone	50 -C	N
1.7.3	Short duty cycles	Equipment is designed for continuous operation.	N
1.7.4	Supply voltage adjustment:	No such devices used	N
	Methods and means of adjustment; reference to installation instructions:	· 100	N
1.7.5	Power outlets on the equipment:	0 2 5	N
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference):	No You	N
1.7.7	Wiring terminals	0	N
1.7.7.1	Protective earthing and bonding terminals:	Class III equipment, no protective earthing	N



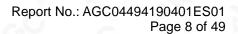




	EN 60950-1		
Clause	Requirement – Test	Result – Remark	Verdict
1.7.7.2	Terminal for a.c. mains supply conductors	30 .00	N
1.7.7.3	Terminals for d.c. mains supply conductors		N
1.7.8	Controls and indicators	-G	Р
1.7.8.1	Identification, location and marking:	It is obviously unnecessary.	N
1.7.8.2	Colours:	The colours used for LED are indicating function. No safety consideration.	P
1.7.8.3	Symbols according to IEC 60417		N
1.7.8.4	Markings using figures	Not applicable.	N
1.7.9	Isolation of multiple power sources:	No direct connection to mains supply	N
1.7.10	Thermostats and other regulating devices	No thermostats or other regulating devices used	N
1.7.11	Durability	The marking withstands required tests.	Р
1.7.12	Removable parts	No such parts.	N
1.7.13	Replaceable batteries	No battery	N
6.	Language(s)	C	
1.7.14	Equipment for restricted access locations:	0 20 2	N

2	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energy hazards	No hazardous parts in operator access areas.	Р
2.1.1	Protection in operator access areas		Р
2.1.1.1	Access to energized parts	No energized parts.	Р
0	Test by inspection		
	Test with test finger(Figure 2A)	- C	
(S)	Test with test pin (Figure 2B)		
	Test with test probe (Figure 2C)	GO ZG Z	
2.1.1.2	Battery compartments	. 10	N
2.1.1.3	Access to ELV wiring	G 2 P	N
10	Working voltage (Vpeak or Vrms); minimum distance (mm) through insulation	NOO LOC	
2.1.1.4	Access to hazardous voltage circuit wiring	. 1	N
2.1.1.5	Energy hazards	No energy hazard in operator access area.	Р
2.1.1.6	Manual controls	P 30	N







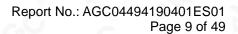
	EN 60950-1		
Clause	Requirement – Test	Result – Remark	Verdict
2.1.1.7	Discharge of capacitors in equipment	No primary circuit.	N
0	Time-constant (s); measured voltage (V)		
2.1.1.8	Energy hazards – d.c. mains supply	Not directly connect to mains supply	N
0	a)Capacitor connected to the d.c. mains supply:	30	N
0	b)Internal battery connected to the d.c. mains supply:	100	N
2.1.1.9	Audio amplifiers	No any amplifiers	N
2.1.2	Protection in service access areas	- 10	N
2.1.3	Protection in restricted access locations	0	N

2.2	SELV circuits	200	Р
2.2.1	General requirements	42.4V peak or 60VDC are not exceeded in SELV circuit under normal operation or single fault condition.	P
2.2.2	Voltages under normal conditions (V)	Within SELV limits.	Р
2.2.3	Voltages under fault conditions (V)	Within SELV limits.	Р
2.2.4	Connection of SELV circuits to other circuits:	6 - 6	N

2.3	TNV circuits		N
2.3.1	Limits	No TNV circuits.	N
10	Type of TNV circuits:	300	N
2.3.2	Separation from other circuits and from accessible parts	· No. 10	N
2.3.2.1	General requirements	20 2	N
2.3.2.2	Protection by basic insulation	30 -0	N
2.3.2.3	Protection by earthing		N
2.3.2.4	Protection by other constructions	a.C	N
2.3.3	Separation from hazardous voltages	0 00	N
	Insulation employed:		N
2.3.4	Connection of TNV circuits to other circuits		N
NO	Insulation employed:	60 6	_® N
2.3.5	Test for operating voltages generated externally		N

2.4	Limited current circuits		N
2.4.1	General requirements	No limited current circuits to be	N
		evaluated.	





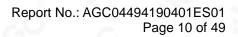


	EN 60950-1		
Clause	Requirement – Test	Result – Remark	Verdict
2.4.2	Limit values	100	N
0	Frequency (Hz)		N
C	Measured current (mA)	-0	N
10	Measured voltage (V)	100	N
	Measured capacitance (nF or μF)		N
2.4.3	Connection of limited current circuits to other circuits	GC - C	N

2.5	Limited power sources	N
	a)Inherently limited output	N N
1	b)Impedance limited output	N
	c)Regulating network limited output under normal operating and single fault condition	N
	d)Overcurrent protective device limited output	N
	Max. output voltage (V), max. output current (A), max. apparent power (VA):	- CO -
G	Current rating of overcurrent protective device (A)	N
	Use of integrated circuit (IC) current limited	N

2.6	Provisions for earthing and bonding		N
2.6.1	Protective earthing	Class III equipment.	N
2.6.2	Functional earthing	200	N
0	Use of symbol for functional earthing		N
2.6.3	Protective earthing and protective bonding conductors	100 c	N
2.6.3.1	General	D 30 20	N
2.6.3.2	Size of protective earthing conductors		N
	Rated current (A), cross-sectional area (mm²), AWG	GO GO	N
2.6.3.3	Size of protective bonding conductors		N
- 6	Rated current (A), cross-sectional area (mm²), AWG	0 6 6	N
2.6.3.4	Resistance of earthing conductors and their terminations, resistance(Ω), voltage drop(V),test current (A), duration(min)	100 No	N
2.6.3.5	Colour of insulation	- CO - C	N
2.6.4	Terminals	- C	N







	EN 60950-1				
Clause	Requirement – Test	Result – Remark	Verdict		
2.6.4.1	General	30 .00	N		
2.6.4.2	Protective earthing and bonding terminals		N		
GC	Rated current (A), type and nominal thread diameter (mm):	NOC -C	N		
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors	F. 10- 100	N		
2.6.5	Integrity of protective earthing	20 2	N		
2.6.5.1	Interconnection of equipment	S 100 -0	N		
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N		
2.6.5.3	Disconnection of protective earth	20 a	N		
2.6.5.4	Parts that can be removed by an operator	100	N		
2.6.5.5	Parts removed during servicing		N		
2.6.5.6	Corrosion resistance	-0	N		
2.6.5.7	Screws for protective bonding	20 00 0	N		
2.6.5.8	Reliance on telecommunication network or cable distribution system	200	N		

2.7	Overcurrent and earth fault protection in primary circuits		N
2.7.1	Basic requirements	Supplied by SELV	N
, G	Instructions when protection relies on building installation	COC CO P	N
2.7.2	Faults not covered in 5.3.7	F	N
2.7.3	Short-circuit backup protection	® N. YO	N
2.7.4	Number and location of protective devices:	-0	N
2.7.5	Protection by several devices	200 -0	N
2.7.6	Warning to service personnel:		N

2.8	Safety interlocks		N
2.8.1	General principles	No safety interlocks	N
2.8.2	Protection requirements	-0	N
2.8.3	Inadvertent reactivation		N
2.8.4	Fail-safe operation	100	N
(6)	Protection against extreme hazard	-C	N
2.8.5	Moving parts	60 6	N
2.8.6	Overriding	100	N





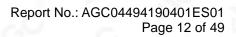


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	EN 60950-1				
Clause	Requirement – Test	Result – Remark	Verdict		
2.8.7	Switches and relays	100	N		
2.8.7.1	Contact gaps (mm)		N		
2.8.7.2	Overload test	-G .	N		
2.8.7.3	Endurance test	10	N		
2.8.7.4	Electric strength test		N		
2.8.8	Mechanical actuators	-C. 0 V	N		
2.0.0	Woodania actuatoro				

2.9	Electrical insulation		N
2.9.1	Properties of insulating materials Natural rubber, asbestos or hygroscopic materials are not used.		N
2.9.2	Humidity conditioning	300 - 0	N
	Humidity (%),temperature (°C)		N
2.9.3	Grade of insulation		N
2.9.4	Separation from hazardous voltages	- 60 6	N
	Method(s) used:	E 40 4.0	N

2.10	Clearances, creepage distances and distances	through insulation	N
2.10.1	General	Functional insulation only.	N
	Frequency		N
1	Pollution degrees		N
< G	Reduced values for functional insulation	100 C	N
	Intervening unconnected conductive parts	P	N
8	Insulation with varying dimensions	. 10	N
60	Special separation requirements	-C	N
	Insulation in circuits generating starting pulses	30 -0	N
2.10.2	Determination of working voltage		N
2.10.3	Clearances	-0	N
2.10.3.1	General	0 .00	N
2.10.3.2	Mains transient voltages	, D	N
	a)AC mains supply	C · V	N
< G	b)Earthed d.c. mains supplies	60 6	。 N
	c)Unearthed d.c. main supplies	E 100 c	N
(8)	d)Battery operation:	。	N
2.10.3.3	Clearances in primary circuits	CO C	N
2.10.3.4	Clearances in secondary circuits	200 - 0	N







	EN 60950-1		
Clause	Requirement – Test	Result – Remark	Verdict
2.10.3.5	Clearances in circuits having starting pulses	30 .00	N
2.10.3.6	Transients from a.c. mains supply:		N
2.10.3.7	Transients from d.c. mains supply:	-C 0 F	N
2.10.3.8	Transients from telecommunication networks and cable distribution systems:	No 100 CC	N
2.10.3.9	Measurement of transient voltage levels		N
	a)Transients from a mains supply	GU - CI	N
	For a.c. mains supply:	. 10	N
	For d.c. mains supply:		N
	b)Transients from	U C 0 P	N
2.10.4	Creepage distances	100	N
2.10.4.1	General	100	N
2.10.4.2	Material group and comparative tracking index		N
C	CTI tests	-C -	N
2.10.4.3	Minimum creepage distances	N 10	N
2.10.5	Solid insulation		N
2.10.5.1	General	6 - 6	N
2.10.5.2	Distances through insulation	100	N
2.10.5.3	Insulation compound as solid insulation		N
2.10.5.4	Semiconductor device	U _C	N
2.10.5.5	Cemented joints	300	o N
2.10.5.6	Thin sheet material - General		N
2.10.5.7	Separable thin sheet material		N
0	Number or layers(pcs):	- GU C .	N
2.10.5.8	Non-separable thin sheet material	D 30 20	N
2.10.5.9	Thin sheet material – standard test procedure		N
, ,	Electric strength test	CO C .	N
2.10.5.10	Thin sheet material – alternative test procedure	× 00	N
	Electric strength test	· P	N
2.10.5.11	Insulation in wound components	0 2 5	N
2.10.5.12	Wire in wound components	-C	_ N
	Working voltage:		N
(6)	a)Basic insulation not under stress:		N
60	b)Basic, supplementary, reinforced insulation:	- GO - C	N
	c)Compliance with Annex U:	D	N



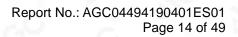




EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
10	Two wires in contact inside wound component; angle between 45° and 90°:	300	N
2.10.5.13	Wire with solvent-based enamel in wound components	60 6	N
	Electric strength test	E 40 4.0	N
©	Routine test	。	N
2.10.5.14	Additional insulation in wound components	20 2	N
	Working voltage	S 100 -0	N
	-basic insulation not under stress	. P	N
	-Supplementary, reinforced insulation:	0 2	N
2.10.6	Construction of printed boards	- GU - C	N
2.10.6.1	Uncoated printed boards	D 10	N
2.10.6.2	Coated printed boards		N
2.10.6.3	Insulation between conductors on the same inner surface of a printed board	NO GO	N
2.10.6.4	Insulation between conductors on different layers of a printed board	30	N
	Distance through insulation	G - G	N
	Number of insulation layers(pcs):	100	N
2.10.7	Component external terminations		N
2.10.8	Tests on coated printed boards and coated components	J GC &	N
2.10.8.1	Sample preparation and preliminary inspection	F 100	N
2.10.8.2	Thermal conditioning	0	N
2.10.8.3	Electric strength test	-C	N
2.10.8.4	Abrasion resistance test	30 - 60	N
2.10.9	Thermal cycling		N
2.10.10	Test for Pollution Degree 1 environment and insulating compound	CC CC	N
2.10.11	Test for semiconductor devices and cemented joints	. 20	N
2.10.12	Enclosed and sealed parts	C -	N

3	WIRING, CONNECTIONS AND SUPPLY		Ų P
3.1	General	C 2	Р
3.1.1	Current rating and overcurrent protection	Adequate cross sectional areas on internal wiring. No internal wire for primary power distribution.	Р



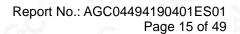




	EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict	
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges that could damage the insulation and cause hazard.	Р	
3.1.3	Securing of internal wiring	Internal wiring is reliable secured	Р	
3.1.4	Insulation of conductors	NO . GO . C	Р	
3.1.5	Beads and ceramic insulators	No such insulators provided.	N	
3.1.6	Screws for electrical contact pressure	No electrical contact pressure by screwed connections.	N	
3.1.7	Insulating materials in electrical connections	No contact pressure through insulating material.	N	
3.1.8	Self-tapping and spaced thread screws	Thread-cutting or space thread screws are not used for electrical connections.	N	
3.1.9	Termination of conductors		Р	
	10 N pull test		Р	
3.1.10	Sleeving on wiring	No sleeving used to provide supplementary insulation	N	

3.2	Connection to a mains supply		N
3.2.1	Means of connection	Class III equipment	N
3.2.1.1	Connection to an a.c. mains supply	200 -0	N
3.2.1.2	Connection to a d.c. mains supply	。	N
3.2.2	Multiple supply connections		N
3.2.3	Permanently connected equipment	-60	N
	Number of conductors, diameter (mm) of cable and conduits	P	
3.2.4	Appliance inlets		N
3.2.5	Power supply cords	-C -C	N
3.2.5.1	AC power supply cords	P. 30 . 60	N
C	Type		
	Rated current (A), cross-sectional area (mm²), AWG:	C	
3.2.5.2	DC power supply cords	· F	N
3.2.6	Cord anchorages and strain relief	C 2 b	N
10	Mass of equipment (kg), pull (N)	-00	
	Longitudinal displacement (mm)		
3.2.7	Protection against mechanical damage	0	N
3.2.8	Cord guards	- GU C .	N
	D (mm); test mass (g):	D 20	







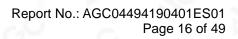
	EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict	
	Radius of curvature of cord (mm)	100		
3.2.9	Supply wiring space		N	

3.3	Wiring terminals for connection of external conductor	ors	N
3.3.1	Wiring terminals		N
3.3.2	Connection of non-detachable power supply cords		N
3.3.3	Screw terminals	70 40	N
3.3.4	Conductor sizes to be connected		N
_ C	Rated current (A), cord/cable type, cross-sectional area (mm²):	- CO - C	
3.3.5	Wiring terminal sizes		N
2.C	Rated current (A), type and nominal thread diameter (mm)	C S	
3.3.6	Wiring terminals design	2 60 6	N
3.3.7	Grouping of wiring terminals		N
3.3.8	Stranded wire		N

3.4	Disconnection from the mains supply		N
3.4.1	General requirement	Class III equipmen	N
3.4.2	Disconnect devices		N
3.4.3	Permanently connected equipment	200	N
3.4.4	Parts which remain energized	- 0	N
3.4.5	Switches in flexible cords	C	N
3.4.6	Single-phase equipment and d.c. equipment	10 20	N
3.4.7	Three-phase equipment	100	N
3.4.8	Switches as disconnect devices	6 6	N
3.4.9	Plugs as disconnect devices	100 20	N
3.4.10	Interconnected equipment	100	N
3.4.11	Multiple power sources		N

3.5	Interconnection of equipment	100	Р
3.5.1	General requirements	P 30	Р
3.5.2	Types of interconnection circuits	SELV circuit only.	Р
3.5.3	ELV circuits as interconnection circuits	No ELV interconnections.	N
3.5.4	Data ports for additional equipment	F . C	N





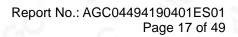


	EN 60950-1		
Clause	Requirement – Test	Result – Remark	Verdict
10	60 6	100	. C.
4	PHYSICAL REQUIREMENTS		Р
4.1	Stability	-6	N
10	Angle of 10°	100	N
	Test: force (N):		N

4.2	Mechanical strength		Р
4.2.1	General	See below	Р
	Rack-mounted equipment.	- · ·	N
4.2.2	Steady force test, 10 N	CO 6	N
4.2.3	Steady force test, 30 N	30 -00	N
4.2.4	Steady force test, 250 N	250N applied to outer enclosure. No energy or other hazards.	Р
4.2.5	Impact test	-60	N
	Fall test	D 30 20	N
0	Swing test		N
4.2.6	Drop test; height(m):	1m; No damage of the enclosure, no energy hazards or damage to enclosure integration after the test.	Р
4.2.7	Stress relief test	77°C, 7h, no damage and no hazards.	O N
4.2.8	Cathode ray tubes	No cathode ray tube.	N
	Picture tube separately certified	100	N
4.2.9	High pressure lamps	No high pressure lamp	N
4.2.10	Wall or ceiling mounted equipment; force (N):	20 2	N

4.3	Design and construction		Р
4.3.1	Edges and corners Edges and corners are rounded.	Р	
4.3.2	Handles and manual controls; force (N)	9 .00 .0	N
4.3.3	Adjustable controls	No such adjustable control.	N
4.3.4	Securing of parts	G P	N
4.3.5	Connection of plugs and sockets	- 60	o N
4.3.6	Direct plug-in equipment	Not direct plug-in equipment.	N
@	Torque	。	N
CO	Compliance with the relevant mains plug standard	SO GO	N







	EN 60950-1		
Clause	Requirement – Test	Result – Remark	Verdict
4.3.7	Heating elements in earthed equipment	No heating elements.	N
4.3.8	Batteries		N
- C	-Overcharging of a rechargeable battery	-0	N
100	-Unintentional charging of a non-rechargeable battery	No so	N
8	-Reverse charging of a rechargeable battery		N
,0	-Excessive discharging rate for any battery	GU - G	N
4.3.9	Oil and grease	No oil and grease.	N
4.3.10	Dust, powders, liquids and gases	Equipment in intended use not considered to be exposed to these.	N
4.3.11	Containers for liquids or gases	No containers for liquids or gases	N
4.3.12	Flammable liquids:	The equipment does not contain flammable liquid.	N
(8)	Quantity of liquid (I):		N
60	Flash point (°C)		N
4.3.13	Radiation; type of radiation:	D 20	Р
4.3.13.1	General		P
4.3.13.2	Ionizing radiation	No ionizing radiation	N
	Measured radiation (pA/kg):		
	Measured high-voltage (kV):		
	Measured focus voltage (kV):		
1 Col	CRT markings		
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	No ultraviolet radiation	N
-C	Part, property, retention after test, flammability classification	- C	N
4.3.13.4	Human exposure to ultraviolet (UV) radiation:	20 20 2	N
4.3.13.5	Lasers (including laser diodes) and LEDs	LEDs for indicator only	Р
4.3.13.5.1	Lasers (including laser diodes)	6 0	N
(Laser class:	0 20 2	
4.3.13.5.2	Light emitting diodes (LEDs)	. 50 - 500	
4.3.13.6	Other types:		N

4.4	Protection against hazardous moving parts		N
4.4.1	General No hazardous moving parts.		N
4.4.2	Protection in operator access areas	- C	N
	Household and home/office document/media shredders	30 100 CC	N





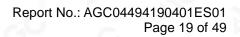


	EN 60950-1		
Clause	Requirement – Test	Result – Remark	Verdict
4.4.3	Protection in restricted access locations	100	N
4.4.4	Protection in service access areas		N
4.4.5	Protection against moving fan blades	-0	N
4.4.5.1	General	100	N
	Not considered to cause pain or injury. a):	100	N
C	Is considered to cause pain, not injury. b):	- 6	N
	Considered to cause injury. c):		N
4.4.5.2	Protection for users	100	N
	Use of symbol or warning		N
4.4.5.3	Protection for service persons	20 2	N
	Use of symbol or warning:	300	N

4.5	Thermal requirements		P P
4.5.1	General		
4.5.2	Temperature tests	(see appended table 4.5)	Р
G	Normal load condition per Annex L	-C	
4.5.3	Temperature limits for materials	(see appended table 4.5)	Р
4.5.4	Touch temperature limits	(see appended table 4.5)	Р
4.5.5	Resistance to abnormal heat	No thermoplastic parts on which parts at hazardous voltage are directly mounted.	N

4.6	Openings in enclosures		N
4.6.1	Top and side openings	C	N
	Dimensions (mm)	20 20 2	
4.6.2	Bottoms of fire enclosures	100	N
.C	Construction of the bottom		
4.6.3	Doors or covers in fire enclosures	No doors and covers	N
4.6.4	Openings in transportable equipment	. 10	N
4.6.4.1	Constructional design measures		N
- (4	Dimensions(mm)		N
4.6.4.2	Evaluation measures for larger openings	NO GO	N
4.6.4.3	Use of metallized parts	10	N
4.6.5	Adhesives for constructional purposes	No adhesives for constructional purpose.	N
	Conditioning temperature (°C), time (weeks):	-C	





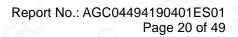


		EN 60950-1		
Clause	Requirement – Test		Result – Remark	Verdict

4.7	Resistance to fire		Р
4.7.1	Reducing the risk of ignition and spread of flame	Use of plastic with the required flammability classes.	Р
	Method 1, selection and application of components wiring and materials	Method 1 used	Р
,0	Method 2, application of all of simulated fault condition tests	GC C	N
4.7.2	Conditions for a fire enclosure	See appended table 1.5.1	Р
4.7.2.1	Parts requiring a fire enclosure		N
4.7.2.2	Parts not requiring a fire enclosure	Supplied by USB port considered complied with LPS	Р
4.7.3	Materials		Р
4.7.3.1	General	PCB rated V-0	Р
4.7.3.2	Materials for fire enclosures	c.O	N
4.7.3.3	Materials for components and other parts outside fire enclosures	500 CC	N
4.7.3.4	Materials for components and other parts inside fire enclosures	Internal components except small parts are V-2 or better.	Р
4.7.3.5	Materials for air filter assemblies	No air filter assemblies	N
4.7.3.6	Materials used in high-voltage components	No high voltage components.	N

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS Touch current and protective conductor current	
5.1		
5.1.1	General	N
5.1.2	Equipment under test (EUT)	N
5.1.2.1	Single connection to an a.c. mains supply	N
5.1.2.2	Redundant multiple connections to an a.c. mains supply	N
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply	N
5.1.3	Test circuit	N
5.1.4	Application of measuring instrument	N
5.1.5	Test procedure	_ N
5.1.6	Test measurements	N
0	Test voltage (V)	N
GU	Measured touch current (mA):	N
	Max. allowed touch current (mA)	N





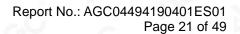


	EN 60950-1				
Clause	Requirement – Test	Result – Remark	Verdict		
10	Measured protective conductor current (mA):	30 .00	N		
0	Max. allowed protective conductor current (mA) .:		N		
5.1.7	Equipment with touch current exceeding 3.5 mA:	-G 0 F	N		
5.1.7.1	General	200	N		
5.1.7.2	Simultaneous multiple connections to the supply	- C	N		
5.1.8	Touch currents to and from telecommunication networks and cable distribution systems and from telecommunication networks	go go	N		
5.1.8.1	Limitation of the touch current to a telecommunication network and a cable distribution system		N		
	Test voltage (V)	30 20	N		
	Measured touch current (mA)	- C	N		
	Max. allowed touch current (mA)		N		
5.1.8.2	Summation of touch currents from telecommunication networks	FO CO CO	N		
©	a)EUT with earthed telecommunication ports:	。	N		
,0	b)EUT whose telecommunication ports have no reference to protective earth	90 00 a	N		

5.2	Electric strength	- 6	N
5.2.1	General	Class III equipment	N
5.2.2	Test procedure	20	N

5.3	Abnormal operating and fault conditions		Р
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	Р
5.3.2	Motors	No motor used	N
5.3.3	Transformers	No transformers	N
5.3.4	Functional insulation:	See appended table 5.3. Complies with c)	Р
5.3.5	Electromechanical components		N
5.3.6	Audio amplifiers in ITE	Y - C - V	N
5.3.7	Simulation of faults	Result see appended table 5.3.	Р
5.3.8	Unattended equipment	- C	N
5.3.9	Compliance criteria for abnormal operating and fault conditions	No flame emitted, no molten material emitted, no deformation of enclosure	Р







	E	EN 60950-1	
Clause	Requirement – Test	Result – Remark	Verdict
5.3.9.1	During the tests	No hazards.	Р
5.3.9.2	After the tests	No fire, no danger.	P

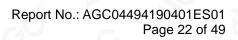
6	CONNECTION TO TELECOMMUNICATION NETWORKS	N
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment	
6.1.1	Protection from hazardous voltages	
6.1.2	Separation of the telecommunication network from earth	
6.1.2.1	Requirements	N
1	Test voltage (V)	
10	Current in the test circuit (mA)	
6.1.2.2	Exclusions	N

6.2	Protection of equipment users from overvoltages on telecommunication networks		N
6.2.1	Separation requirements	· F 70	N
6.2.2	Electric strength test procedure		N
6.2.2.1	Impulse test	\C\ -C\ -\	N
6.2.2.2	Steady-state test	No insulation breakdown	N
6.2.2.3	Compliance criteria	Compliance	N

6.3	Protection of the telecommunication wiring system from overheating	
	Max. output current (A):	
	Current limiting method:	

7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		N
7.1	General		N
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment	GC SGC	N
7.3	Protection of equipment users from overvoltages on the cable distribution system		N
7.4	Insulation between primary circuits and cable distribution systems	700	N
7.4.1	General	C. O	N
7.4.2	Voltage surge test	NO AC	N
7.4.3	Impulse test	200	N

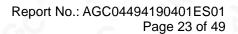






	EN 60950-	1	
Clause	Requirement – Test	Result – Remark	Verdict
Α	ANNEX A, TESTS FOR RESISTANCE TO HEAT	AND FIRE	₩ N
A.1	Flammability test for fire enclosures of movable exceeding 18 kg, and of stationary equipment (se	quipment having a total mass e 4.7.3.2)	N
A.1.1	Samples	20 20	
0	Wall thickness (mm)	。	
A.1.2	Conditioning of samples; temperature (°C)	20	N
A.1.3	Mounting of samples	S 100 - 0	N
A.1.4	Test flame (see IEC 60695-11-3)	。	N
1	Flame A, B, C or D	G P E	
A.1.5	Test procedure		N
A.1.6	Compliance criteria		N
(6)	Sample 1 burning time (s)		
60	Sample 2 burning time (s)		
	Sample 3 burning time (s)	E 10 20	
A.2	Flammability test for fire enclosures of movable enceeding 18 kg, and for material and component 4.7.3.2 and 4.7.3.4)		N
A.2.1	Samples, material	1000	
	Wall thickness (mm)		
A.2.2	Conditioning of samples	0 - 0	N
A.2.3	Mounting of samples	100	⊚ N
A.2.4	Test flame (see IEC 60695-11-4)		N
	Flame A, B or C		
A.2.5	Test procedure	-60	N
A.2.6	Compliance criteria	N 10 20	N
0	Sample 1 burning time (s)		
	Sample 2 burning time (s)	60 6	
	Sample 3 burning time (s)	× 0 2.0	
A.2.7	Alternative test acc. To IEC 60695-2-2, cl. 4 and 8	e ·	N
\G	Sample 1 burning time (s)	2 60 6	
	Sample 2 burning time (s)	E	
0	Sample 3 burning time (s)		
A.3	Hot flaming oil test (see 4.6.2)	CO 2º	N
A.3.1	Mounting of samples	10 100 1	N





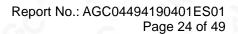


	E	EN 60950-1	
Clause	Requirement – Test	Result – Remark	Verdict
A.3.2	Test procedure	20, 200	N
A.3.3	Compliance criterion		N

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

С	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)	
	Position: No transformers	
7.0	Manufacturer:	
	Type:	







	EN 60950-1		
Clause	Requirement – Test	Result – Remark	Verdict
359	Rated values:	30 .00	
	Method of protection:	, D. C.	
C.1	Overload test	-0	N
C.2	Insulation	20 60 6	N
	Protection from displacement of windings:	F 400	N

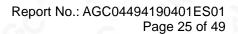
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		N	
D.1	Measuring instrument	50	N	
D.2	Alternative measuring instrument		N	

E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)	N
11 120		

	F _ C	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES	N	
4		(see 2.10)		

G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MI	NIMUM CLEARANCES	N
G.1	Clearances	-0	N
G.1.1	General		N
G.1.2	Summary of the procedure for determining minimum clearances	0	N
G.2	Determination of mains transient voltage (V):		N
G.2.1	AC mains supply	100	N
G.2.2	DC mains supply	· //	N
G.2.3	Unearthed DC mains supply:		N
G.2.4	Battery operation:	100 -C	N
G.3	Determination of telecommunication network transient voltage (V):	P. P.	N
G.4	Determination of required withstand voltage (V) .:	-C	N
G.4.1	Mains transients and internal repetitive peaks:	10	N
G.4.2	Transients from telecommunication networks:		N
G.4.3	Combination of transients	. C	N
G.4.4	Transients from cable distribution systems	60	N
G.5	Measurement of transient levels (V):		N
- 6	a) Transients from a mains supply	0	N
10	For an a.c. mains supply	, CO ~	N
	For a d.c. mains supply	100	N







	EN 60950-1				
Clause	Requirement – Test	Result – Remark	Verdict		
	b) Transients from a telecommunication network	200	N		
G.6	Determination of minimum clearances:		N		

Н	ANNEX H, IONIZING RADIATION (see 4.3.13)	N
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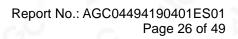
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)	
	Metal used:	

K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.7)	N
K.1	Making and breaking capacity	N
K.2	Thermostat reliability; operating voltage (V):	N
K.3	Thermostat endurance test; operating voltage (V):	N
K.4	Temperature limiter endurance; operating voltage (V):	GC N
K.5	Thermal cut-out reliability	N
K.6	Stability of operation	N

L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOI BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.1)	ME TYPES OF ELECTRICAL	P
L.1	Typewriters	-CO 0	N
L.2	Adding machines and cash registers	20	N
L.3	Erasers		N
L.4	Pencil sharpeners		N
L.5	Duplicators and copy machines	10° 20' 2	N
L.6	Motor-operated files	100	N
L.7	Other business equipment		Р

М	ANNEX M, CRITERIA FOR TELEPHONE RINGING	G SIGNALS (see 2.3.1)	N
M.1	Introduction		N
M.2	Method A		N
M.3	Method B	100	N
M.3.1	Ringing signal		N
M.3.1.1	Frequency (Hz):	-C	
M.3.1.2	Voltage (V):		
M.3.1.3	Cadence; time (s), voltage (V):	100	







	EN 60950-1				
Clause	Requirement – Test	Result – Remark	Verdict		
M.3.1.4	Single fault current (mA):	300			
M.3.2	Tripping device and monitoring voltage:		N		
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage	NO CO	N		
M.3.2.2	Tripping device	P 10	N		
M.3.2.3	Monitoring voltage (V):		N		

N	ANNEX N, IMPULSE TEST GENERATORS (see 2.10.3.4, 6.2.2.1, 7.3.2 and clause G.5)	
N.1	ITU-T impulse test generators	N
N.2	IEC 60065 impulse test generator	. N

Р	ANNEX P, NORMATIVE REFERENCES	P

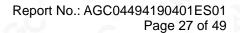
Q	ANNEX Q, Voltage dependent resistors (VDRS) (see 1.5.9.1)	N
0	-Preferred climatic categories:	N
0	-Maximum continuous voltage:	N
	-Combination pulse current:	N _o
	Body of the VDR Test according to IEC 60695- 11-5:	N
	Body of the VDR. Flammability class of material (min V-1):	N

R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR PROGRAMMES	QUALITY CONTROL	N
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6)	50 CC	N
R.2	Reduced clearances (see 2.10.3)		N

S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)			
S.1	Test equipment		N	
S.2	Test procedure	-6	N	
S.3	Examples of waveforms during impulse testing	100	N	

T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER	N
NOV	(see 1.1.2)	







		EN 60950-1		
Clause	Requirement – Test		Result – Remark	Verdict
U	ANNEX U, INSULATED WINDIN INSULATION (see 2.10.5.4)	G WIRES FOR U	SE WITHOUT INTERLEAVE	D N

V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)				
V.1	Introduction	10	N		
V.2	TN power distribution systems		N		

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

X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)				
X.1	Determination of maximum input current	100 -C	N		
X.2	Overload test procedure	。 F 10	N		

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

Z	ANNEX Z	, OVERVOLTA	GE CATE	GORIES(se	e2.10.3.2 an	d Clause G.2)	N
		~ .C	0		10	- 60	0

AA	ANNEX AA, MA	ANDREL TEST (see 2.10.5.8)		N
	©			(a)	

BB	ANNEX BB, CHA	NGES IN THE	SECOND	EDITION	- 60	
			(a)			

CC	ANNEX CC, Evaluation of integrated circuit (IC) circuit limiters	N		
CC.1	eneral			
CC.2	Test program 1:	N		





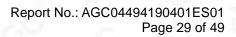


	EN 60950-1						
Clause	Requirement – Test	Result – Remark	Verdict				
CC.3	Test program 2	30	N				
CC.4	Test program 3		N				
CC.5	Compliance:	-C	N				

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

EE	ANNEX EE, Household and home/office document/media shredders	
EE.1	General	N
EE.2	Marking and instructions	N
	Use of markings or symbols:	N
C	Information of user instructions, maintenance and/or servicing instructions:	N
EE.3	Compliance:	N N
EE.4	Disconnection of power to hazardous moving parts:	N
	Use of markings or symbols:	o N
EE.5	Protection against hazardous moving parts	N N
6	Test with test finger (figure 2A):	N
~C	Test with wedge probe (figure EE1 and EE2):	N

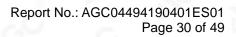






				EN 60950-1			
Clause	Requirer	ment – Test			Re	sult – Remark	Verdic
EN	60950-1:2	006/A11:2009/A	1:2010/A12:2	2011/A2:2013 – C	ENELEC CO	MMON MODIFICAT	IONS
0		subclauses, no 0-1 and it's ame		nd figures which a prefixed "Z"	re additional	to those in	(
Contents (A2:2013)	Annex Z	B (normative)	Normative refe corresponding Special nation	erences to interna g European public nal conditions IELEC code desig	cations		P
General		II the —countryll g to the following		reference docum	ent (IEC 609	50-1:2005)	Р
	1.4.8	Note 2	1.5.1	Note 2 & 3	1.5.7.1	Note	G
	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	9
	2.3.2.1	Note 2	2.3.4	Note 2	2.6.3.3	Note 2 & 3	9
	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	- 0
	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	100
	6.2.2	Note	6.2.2.1	Note 2	6.2.2.2	Note	0
	7.1	Note 3	7.2	Note	7.3	Note 1 & 2	60
	G.2.1	Note 2	Annex H	Note 2			
General (A1:2010)		II the "country" n g to the following		ference documer	nt (IEC 60950)-1:2005/A1:2010)	P
	1.5.7.1	Note		6.1.2.1	Note 2		
r.O	6.2.2.1	Note 2		EE.3	Note	0	
General (A2:2013)	accordin 2.7.1 6.2.2.	g to the following Note * Note	g list:	ference documer 2.10.3.1 Modification rema	Note 2	0-1:2005/A2:2013) ed.	P
1.1.1 (A1:2010)	Replace NOTE 3 1 multimedi	the text of NOT he requirements	E 3 by the fol of EN 60065 m IEC Guide 11.	lowing. nay also be used to	meet safety re	0	Ç.C







	EN 60950-1		
Clause	Requirement – Test	Result – Remark	Verdict
1.3.Z1	Add the following subclause:	- 60	
	1.3.Z1 Exposure to excessive sound pressure		N
	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	Sec Sec	
	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.		
(A12:2011)	In EN 60950-1:2006/A12:2011	60 6	
	Delete the addition of 1.3.Z1 / EN 60950-1:2006	10	N
8	Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010		100
1.5.1	Add the following NOTE:		
(Added info*)	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 *	GC SCC	N
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.	C cc	N
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
0	Zx Protection against excessive sound pressure from person	nal music players	=0
	Zx.1 General This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that	GC C	N
	are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players. A personal music player is a portable equipment for personal		
	use, that: - 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	NOC NO	
	or on or around the ears; - allows the user to walk around while in use.	. o° . o	

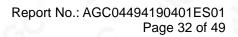






	EN 60950-1				
Clause	Requirement – Test	Result – Remark	Verdict		
70	NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment.	200	N		
	A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause.	SGC SGC			
	The requirements in this sub-clause are valid for music or video mode only.		Per		
	 The requirements do not apply: while the personal music player is connected to an external amplifier; or while the headphones or earphones are not used. 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. 	C CC	C I		
	The requirements do not apply to: hearing aid equipment and professional equipment; 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. - 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. 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. For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.	20°	Ċ		
30°	 Zx.2 Equipment requirements No safety provision is required for equipment that complies with the following: equipment provided as a package (personal music player with its listening device), where the acoustic output LAeq,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. NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level LAeq,T is meant. See also Zx.5 and Annex Zx. 		N		

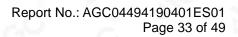






EN 60950-1				
Clause	Requirement – Test	Result – Remark	Verdict	
Clause	All other equipment shall: a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and b) have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and 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 NOTE 2 Examples of means include visual or audible signals. Action from the user is always required. 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. d) have a warning as specified in Zx.3; and e) not exceed the following: 1) equipment provided as a package (player with Its	Result – Remark	N	
	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"	GC NGC	NGC.	
	described in EN 50332-1. For music where the average sound pressure (long term LAeq,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. NOTE 4 Classical music typically has an average sound pressure (long term LAeq,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.	CC FC		
	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.	C NGC	go	







	EN 60950-1		
Clause	Requirement – Test	Result – Remark	Verdict
NOC.	Zx.3 Warning The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following: - the symbol of Figure 1 with a minimum height of 5 mm; and - the following wording, or similar:		N
	"To prevent possible hearing damage, do not listen at high volume levels for long periods."	CC CC	
	Figure 1 – Warning label (IEC 60417-6044)	·	
≥C	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.	CCC	c i
0	Zx.4 Requirements for listening devices (headphones and e	earphones)	N
S.C.C.	Zx.4.1 Wired listening devices with analogue input With 94 dBA sound pressure output LAeq,T, the input voltage of the fixed "programme simulation noise" described in EN 50332-2 shall be ≥ 75 mV.	PCC VCC	N
	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).	go koo	- C
	NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.		
NOC.	Zx.4.2 Wired listening devices with digital input 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 LAeq,T of the listening device shall be ≤ 100 dBA.	NGC N	N
	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.).	FG. FG.	NGC
	NOTE An example of a wired listening device with digital input is a USB headphone.	100	.00

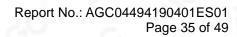






	EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict	
	 Zx.4.3 Wireless listening devices In wireless mode: with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and respecting the wireless transmission standards, where an air interface 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 LAeq,T of the listening device shall be ≤ 100 dBA. 			
	NOTE An example of a wireless listening device is a Bluetooth headphone.	U .C.	0	
GC	Zx.5 Measurement methods 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.	20 N	N	
	NOTE Test method for wireless equipment provided without listening device should be defined.	50	C	
2.7.1	Replace the subclause as follows:		100	
	Basic requirements 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):	C NCC	N	
	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;	NOC .	C	
NGC	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;	OC CO		
	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.	GC SC	N	
A.C.	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.	C NCC	S C	
2.7.2	This subclause has been declared 'void'.	8	N	
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.	100 C	N	





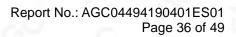


	EN 60950-1		
Clause	Requirement – Test	Result – Remark	Verdict
3.2.5.1	Replace "60245 IEC 53" by "H05 RR-F"; "60227 IEC 52" by "H03 VV-F or H03 VVH2-F"; "60227 IEC 53" by "H05 VV-F or H05 VVH2-F2".	PG, 70	30
	In Table 3B, replace the first four lines by the following: Up to and including 6 0,75 a)	-C	
	Over 6 up to and including 10 (0,75) b) 1,0	10	N
	Over 10 up to and including 16 (1,0) c) 1,5		1 GU
	In the conditions applicable to Table 3B delete the words "in some countries" in condition ^{a)} .	CC -	
	In NOTE 1, applicable to Table 3B, delete the second sentence.	CO NOC	GC
3.2.5.1 (A2:2013)	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD		N
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following:	NOC /	. C
	Over 10 up to and including 16 1,5 to 2,5 1,5 to 4		N
-G	Delete the fifth line: conductor sizes for 13 to 16 A	0	
4.3.13.6 (A1:2010)	Replace the existing NOTE by the following:	-CO -C	
	NOTE Z1 Attention is drawn to:	100	60
	1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz, and	-C	N
	2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artifical optical radiation).	S NGC	10°
NO	Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.	C	N
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.	GC C	N
	Replace the notes as follows:	P. 10,	-0
	NOTE These values appear in Directive 96/29/Euratom. Delete NOTE 2.	8	NO.
Bibliography	Additional EN standards.	6	

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR	
- C	CORRESPONDING EUROPEAN PUBLICATIONS	_

		2.7			
	EN 6	0950-1			
Clause	Requirement – Test		Result – Remark	Verdict	
10-	ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)				

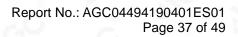






EN 60950-1				
Clause	Requirement – Test	Result – Remark	Verdict	
	ZB ANNEX (normative) SPECIAL NATIONAL COND	DITIONS (EN)		
1.2.4.1	In Denmark , certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.	P. N.	N	
.2.13.14	In Norway and Sweden , for requirements see 1.7.2.1 and 7.3 of this annex.	300	N	
1.5.7.1	In Finland, Norway and Sweden , resisters 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 resister is used, the resister must withstand the resister test in 1.5.7.2.	GC NC	N	
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).	C CC	N	
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.	E. N	N	
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.	GC FCC	N	
	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"			
1.7.2.1 (A11:2009)	In Sweden: "Apparaten skall anslutas till jordat uttag" 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.	NGC NGC	N	
	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.	100	B.C.C	
	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:	Sec 5		

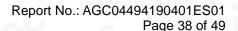






	EN 60950-1		
Clause	Requirement – Test	Result – Remark	Verdict
	ZB ANNEX (normative) SPECIAL NATIONAL CONI	DITIONS (EN)	. C.
30°	"Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – 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)."	Page Page	N
	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.		GC B
	Translation to Norwegian (the Swedish text will also be accepted in Norway):	100	-,0
	"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."	SCC SCC	, S
	Translation to Swedish: "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 alvanisk isolator finnas mellan utrustningen och kabel-TV nätet."	GC NGC	
1.7.2.1 (A2:2013)	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. 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."	YOC YOU	N
1.7.5	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. For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.	C PCC V	N



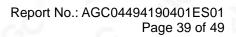




EN 60950-1 Clause Requirement - Test Result - Remark Verdict ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN) 1.7.5 In **Denmark**, socket-outlets for providing power to other (A2:2013) equipment shall be in accordance with the DS 60884-2-D1:2011. For class I equipment the following Standard Sheets 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 2.2.4 In **Norway**, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 Ν of this annex. 2.3.2 In Finland, Norway and Sweden there are additional N requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex. In Norway, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 2.3.4 of this annex. In the **United Kingdom**, the current rating of the circuit shall 2.6.3.3 Ν be taken as 13 A, not 16 A. 2.7.1 N 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. 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



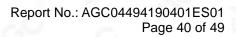
Xixiang, Bao'an District, Shenzhen, Guangdong, China





	EN 60950-1		
Clause	Requirement – Test	Result – Remark	Verdict
	ZB ANNEX (normative) SPECIAL NATIONAL CONI	DITIONS (EN)	
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:	CC CC	N
	SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A		P.G.C
	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:	S SC P	oc .
	SEV 5932-2.1998: Plug Type 25 , 3L+N+PE 230/400 V, 16 A SEV 5933-2.1998: Plug Type 21, L+N, 250 V, 16A SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V, 16 A	CC C	Ġ F
3.2.1.1	In Denmark , supply cords of single-phase equipment having a rated current not exceeding13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1.	CC CC	N
	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.	CC CC	
	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.	o co	
3.2.1.1	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.	No. No.	N
	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.	Yer Yee	, GC
	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.	GC NGC	CC
N.G	If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.		· ·

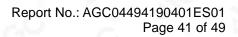






	EN 60950-1		
Clause	Requirement – Test	Result – Remark	Verdict
189	ZB ANNEX (normative) SPECIAL NATIONAL COND	DITIONS (EN)	
3.2.1.1	In the United Kingdom , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that 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.	Pac Pac	N
	NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.	GC CC	
3.2.1.1	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.	C NC NC	N
3.2.4	In Switzerland , for requirements see 3.2.1.1 of this annex.	60 6	N
3.2.5.1	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. 10	N
3.3.4	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: • 1,25 mm² to 1,5 mm² nominal cross-sectional area.	GC SCC	N
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.	C NC NC	N
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

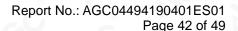






	EN 60950-1		
Clause	Requirement – Test	Result – Remark	Verdict
100	ZB ANNEX (normative) SPECIAL NATIONAL CONI	DITIONS (EN)	. C.
5.1.7.1	In Finland , Norway and Sweden TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that	CC N	N
	is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and	No.	P.G.C
	has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and is provided with instructions for the installation of that conductor by a SERVICE PERSON;	GC NGC	GC
	• STATIONARY PLUGGABLE EQUIPMENT TYPE B;	C a	
30	STATIONARY PERMANENTLY CONNECTED EQUIPMENT.	20	
6.1.2.1 (A1:2010)	In Finland , Norway and Sweden , add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either		N
	- two layers of thin sheet material, each of which shall pass the electric strength test below, or	100	NGC
	- one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below.	GC -C	
	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		NGC.



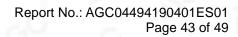




EN 60950-1 Clause Requirement - Test Result - Remark Verdict ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN) - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - 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. 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. 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. In Norway and Sweden, for requirements see 1.2.13.14 and N 7.3 1.7.2.1 of this annex. 7.3 In **Norway**, for installation conditions see EN 60728-11:2005. Ν



Xixiang, Bao'an District, Shenzhen, Guangdong, China





1.5.1	TABLE: list of critical components					
Object/part no.	Manufacturer/ trademark	Type/model	Technical data	Standard	Mark(s) of conformity	
PCB	Interchangeable	Interchangeable	V-0, 130°C	UL94, UL796	UL ZPMV2	
Coil	Interchangeable	Interchangeable	130°C	UL 1446	UL OBMW2	
Plastic enclosure	DONGGUAN HONOUR E P LTD	H1018	Min. 1.5mm, HB, 80°C	UL94	UL E341783	
Note(s):	C		10 C	0		

1.6.2	TABLE: el	lectrical data (in normal cor	nditions)		Р
U (V)	I (A)	I rated (A)	P (W)	Fuse #	I fuse (A)	Condition/status
5	1.51	2	7.55	9		Normal load:5V ===,1A
9	1.33	1.67	11.97	1 0		Normal load:9V ===,1.1A

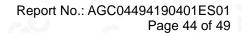
2.1.1.5c)1) TABLE: r	nax. V, A, VA test		N	
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)
1.0	GU - C	·	9	J
Note(s):Test for output	port	CO C		10°

2.1.1.5c)2)	TABLE: stored energy		- c.O	N
Capacitance	e C (µF)	Voltage U (V)		Energy E (J)
_C C		- 30	0	P. 10
Note(s):	10 20 a	10	-40	

2.2	TABLE: evaluation of voltage limiting comp	iting components in SELV circuits				
Component (measured between)		max. voltage (V)	Voltage Limiting			
		Vpeak	Vd.c.	Components		
0		~ . O	<u> </u>			
Fault test pe	erformed on voltage limiting components	Voltage measure	d (V) in SELV circuits	s (V peak or V d.c.)		
	10 - 60 C	0	1-0	- 60		
Note(s):		7.O		20		

2.5	TABLE: limited power source measurement				N
-----	---	--	--	--	---







Measured Uoc (V) with all load circuits	Isc (A	Isc (A)		
disconnected:	Meas.	Limit	Meas.	Limit
200	0		COU	G
Note(s):	0 6	· F		7

2.10.2	TABLE: Working vo	N	0		
Location		RMS voltage (V)	Peak voltage (V)	Comments	
r.C		- 0	20 2°		
Note(s):	G 2.C		Par Con	-C -	li .

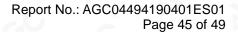
2.10.3 and 2.10.4 TABLE: clearance a	I TARLE, Clearance and Creenade distance measurements								
Clearance cl and creepage distance dcr at/of:									
	-	7 6	0			-0			
Note(s):	0								

2.10.5 TABLE: distance through insulation measurements							
Distance the	rough insulation di at/of:	U r.m.s. (V)	Test voltage (V)	Required di (mm)	di (mm)		
Note(s):	C OF N	200	-6	<u></u>			

4.3.8	TABLE: Batteries	F. 100	N
The tests of not available	4.3.8 are applicable only when appropriate battery data is	C P	N
Is it possible	to install the battery in a reverse polarity position?	200 -0	N

0	Non-rechargeable batteries			Rechargeable batteries					
00	Discharging		Uninten-	Cha	Charging		Discharging		Charging
	Meas. Current	Manuf. Specs.	tional charging	Meas. Current	Manuf. Specs.	Meas. Current	Manuf.S pecs.	Meas. Current	Manuf. Specs.
Max. current during normal condition		1	5 A	9 <u>0</u>	G	<u>,</u>	-		: C
Max. current during fault condition		-G		Š	o		F	<u> </u>	
Test results:	c.C	0				39	-C	8	Verdict
- Chemical leak	S	0		(6			9	0	Ν



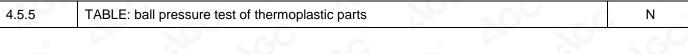




- Explosion of the battery		N
- Emission of flame or expulsion of molten metal	-60	。 N
- Electric strength tests of equipment after completion of tests	10	N
Note(s):		10

4.3.8	TABLE: Batteries	100	N
Battery ca	ategory:		100
Manufacti	urer:	20 60	
Type/mod	del:	- 5 10 20	0
Voltage, 0	Capacity:	-	100
Circuit pro	otection diagram:		
3/	- C - C - C	P 20	- 0
MARKING	GS AND INSTRUCTIONS (1.7.13)		3
Location of	of replaceable battery	-0 -0 -	
Language	e(s):	E. 30. CO.	
Close to t	he battery:		- C3O
In the ser	vicing instructions:	5 20 °	
In the ope	erating instructions	- 30 -0	<u> </u>
Note(s):	NO		-0

4.5	TABLE: maximum t	TABLE: maximum temperatures						
	Test voltage (V)	:	a) DC9V;	a) DC9V; b)				
mavimum	tomporature T of part/s	.4.			T (°	,C)		allowed Tmax
maximum temperature T of part/at:				a)	a)		b)	(°C)
PCB near	U1	G	(6)	60.	2			130
PCB near	U2	(0	66.4		·- · · · ·		130
Coil				73.5			130	
Internal en	closure	(6)		66.8			80	
External e	nclosure	<i>a</i> .C	1	59.2		0	95	
Ambient				40.	0			
Tempe	erature T of winding	t₁(°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation Class
	10						9	C3O









	allowed impression diameter	(mm):					
Part			Test temperature(°C)		on diameter mm)	r
	1-00	aG a	1		1 C	,	.(
Note(s):	®	10	- 0	0			

4.7	TABLE	E: Resistance to fire	© (i)	10		Р
Pa	rt	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence
9	GU	-0		- 6		(8)
Note(s):		100			NO.	- 60

5.1	TABLE: touch current measurement		\G\ -(C	N
Measured be	etween:	Measured(mA)	Limit(mA)	Comments/conditions
		~ .		0
Note(s):	c.C		3ºC	8

5.2	TABLE: electric strength tests and impulse tests	s	N
Test volta	age applied between:	Test voltage (V)	Breakdown
	- CO CO	P 120	GU - 2
Note(s): -	- 6 10 10		100

5.3	TAE	BLE: fault condition	tests	8		60	Р
8	aml	oient temperature	23.2-24.6	J			
-60	rate	ed markings of pow	C 2 F				
Component	no.	no. Fault Test Test Fuse no. Result					
C1		S-C	9	10min	- 0	No damage and hazards.	
U4	Q/	Pin 2-3, S-C	9	10min	100	No damage and hazards.	0
R01		S-C	9	10min		No damage and hazards.	C,O
Q1	Q1 Pin D-S, S-C 9 10min No damage and hazar			No damage and hazards.			
Fault: S-C =	short	circuit, O-C = op	en circuit O-L:	= overload		G	0
Note:		20	30 - (-	0	100	30





Attachment A Photos of product



Fig.1 – overview



Fig.2 - overview



 $Attestation\ of\ Global\ Compliance (Shenzhen) Co., Ltd.$

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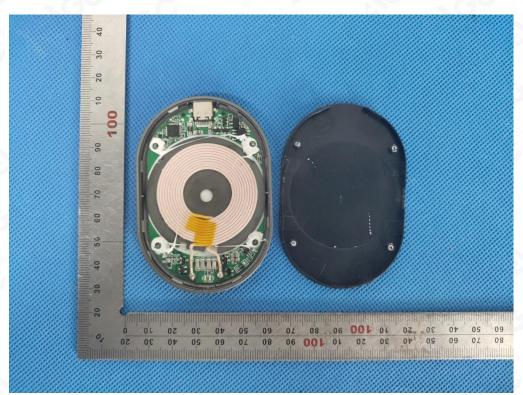


Fig.3 - partview

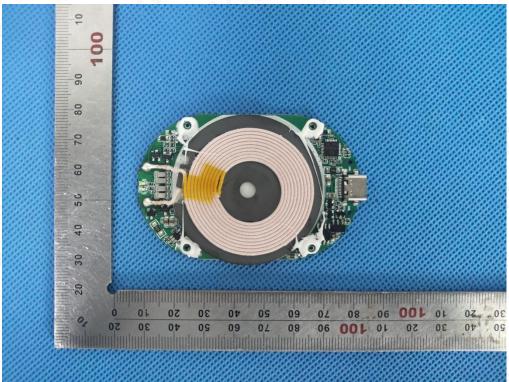


Fig.4 – partview



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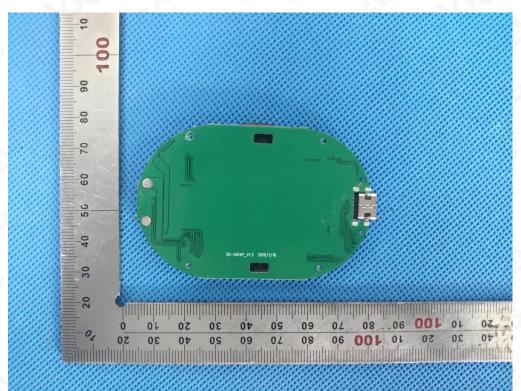


Fig.5 - partview

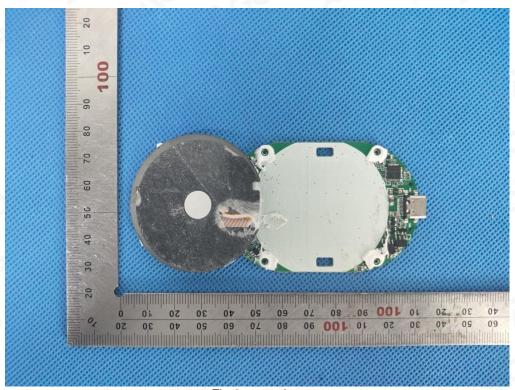


Fig.6 – partview

END OF REPORT--



Attestation of Global Compliance(Shenzhen)Co.,Ltd.

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