

中国认可 国际互认 检测 TESTING CNAS L6478



# **TEST REPORT**

Reference No.	in.	WTF17F1194903S
Applicant	. Stal	Mid Ocean Brands B.V.
Address	÷	Unit 201 2/F., Laford Centre, 838 Lai Chi Kok Road, Cheung Sha Wan, Kowloon, Hong Kong.
Manufacturer	?: .	Mid Ocean Brands B.V.
Address	. با	Unit 201 2/F., Laford Centre, 838 Lai Chi Kok Road, Cheung Sha Wan, Kowloon, Hong Kong.
Vendor code	: 20	114889
Product Name	ST.	5000mAh power bank
Model No		MO9209
Standards		Information technology equipment – Safety – Part 1: General requirements IEC 60950-1:2005+A1:2009+A2:2013
Date of Receipt sample	:/	2017-11-13
Date of Test	:03	2017-11-13 to 2017-11-15
Date of Issue		2017-12-09
Test Report Form No	:	WSH-609501F-01A
Test Result	5	Pass

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

#### Prepared By:

Waltek Services (Foshan) Co., Ltd. Address: No. 13-19, 2/F, 2nd Building, Sunlink International Machinery City, Chencun Town, Shunde District, Foshan, Guangdong, China Tel: +86-757-23811398 Fax: +86-757-23811381

Compiled by:

Jaca Huang / Project Engineer

Approved by: ERVICES WALTER Jerry Mu / Manager EST REPOR

Page 2 of 37



lest item description	: 5000mAh power bank
Trade Mark	
Model/Type reference	: MO9209
Ratings	: Input: 5V=1A Output1: 5V=1.0A Output2 : 5V=2.1A(Max)
	HS CE PO Number 74328 Capacity: 5000mAh 18.5Wh PO BOX 434 3770 AK(NL) MO9209 UT1 INPUT OUTPUT2
et wattet wattet	1A 5V1A 5V2.1A(Max)
National difference:	
	were considered accroding to below standard:
EN 60950-1:2006+A11:2009+	A1:2010+A12:2011+A2:2013

# Summary of testing:

- 1. These samples are tested and complied with the requirements of standards listed.
- 2. Full tests were performed on model MO9209.



Test item particulars	in m m m
	the market of the state of the state
Equipment mobility:	[x] movable [] hand-held [x] transportable [] stationary [] for building-in [] direct plug-in
Connection to the mains:	<ul> <li>[] pluggable equipment [] type A [] type B</li> <li>[] permanent connection</li> <li>[] detachable power supply cord</li> <li>[] non-detachable power supply cord</li> <li>[x] not directly connected to the mains</li> <li>[] built-in component, consider in end system</li> </ul>
Operating condition:	[x] continuous [] rated operating / resting time: 90 sec ON / 30 min OFF
Access location:	<ul><li>[x] operator accessible</li><li>[] restricted access location</li><li>[] built-in component, consider in end system</li></ul>
Over voltage category (OVC)	[] OVC I [] OVC II [] OVC III [] OVC IV [x] other:
Mains supply tolerance (%) or absolute mains supply values:	N white white white the street with
Tested for IT power systems	[] Yes [x] No
IT testing, phase-phase voltage (V)	N A at at the tree with
Class of equipment	[] Class I [] Class II [x] Class III [] Not classified
Considered current rating of protective device as part of the building installation (A)	N white white white white white whe
Pollution degree (PD)	[] PD 1 [x] PD 2 [] PD 3
IP protection class	IP20
Altitude during operation (m)	Up to 2000
Altitude of test laboratory (m)	Below 2000
Mass of equipment (kg)	Approx. 0.13 kg
Possible test case verdicts:	son so at at at at at
- test case does not apply to the test object	Net white white white white whe
- test object does meet the requirement:	P(Pass)
- test object does not meet the requirement:	F(Fail)



#### Abbreviations used in the report:

<ul> <li>normal conditions</li> <li>functional insulation</li> <li>double insulation</li> <li>between parts of opposite</li> </ul>	N.C. OP DI	<ul> <li>single fault conditions</li> <li>basic insulation</li> <li>supplementary insulation</li> </ul>	S.F.C BI SI	
polarity	ВОР	- reinforced insulation	RI	

Indicate used abbreviations (if any)

#### 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 point is used as the decimal separator.

#### General product information:

- 1. power bank, models MO9209, intended for use with the information technology equipment.
- 2. The maximum operating temperature is 40°C.
- 3. Circuit characteristics: the equipment contains SELV circuitry only.
- 4. The equipment is operated up to 2000m above sea level as declared by manufacturer.
- 5. 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.

Page 5 of 37



Ρ

IEC 60950-1

Clause	Requirement + Test	Result - Remark	Verdict

# GENERAL

1

1.5	Components	street white white white w	P
1.5.1	General	a state	<i>⊳</i> ⊢Ρ
WALTER .	Comply with IEC 60950-1 or relevant component standard	Components which were found to affect safety aspects comply with the requirements of this standard or within the safety aspects of the relevant IEC component standards. (see appended 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.	TEP V
1.5.3	Thermal controls	No thermal controls used	Ν
1.5.4	Transformers	Tex Tex Lifet Nifet	Ń
1.5.5	Interconnecting cables	the with the second	Ν
1.5.6	Capacitors bridging insulation	ret ret lifet wifet w	N
1.5.7	Resistors bridging insulation	in me me m	Ν
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	intret water water water	N
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits	THE TRANSPORT	N
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable	the state	N
1.5.8	Components in equipment for IT power systems	N - Ma - Ma - Ma - Ma	Ν
1.5.9	Surge suppressors	No surge suppressor used.	N
1.5.9.1	General	1. mer mer mer mer	Ν
1.5.9.2	Protection of VDRs	to set set uset use	Ν
1.5.9.3	Bridging of functional insulation by a VDR	wat was we we	Ν
1.5.9.4	Bridging of basic insulation by a VDR	at all all all	Ń
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR	int when when we	N

1.6	Power interface	the state of the	P S
1.6.1	AC power distribution systems	Not directly connected to the mains	N
1.6.2	Input current	(see appended table 1.6.2)	JU. P

Page 6 of 37



IEC 60950-1

Clause	Requirement + Test	Result - Remark	Verdict
1.6.3	Voltage limit of hand-held equipment	ret auter nuter white water	SUN -
1.6.4	Neutral conductor	Not directly connected to the mains	N

1.7	Marking and instructions	ret ret tel nuter in	Р
1.7.1	Power rating and identification markings	me m m m	Р
1.7.1.1	Power rating marking	The required marking is located on the outside surface of the equipment.	NP.
ne ne	Multiple mains supply connections	stift out a south would be	м <sup>°</sup> N
EK NALT	Rated voltage(s) or voltage range(s) (V):	See marking plate for details or no need to mark.	JE P
- JEK	Symbol for nature of supply, for d.c. only:	See marking plate for details or no need to mark.	Р
-211-	Rated frequency or rated frequency range (Hz):	white white white white	Ň
NNLTEK W	Rated current (mA or A)	See marking plate for details or no need to mark.	P.
1.7.1.2	Identification markings	See below	P
in white	Manufacturer's name or trade-mark or identification mark	МОВ	P
in Intre	Model identification or type reference	MO9209	Р
	Symbol for Class II equipment only	which we want	Ν
WALTE	Other markings and symbols:	Additional symbols or marking does not give rise to misunderstanding.	N.P.
1.7.1.3	Use of graphical symbols	The mark water	η <sup>ν</sup> Ά
1.7.2	Safety instructions and marking		Р
1.7.2.1	General	The Main M	P
1.7.2.2	Disconnect devices	Not directly connected to the mains.	ر ا میں مراجع
1.7.2.3	Overcurrent protective device	Not such equipment.	Ν
1.7.2.4	IT power distribution systems	the set set state with	N
1.7.2.5	Operator access with a tool	MUL MU MU IN	N
1.7.2.6	Ozone	of the tree with	Ň
1.7.3	Short duty cycles	We all the star	Ν
1.7.4	Supply voltage adjustment	No voltage selector.	Ň
THE	Methods and means of adjustment; reference to installation instructions	a wat wat not at	N
1.7.5	Power outlets on the equipment	inter white when when	Ň

Page 7 of 37



11th	IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict	
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference):	white white white white	SUDN Stat	
1.7.7	Wiring terminals	See below.	N	
1.7.7.1	Protective earthing and bonding terminals	set suret muset whitek whi	INT N	
1.7.7.2	Terminals for a.c. mains supply conductors	The second second	- N /	
1.7.7.3	Terminals for d.c. mains supply conductors	ALTER MUTER MALTE MALT	Ň	
1.7.8	Controls and indicators	See below.	P-	
1.7.8.1	Identification, location and marking	The function of controls affecting safety is obvious without knowledge of language etc.	Р	
1.7.8.2	Colours	For functional indication a LED lights when the equipment is operating.	P	
1.7.8.3	Symbols according to IEC 60417:	when we we the state	N	
1.7.8.4	Markings using figures	with white white white	N	
1.7.9	Isolation of multiple power sources:	at set set set	Ń	
1.7.10	Thermostats and other regulating devices	No such componentes provided	N	
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.	SE P MA	
1.7.12	Removable parts	No removable part.	N_3	
1.7.13	Replaceable batteries	The Lithium type battery pack is Non-replacement.	Ň	
when a	Language(s):	white white white white	m	
1.7.14	Equipment for restricted access locations:	Not intended for use in restricted access locations.	N	

2 1	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energ	ly hazards	Р
2.1.1	Protection in operator access areas	Max. voltage DC 5V input, no hazardous voltage existing in the equipment	P.L.
2.1.1.1	Access to energized parts	No hazard live part.	JUP ·

Page 8 of 37



Clause	Requirement + Test	Result - Remark	Verdic
INLIEK W	Test by inspection:	178 - 178 MITCH MITCH	N N
	Test with test finger (Figure 2A)	Mr. W. Ch. I.	N
LIE MAL	Test with test pin (Figure 2B)	THE NUEL MUTER WALTER	s N -s
+ 14	Test with test probe (Figure 2C)	No TNV present.	
2.1.1.2	Battery compartments	LEK SLIER WITE WALTE W	N
2.1.1.3	Access to ELV wiring	No ELV circuit	N
when y	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)	watter watter watter water water	1 mm
2.1.1.4	Access to hazardous voltage circuit wiring	No such component	Ň
2.1.1.5	Energy hazards:	No energy hazards in operator access area.	P
2.1.1.6	Manual controls	No manual controls.	N S
2.1.1.7	Discharge of capacitors in equipment	at at at	< <sup>0</sup> N 3
-2m	Measured voltage (V); time-constant (s)	white white white white	
2.1.1.8	Energy hazards – d.c. mains supply	at let let le	N
n n	a) Capacitor connected to the d.c. mains supply:	intit with white where	N N
LIEK WAL	b) Internal battery connected to the d.c. mains supply :	TEX WITEX WITEX WITEX	IN CON
2.1.1.9	Audio amplifiers	the state	-N
2.1.2	Protection in service access areas	TER NUTER INTERNATION	N
2.1.3	Protection in restricted access locations	In I	

2.2	SELV circuits	m t t	P,
2.2.1 5	General requirements	(see appended table 2.2)	N P
2.2.2	Voltages under normal conditions (V):	Within SELV limits, See 2.1.1.1	P
2.2.3	Voltages under fault conditions (V):	The Martin M	× N 4
2.2.4	Connection of SELV circuits to other circuits:	SELV circuits are only connected to other secondary circuits. SELV circuit and all interconnected circuits separated from primary by reinforced insulation. The SELV circuit does not exceed the SELV limits under normal and fault conditions.	et P white white

2.3	TNV circuits	lite water water water w	N
2.3.1	Limits	No TNV circuits	୬ <sup>+</sup> N <sub>2</sub> S <sup>(2)</sup>
m	Type of TNV circuits:	white white white white	-In.
2.3.2	Separation from other circuits and from accessible parts	surfex while waiter waiter	NET

Page 9 of 37



#### IEC 60950-1

Clause	Requirement + Test	Result - Remark	Verdict
and the second s	The strength with which we we	the state	
2.3.2.1	General requirements	ALTER MUTE MALTE	NNN NNN
2.3.2.2	Protection by basic insulation	In In A	N
2.3.2.3	Protection by earthing	LIFEK MITER WAITE W	S N N S
2.3.2.4	Protection by other constructions:		AL ALN
2.3.3	Separation from hazardous voltages	with aller white whi	Nr Nr
,it	Insulation employed:		
2.3.4	Connection of TNV circuits to other circuits	et aller mile white	Nr. NN
it.	Insulation employed	N. A. At	it it
2.3.5	Test for operating voltages generated externally	THE STREE MUTE	N <sup>N</sup> N ·

2.4	Limited current circuits	TEL ALTE WALTE WALL W	∑ N sh
2.4.1	General requirements	and the state	<u>م</u> ۲
2.4.2	Limit values	INTER INTE WATE WATE	N
.et	Frequency (Hz)	the state of	- the
me	Measured current (mA)	NUTER INTE WATE WATE	m
1th	Measured voltage (V)	i it it it	At .
e n	Measured circuit capacitance (nF or µF)	the watte water water	n_ m
2.4.3	Connection of limited current circuits to other circuits	ret inter street munet an	SELN NO

2.5	Limited power sources	et aret outer onlite only	P
A	a) Inherently limited output	July June 1	N
N <sup>LI</sup> V	b) Impedance limited output	The Marken Marken	N N
TEX WIN	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition	Considered for USB output port (see appended table 2.5)	TEP
	Use of integrated circuit (IC) current limiters	i i at at at a	۶ <sup>L</sup> N
m	d) Overcurrent protective device limited output	it white white white white	Ň
NNLTEX	Max. output voltage (V), max. output current (A), max. apparent power (VA)	(see appended table 2.5)	WALTE
×	Current rating of overcurrent protective device (A) .:	In the state	4

2.6	Provisions for earthing and bonding		N
2.6.1	Protective earthing Class III apparatus.	Class III apparatus.	N
2.6.2	Functional earthing		,
with	Use of symbol for functional earthing	set numer intre- white white	Ň
2.6.3	Protective earthing and protective bonding conductors	t the state with mind	Net

Page 10 of 37



Clause	Requirement + Test	Result - Remark	Verdict
		Itesuit - Itemaik	Verdic
2.6.3.1	General	NUTER NUTER WALTER	MULT NIN
2.6.3.2	Size of protective earthing conductors	Sur Sur 1	N
In white	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG	NITER WALTER WAITE W	11 - 3 m - 3
2.6.3.3	Size of protective bonding conductors	set set states	NN
JEK	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG	when when we	
when a	Protective current rating (A), cross-sectional area (mm <sup>2</sup> ), AWG	white white white	N N
2.6.3.4	Resistance of earthing conductors and their terminations; resistance ( $\Omega$ ), voltage drop (V), test current (A), duration (min):	whitek white white	unit unin
2.6.3.5	Colour of insulation:	White white we	N.N.
2.6.4	Terminals	at at a	et set No
2.6.4.1	General	White white white	- N
2.6.4.2	Protective earthing and bonding terminals	the state	N
n - n Lit	Rated current (A), type, nominal thread diameter (mm)	mine white white	when when
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors	eret white white w	N N
2.6.5	Integrity of protective earthing	let the the of	N
2.6.5.1	Interconnection of equipment	ry mer mer m	Ν
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	MALTER MALTER MALTE	WILL NOT
2.6.5.3	Disconnection of protective earth		N <sup>t</sup>
2.6.5.4	Parts that can be removed by an operator	white the water .	N N
2.6.5.5	Parts removed during servicing		Alt SCN
2.6.5.6	Corrosion resistance	IN THE ALL AND	~ ~ N~
2.6.5.7	Screws for protective bonding	s at at a	et N
2.6.5.8	Reliance on telecommunication network or cable distribution system	iter white white white	N

2.7	Overcurrent and earth fault protection in primary circuits		N-
2.7.1	Basic requirements	Not directly connected to the mains	м <sup>х</sup> N - 4
IET WALT	Instructions when protection relies on building installation	Whitek whitek whitek whitek wh	N N N
2.7.2	Faults not simulated in 5.3.7	a stat stat st	N S
2.7.3	Short-circuit backup protection	NT MALT WALL WAT WIT	Ň
2.7.4	Number and location of protective devices	· · · · · · ·	N

Page 11 of 37

 $\bigotimes$ 

IEC 60950-1

Clause	Requirement + Test	Result - Remark	Verdict
2.7.5	Protection by several devices	alifer miles while while	SUN S
2.7.6	Warning to service personnel::	m m t	N

2.8	Safety interlocks		. N
2.8.1	General principles	No safety interlocks	N N
2.8.2	Protection requirements	n m t at	- N
2.8.3	Inadvertent reactivation	re aller mile white	N N
2.8.4	Fail-safe operation	Shi shi sh	, Nt
ne m	Protection against extreme hazard	t white white white wh	N <sup>N</sup> N
2.8.5	Moving parts	Mr. W. M.	N
2.8.6	Overriding	TER ALTER MALTE MALT	N NS
2.8.7	Switches, relays and their related circuits	al au st	N -
2.8.7.1	Separation distances for contact gaps and their related circuits (mm)	. white white white	sin' N
2.8.7.2	Overload test	TEX TEX TEX	N N
2.8.7.3	Endurance test	ner me m	N
2.8.7.4	Electric strength test	tet tet still at	N N
2.8.8	Mechanical actuators	c. Mu m. m.	N

2.9	Electrical insulation	the sur set	Р
2.9.1	Properties of insulating materials	Only SELV circuits inside the equipment, therefore no requirement on the insulation (see also subclause 5.3.4).	W. P.J
2.9.2	Humidity conditioning	W. M. M.	Ν
IE. M	Relative humidity (%), temperature (°C)::	A TEX NUTER IN	л́
2.9.3	Grade of insulation	The adequate levels of safety insulation is provided and maintained to comply with the requirements of this standard.	P
2.9.4	Separation from hazardous voltages	to the street with white	Ň
	Method(s) used:	THE THE THE	

2.10	Clearances, creepage distances and distances through insulation		Р
2.10.1	General	Not directly connected to the mains	N
2.10.1.1	Frequency:	the set set set and	N
2.10.1.2	Pollution degrees	2	Р
2.10.1.3	Reduced values for functional insulation	See clause 5.3.4.	Ρ

Page 12 of 37



- LIFE	IEC 60950-1	t the fil	t JEE JIE
Clause	Requirement + Test	Result - Remark	Verdict
2.10.1.4	Intervening unconnected conductive parts	THE JEE MICH	N N
2.10.1.5	Insulation with varying dimensions	nor me m	N
2.10.1.6	Special separation requirements	THE THE STREET	N N
2.10.1.7	Insulation in circuits generating starting pulses	1. the the the	N
2.10.2	Determination of working voltage	set iter stret mi	N <sup>N</sup>
2.10.2.1	General		N
2.10.2.2	RMS working voltage	t the street with	SN SN
2.10.2.3	Peak working voltage	An An An	N
2.10.3	Clearances	TEK ALTER MITE	MAL NON
2.10.3.1	General	Mr. Mr. Mr.	N
2.10.3.2	Mains transient voltages	TEK LIEK MITE IN	No <sup>N</sup>
e st	a) AC mains supply	102 20 20	N
NALIE	b) Earthed d.c. mains supplies:	TER NUTER INTE	N
A	c) Unearthed d.c. mains supplies:	Mr. M. S.	Not
White N	d) Battery operation:	LIEK NUTER MUTER	NN NN
2.10.3.3	Clearances in primary circuits	h - 24 - 24	N
2.10.3.4	Clearances in secondary circuits	TEX STER WITE S	N N N
2.10.3.5	Clearances in circuits having starting pulses	241 241 2	L N
2.10.3.6	Transients from a.c. mains supply	TEX NITER WITE WIT	NI NI
2.10.3.7	Transients from d.c. mains supply	IN IN	
2.10.3.8	Transients from telecommunication networks and cable distribution systems:	WALTER WALTER WALTE	N N
2.10.3.9	Measurement of transient voltage levels	THE THE	N
a a	a) Transients from a mains supply	10 - MIL	N
ITER INLT	For an a.c. mains supply		JE N N
	For a d.c. mains supply	in the 2n th	N
MUTE	b) Transients from a telecommunication network :	et set set st	N.S
2.10.4	Creepage distances	mur mur m	N
2.10.4.1	General	- let tet tet	N
2.10.4.2	Material group and comparative tracking index	when when which	N
NUTER IN	CTI tests:	let set set	NUTER INLIE
2.10.4.3	Minimum creepage distances	ne me me	N
2.10.5	Solid insulation	alt alt alt is	SEC DENN
2.10.5.1	General	, Mr. M. M.	N
2.10.5.2	Distances through insulation	et tet tet tet	NUT NUT
2.10.5.3	Insulating compound as solid insulation	MUT MUT MI	N
2.10.5.4	Semiconductor devices	at let let	N.

Page 13 of 37



JE	IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict	
2.10.5.5.	Cemented joints	the set set	N N	
2.10.5.6	Thin sheet material – General	white where we want		
2.10.5.7	Separable thin sheet material	At the tet		
2.10.3.7	Number of layers (pcs):	try wer in w		
2.10.5.8	Non-separable thin sheet material	at let the it	 	
2.10.5.8	Thin sheet material – standard test procedure	The mater and the		
2.10.3.9	Electric strength test			
2.10.5.10	Thin sheet material – alternative test procedure	which such as a	<u> </u>	
2.10.3.10		at at the		
240544	Electric strength test	which	<u> </u>	
2.10.5.11	Insulation in wound components	the set of the		
2.10.5.12	Wire in wound components	and and and and a	_3' N %	
	Working voltage		L	
211 .	a) Basic insulation not under stress	white white white	N N	
THE T	b) Basic, supplementary, reinforced insulation:	the set	N	
m m	c) Compliance with Annex U	intit with with	<u> </u>	
LIEK WALT	Two wires in contact inside wound component; angle between 45° and 90°	stet suret muset of	LIFE NIN	
2.10.5.13	Wire with solvent-based enamel in wound components	it it it is	EL STECN	
20.	Electric strength test	in which which which		
NUTER	Routine test	at the set set	N	
2.10.5.14	Additional insulation in wound components	white white with	N	
SITER IN	Working voltage		N.	
	- Basic insulation not under stress:	We when a	N	
IER NITE	- Supplementary, reinforced insulation:		ST N	
2.10.6	Construction of printed boards	12 Mr. Ju. Ju.	N	
2.10.6.1	Uncoated printed boards	at at at at	N.S	
2.10.6.2	Coated printed boards	MUS MI WI	N	
2.10.6.3	Insulation between conductors on the same inner surface of a printed board	MITER WALTER WALTER	suntre sun	
2.10.6.4	Insulation between conductors on different layers of a printed board	Tet the with	LINE MUCH	
× ×	Distance through insulation	the sur on on	N	
NALIE	Number of insulation layers (pcs):	THE LIFE ALTER AL	NN NN	
2.10.7	Component external terminations	we mue on	Р	
2.10.8	Tests on coated printed boards and coated components	A WALTER WALTER WALTER	N	
2.10.8.1	Sample preparation and preliminary inspection	it it it		

Page 14 of 37



IEC 60950-1

Clause	Requirement + Test	Result - Remark	Verdict
jet-	all with out only when we we	the state of	
2.10.8.2	Thermal conditioning	at street atter water water	JUN .
2.10.8.3	Electric strength test	W St At	N
2.10.8.4	Abrasion resistance test	stret nife white white	р~ N -4/
2.10.9	Thermal cycling	s i i it	
2.10.10	Test for Pollution Degree 1 environment and insulating compound	N TEL WALTER WAITE WALL WA	N
2.10.11	Tests for semiconductor devices and cemented joints	IE MALTER WALTER WALTER WALTE	N
2.10.12	Enclosed and sealed parts	the state of the state	N

3 5	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General	and white white white white	Р
3.1.1	Current rating and overcurrent protection	the set set set	Р
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges and heat-sinks which could damage the insulation and cause hazard.	P
3.1.3	Securing of internal wiring	The wires are secured by soldering, solder pins and quick connect terminals so that a loosening of the terminal connection is unlikely.	EF P
3.1.4	Insulation of conductors	The insulation of the individual conductors are suitable for the application and the working voltage. For the insulation material see 3.1.1.	Pri VIII
3.1.5	Beads and ceramic insulators	Not used.	Ν
3.1.6	Screws for electrical contact pressure	No such screws provided.	N S
3.1.7	Insulating materials in electrical connections	the the tree of the	N
3.1.8	Self-tapping and spaced thread screws	Not used.	N
3.1.9	Termination of conductors	with the second second	Ν
WALTE V	10 N pull test	THE LIFE ALTER MUTE MUT	Ň
3.1.10	Sleeving on wiring	the supervised of	N
3.2	Connection to a mains supply	ret itet itet nite white white	Ň
3.2.1	Means of connection	In the second	N
3.2.1.1	Connection to an a.c. mains supply	- Ist list with million	N
3.2.1.2	Connection to a d.c. mains supply	201 - 101 - 10	Ν
3.2.2	Multiple supply connections	The street out the multi- would	N
3.2.3	Permanently connected equipment	an an an	Ν

Page 15 of 37



Ν

	IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict	
WILLER W	Number of conductors, diameter of cable and conduits (mm):	white white white	untick returner	
3.2.4	Appliance inlets	let fet fet	UTE N N	
3.2.5	Power supply cords	our mu mu m	N	
3.2.5.1	AC power supply cords	at set set out	N N N	
	Туре :	when we we	· · · .	
WALTE	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG:	et white white white	white water	
3.2.5.2	DC power supply cords	the state	N	
3.2.6	Cord anchorages and strain relief	white white white a	N N	
THE ST	Mass of equipment (kg), pull (N):	A At At	THE THE	
- 24	Longitudinal displacement (mm):	I The white white white	<u> </u>	
3.2.7	Protection against mechanical damage	at at a	5 N.S	
3.2.8	Cord guards	white white white	Ň	
WALTER N	Diameter or minor dimension D (mm); test mass (g)	NITEX WALTER WAITER	WALTER WATER	
A	Radius of curvature of cord (mm):		* *	

3.3	Wiring terminals for connection of external conductors	Mr. M N
3.3.1	Wiring terminals	
3.3.2	Connection of non-detachable power supply cords	white white white
3.3.3	Screw terminals	At At Nt
3.3.4	Conductor sizes to be connected	nti mi un v
ITEK WAL	Rated current (A), cord/cable type, cross-sectional area (mm <sup>2</sup> )	Fet maret waret
3.3.5	Wiring terminal sizes	N
WALT	Rated current (A), type, nominal thread diameter (mm):	watte wat - wat
3.3.6	Wiring terminal design	NICE NICE
3.3.7	Grouping of wiring terminals	M M N
3.3.8	Stranded wire	A A N

3.4	Disconnection from the mains supply	- Let Jet JEN N
3.4.1	General requirement	m. m. m. N.
3.4.2	Disconnect devices	Let JEt JIA NUT
3.4.3	Permanently connected equipment	in m N
3.4.4	Parts which remain energized	at at an N

Waltek Services (Foshan) Co., Ltd. http://www.waltek.com.cn

3.2.9

Supply wiring space

Clause

Page 16 of 37



Verdict

NUTE MIT WALL WALL WALL	C 60950-1
Requirement + Test	Result - Remark
	N. A.

3.4.5 📣	Switches in flexible cords	MAN WALL WAN
3.4.6	Number of poles - single-phase and d.c. equipment	N NICH N
3.4.7	Number of poles - three-phase equipment	N
3.4.8	Switches as disconnect devices	STEP NOTE NOT
3.4.9	Plugs as disconnect devices	N
3.4.10	Interconnected equipment	et site site N
3.4.11	Multiple power sources	N

3.5	5 Interconnection of equipment		Р
3.5.1	General requirements	ret ret the street	P. P.
3.5.2	Types of interconnection circuits:	SELV circuits	Р
3.5.3	ELV circuits as interconnection circuits	TEX LIEX ALTER IN	S NS
3.5.4	Data ports for additional equipment	USB output only used for charging, without data transmission	EK WALTER

4 1	PHYSICAL REQUIREMENTS	TEX NITES WALTE WALTE W	n~ P √n
4.1	Stability	w stat	
white	Angle of 10°	TEX INTER INTE MUTE WAY	N
t At	Test force (N)	i i at at at	⊢ N_&

4.2	Mechanical strength	Nº 1 At At	P
4.2.1	c c c c c c c c c c c c c c c c c c c	After following tests, the sample continues to complying relevant equirements.	N P
2m	Rack-mounted equipment.	and the she	N
4.2.2	Steady force test, 10 N	t at at at a	N
4.2.3	Steady force test, 30 N	white white white white	Ň
4.2.4		250N applied to outer enclosure, no energy or other hazards.	Pre
4.2.5	Impact test	the state	N <sup>-</sup>
in me	Fall test	NUTER WALTE WALT WALL V	N
et de	Swing test	i i it it i	<i>⊲</i> ∽N
4.2.6	STER WITE WITE WATE WATE WATE	The equipment has been subjected to 3 drops from 1m neight on a hard wooden surface. No hazards.	Poli

Page 17 of 37



	IEC 60950-1	is at at at a	IFK JIF
Clause	Requirement + Test	Result - Remark	Verdict
4.2.7	Stress relief test	No indication of shrinkage or distortion on plastic enclosure due to the stress relief test (83°C / 7hr).	JUN P
4.2.8	Cathode ray tubes	the state	N .
WILL	Picture tube separately certified:	JEX STER WITE WAITE W	N
4.2.9	High pressure lamps	30 A A	- N (
4.2.10	Wall or ceiling mounted equipment; force (N):	t with with with white	Ň

4.3 📣	Design and construction	street with white white	P
4.3.1	Edges and corners	All edges and corners are judged to be sufficiently well rounded so as not to constitute hazard.	, P
4.3.2	Handles and manual controls; force (N):	white white white white	N
4.3.3	Adjustable controls	Su a st st	N
4.3.4	Securing of parts	No connection likely to be exposed to mechanical stress.	¢۳.
4.3.5	Connection by plugs and sockets	TEX JEX JIEK NITER .	ŃN
4.3.6	Direct plug-in equipment	in the second	Ν
	Torque	ret ret with and	
TEK	Compliance with the relevant mains plug standard	t at all the set	N
4.3.7	Heating elements in earthed equipment	white white white white	Ň
4.3.8	Batteries	See below.	P
Tet watte	- Overcharging of a rechargeable battery	The overcharging voltage and current for battery pack are compatible with electrical characteristics of battery pack. See appended table 4.3.8.and table 5.3	P
TEK.	- Unintentional charging of a non-rechargeable battery	when the set set	N
NI N	- Reverse charging of a rechargeable battery	The battery is not reverse polarity installation is possible due to design of pack.	NP NITEX
et white	- Excessive discharging rate for any battery	The excessive discharge current for battery pack is compatible with electrical characteristics of battery pack. See appended table 4.3.8.and table 5.3	P
4.3.9	Oil and grease	No heating elements provided.	N

Page 18 of 37



Clause	Requirement + Test	Result - Remark	Verdict
	the strength which which will be	the state of the state	
4.3.10	Dust, powders, liquids and gases	Equipment in intended use not considered to be exposed to these.	SUCN STEK
4.3.11	Containers for liquids or gases	No container for liquid or gas.	N
4.3.12	Flammable liquids	No such flammable liquid.	N N
211-	Quantity of liquid (I)	ster white white white white	N
JEt	Flash point (°C)	he at at the st	N (
4.3.13	Radiation	e white white whe whe	Р
4.3.13.1	General	thet set set set	Р
4.3.13.2	Ionizing radiation	white white white white	N
TEX SITE	Measured radiation (pA/kg)	at at at at	UTEK I
201	Measured high-voltage (kV)	y the way with the way	
t stillt	Measured focus voltage (kV):	at set set s	11 - TI
w.	CRT markings	white white white white	
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	at let set set	N
n n	Part, property, retention after test, flammability classification	mit was what we	N
4.3.13.4	Human exposure to ultraviolet (UV) radiation:	ATE WALTE WALT WALT	о <sup>р</sup> N ~
4.3.13.5	Lasers (including laser diodes) and LEDs	Indicator light	<pre>√ P</pre>
4.3.13.5.1	Lasers (including laser diodes)	TEL MUTE MALL WALL WA	N
Tek	Laser class	i stat at a	st{{
4.3.13.5.2	Light emitting diodes (LEDs)	Only indicator light	P
4.3.13.6	Other types:	in the state	N

4.4	Protection against hazardous moving parts		At N
4.4.1	General	No moving parts.	<ul> <li>N</li> </ul>
4.4.2	Protection in operator access areas:	I I I A	F OF N
m	Household and home/office document/media shredders	its wait wat wat	N
4.4.3	Protection in restricted access locations	t JEK STER MITE	NIL III
4.4.4	Protection in service access areas	m. m. s.	N-
4.4.5	Protection against moving fan blades	TEX SLIER MUTER M	N N
4.4.5.1	General	m. m. m.	N
WAL	Not considered to cause pain or injury. a):	TEX STER MITER MIT	NN NN
	Is considered to cause pain, not injury. b)	1. Mr. W. V.	N
WILL	Considered to cause injury. c):	at the sure white	N <sup>N</sup>
4.4.5.2	Protection for users	Mr. M. A.	N
INLI' N	Use of symbol or warning:	THE JEE JIE	N'AL N

Page 19 of 37

 $\bigotimes$ 

IEC 60950-1

Clause	Requirement + Test	Result - Remark	Verdict
4.4.5.3	Protection for service persons	- atter inter inter watter	N N
at a	Use of symbol or warning:	M. S. t at	N

4.5	Thermal requirements		
4.5.1	General	with alter white white wh	P
4.5.2	Temperature tests	the second secon	- P_/
when y	Normal load condition per Annex L	E NIFET MITE MAIT WAL	m
4.5.3	Temperature limits for materials	(see appended table 4.5)	P-
4.5.4	Touch temperature limits	(see appended table 4.5)	P V
4.5.5	Resistance to abnormal heat:	Nº VI At at	N

4.6	Openings in enclosures	and the state	₽
4.6.1	Top and side openings	No openings.	N
.It	Dimensions (mm):	in the state	*
4.6.2	Bottoms of fire enclosures	NUTER WALTE WALTE WALT	~NN
it :	Construction of the bottomm, dimensions (mm) .:	i i at at	
4.6.3	Doors or covers in fire enclosures	TEL WITE WALL WALL	N
4.6.4	Openings in transportable equipment	See below.	
4.6.4.1	Constructional design measures	See below.	P.
. Alt	Dimensions (mm):	No openings.	st -s
4.6.4.2	Evaluation measures for larger openings	The matter white white white	-Ä
4.6.4.3	Use of metallized parts		- N
4.6.5 🖋	Adhesives for constructional purposes	inter standing with which	3 <sup>M</sup> N
it i	Conditioning temperature (°C), time (weeks) :	the state	1th

4.7 🖉	Resistance to fire		ې P
4.7.1	Reducing the risk of ignition and spread of flame	Use of materials with the required flammability classes.	P
WALLEY WA	Method 1, selection and application of components wiring and materials	Selection and application of components and materials which minimize the possibility of ignition and spread of flame.	WP NITEK V
TEK NIT	Method 2, application of all of simulated fault condition tests	Method 1 used only.	JENN N
4.7.2	Conditions for a fire enclosure	in me me me	Р

Page 20 of 37



IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.2.1	Parts requiring a fire enclosure	The product with following: <ul> <li>Output of battery pack not comply with L.P.S.</li> <li>Insulated wire</li> </ul> Fire enclosure is required.	
4.7.2.2	Parts not requiring a fire enclosure	See 4.7.2.1	N
4.7.3	Materials	at at att att at	P
4.7.3.1	General	PCB rated V-1 or better.	Р
4.7.3.2	Materials for fire enclosures	See appended table 1.5.1.	P
4.7.3.3	Materials for components and other parts outside fire enclosures	No such component.	N
4.7.3.4	Materials for components and other parts inside fire enclosures	Inside of the fire enclosures components except small parts are flammability class V-2 or better.	Pon
4.7.3.5	Materials for air filter assemblies	No air filter provided.	N
4.7.3.6	Materials used in high-voltage components	No high voltage component.	N N

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS	Р
5.1	Touch current and protective conductor current	N
5.1.1	General	N
5.1.2	Configuration of 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. N.
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply	J.L. 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
	Supply voltage (V)	7
LITE MAI	Measured touch current (mA)	until.
* 1	Max. allowed touch current (mA)	-
wat	Measured protective conductor current (mA):	1111
- 14	Max. allowed protective conductor current (mA):	* -
5.1.7	Equipment with touch current exceeding 3,5 mA	Ň
5.1.7.1	General	L N
5.1.7.2	Simultaneous multiple connections to the supply	N N



#### IEC 60950-1

Clause	Requirement + Test	Result - Remark	Verdict
J.	THE LIFE ALL WITH WALL WALL WALL	the state	At At
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	No TNV circuits.	orner orner
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system	ret ret tret at	
4	Supply voltage (V)	me me m	
MITE	Measured touch current (mA):	t the the state	White wells
	Max. allowed touch current (mA)	mur mur m	4 7
5.1.8.2	Summation of touch currents from telecommunication networks	NOLTEK WALTER WALTER	min min
FEX JIT	a) EUT with earthed telecommunication ports:	it it it.	Set Sen
t st	b) EUT whose telecommunication ports have no reference to protective earth	No. The The	N

5.2	Electric strength	the state of the	N
5.2.1	General	White white white white	- N N
5.2.2	Test procedure		Ń

5.3 🦽	Abnormal operating and fault conditions	and the	<i>"</i> +Р
5.3.1	Protection against overload and abnormal operation	(See appended table 5.3)	P
5.3.2	Motors	No motor.	N
5.3.3	Transformers	No transformer.	N
5.3.4	Functional insulation	.: Method a) and c) used, but due to	n'P
		- Components are mounted on PCB rated V-1 or better.	
	UNITER WALTER WALTER WALTE WALT WAT	- No basic, supplementary or reinforced insulation inside.	
	at left test steet south souther while	no test necessary.	
5.3.5	Electromechanical components	No electromechanical component.	N
5.3.6	Audio amplifiers in ITE	.: No such functional.	Ň
5.3.7	Simulation of faults	(see appended table 5.3)	Р
5.3.8	Unattended equipment	See below	P
5.3.9	Compliance criteria for abnormal operating and fault conditions	Neither fire burns the equipment nor molten metal.	P
5.3.9.1	During the tests	No fire propagated beyond the equipment. No molten metal was emitted.	VP LITE

Page 22 of 37

 $\bigotimes$ 

IEC 60950-1

Clause	Requirement + Test	Result - Remark	Verdict
	All official and a second	w v i i it	it it
5.3.9.2	After the tests	ret ret with a street out for a marter and	N N N

6 .	CONNECTION TO TELECOMMUNICATION NETWORKS	N - 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	N
6.1.2	Separation of the telecommunication network from earth	
6.1.2.1	Requirements	N
NUTE NI	Supply voltage (V)	Intit y
.L	Current in the test circuit (mA):	-
6.1.2.2	Exclusions	N N

6.2	Protection of equipment users from overvoltage networks	s on telecommunication	N
6.2.1	Separation requirements	let ret ret ster street	N
6.2.2	Electric strength test procedure	With MUL MUL MI	N
6.2.2.1	Impulse test	at let let let	ς ŃΝ
6.2.2.2	Steady-state test	the write when when we	N
6.2.2.3	Compliance criteria	at let set set	S <sup>E</sup> N N

6.3	Protection of the telecommunication wiring syst	em from overheating	N
- Car	Max. output current (A)	mus mus mus m	
JIEF	Current limiting method	THE JEE STEEL	IN THE
		WE A AND AND	S.,

7	CONNECTION TO CABLE DISTRIBUTION SYSTE	MS	N N
7.1	General	the second in the	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	Tet whitet whitet whitet whi	N
7.3	Protection of equipment users from overvoltages on the cable distribution system	when when when when when	N
7.4	Insulation between primary circuits and cable distribution systems	write write write with	N
7.4.1	General	THE STREE NUTE WITE W	N <sub>N</sub> <sup>N</sup>
7.4.2	Voltage surge test	M W	< N <
7.4.3	Impulse test	at iter street intre water	N

A CONTRACT	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE	N N	b
Waltek Serv	ices (Foshan) Co., Ltd.	*	

Page 23 of 37



	IEC 60950-1	the state of the state	
Clause	Requirement + Test	Result - Remark	Verdict
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)	WALTER WALTER WALTER WALTER	SUNN NUTER S
A.1.1	Samples	i i i i it	
when	Wall thickness (mm)	THE WITE WHITE WALL WAL	- The
A.1.2	Conditioning of samples; temperature (°C):		- N <
A.1.3	Mounting of samples	et intre white white white	~/N
A.1.4	Test flame (see IEC 60695-11-3)	the state	N
in m	Flame A, B, C or D	white white white white	m
A.1.5	Test procedure	i i at at	N
A.1.6	Compliance criteria	ALTE WALL WALL WALL WA	N <sub>00</sub>
t jet	Sample 1 burning time (s)	at at at a	et — J
m	Sample 2 burning time (s)	white white white whe	711
	Sample 3 burning time (s)	s at at at	
A.2	Flammability test for fire enclosures of movable not exceeding 18 kg, and for material and comp enclosures (see 4.7.3.2 and 4.7.3.4)		W N
A.2.1	Samples, material	e when we we	
er white	Wall thickness (mm)	ret ster ster with a	TE N
A.2.2	Conditioning of samples; temperature (°C)	MU. M. M.	Ν
A.2.3	Mounting of samples	pt stet sister aller with	N
A.2.4	Test flame (see IEC 60695-11-4)	Mr. M. m.	N
INLIE W	Flame A, B or C	TEN INTER INTER	In the
A.2.5	Test procedure		Ν
A.2.6	Compliance criteria	THE MULTER N	ν N N
L	Sample 1 burning time (s)	Nor Mar In Ar I	×-
NALIT	Sample 2 burning time (s)	tet the number of the work	17
A	Sample 3 burning time (s)	WILL WE WE WE	
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9	1- street outer untile supul	N
A	Sample 1 burning time (s)	Mr. m. v. t. st	
in which	Sample 2 burning time (s)	street intree intree interior	
at a	Sample 3 burning time (s)	all an at at	t-
A.3	Hot flaming oil test (see 4.6.2)	LIER NUTER UNITE WALTE W	Non
A.3.1	Mounting of samples	w t	× N
A.3.2	Test procedure	let outer on the owner would	- N
A.3.3	Compliance criterion	11. 1	N

5.3.2)

Clause

В

**B.1** 

Page 24 of 37



Verdict

Ν

Ν

-----

IEC 60950-1 Requirement + Test Result - Remark ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and **General requirements** No motor provided. Position ..... Manufacturer ..... Туре ..... ...÷ Rated values

	Rated values	NI WILL WE
B.2	Test conditions	N
B.3 🔊	Maximum temperatures	I WIN WIN
B.4	Running overload test	N
B.5 1	Locked-rotor overload test	Non Non
L at	Test duration (days)	
when	Electric strength test: test voltage (V)	White white the
B.6	Running overload test for d.c. motors in secondary circuits	Set and Net
B.6.1	General	N
B.6.2	Test procedure	N N N
B.6.3	Alternative test procedure	N
B.6.4	Electric strength test; test voltage (V)	Not Not
B.7	Locked-rotor overload test for d.c. motors in secondary circuits	N III
B.7.1	General	N N
B.7.2	Test procedure	At At N
B.7.3	Alternative test procedure	Mr. M. N
B.7.4	Electric strength test; test voltage (V)	F AN N
B.8 👋	Test for motors with capacitors	Mr. M. N. M.
В.9 🏑	Test for three-phase motors	N S
B.10	Test for series motors	W W N
JEX	Operating voltage (V)	11 JU - 51

Ç	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)	at let let set	Ň
1 1	Position	inter white white where a	n — ,
Et .	Manufacturer	at at set set	1 <sup>61</sup>
w	Туре	the water water when any	
. JTE	Rated values	t let let set at	
- Car	Method of protection:	Mr. Mr. M. M.	
C.1	Overload test	at set set ster	Ň

Page 25 of 37



 IEC 60950-1

 Clause
 Requirement + Test
 Result - Remark
 Verdict

 C.2
 Insulation
 N

 Protection from displacement of windings..........................
 N

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

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

Ň

F ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES N (see 2.10 and Annex G)

G	ANNEX G, ALTERNATIVE METHOD FOR DETERM CLEARANCES		N
G.1 🔊	Clearances	NUTER SINITE WALT WALT	JN N
G.1.1	General	i i at at	Ň
G.1.2	Summary of the procedure for determining minimum clearances	the write write write	N
G.2	Determination of mains transient voltage (V)	let the street white an	NJ NJ
G.2.1	AC mains supply	and an an	Ν
G.2.2	Earthed d.c. mains supplies	t ster street white whit	N
G.2.3	Unearthed d.c. mains supplies	me m m	N
G.2.4	Battery operation	TE NUTE WITE	N
G.3	Determination of telecommunication network transient voltage (V):	the state with	N
G.4	Determination of required withstand voltage (V)	e the the the s	N
G.4.1	Mains transients and internal repetitive peaks:	at left tet tet a	N
G.4.2	Transients from telecommunication networks:	MUT MUT MUT M	Ň
G.4.3	Combination of transients	it it it it it	N
G.4.4	Transients from cable distribution systems	water water water water	N
G.5	Measurement of transient voltages (V)	at alt the state	Ń
-24-	a) Transients from a mains supply	MIT WALK WALK WIT	N
et nite	For an a.c. mains supply	at at at set	N N
20.	For a d.c. mains supply	in the the structure of	N
TEA	b) Transients from a telecommunication network	t at all all a	N
G.6	Determination of minimum clearances::	when when my m	N

Page 26 of 37

t JEK	alifet intre white white white	EC 60950-1	THE JER
Clause	Requirement + Test	Result - Remark	Verdict
	ATT OF ALL ALL AND	so a star	

Ν

# H ANNEX H, IONIZING RADIATION (see 4.3.13)

1	J m	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)	
	* Alt	Metal(s) used	1 - J

K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		- N_
K.1	Making and breaking capacity	No thermal limiter or thermostat	_Ä
K.2	Thermostat reliability; operating voltage (V)	the state	N
K.3	Thermostat endurance test; operating voltage (V)	WALTER WALTE WALTE WALT	N
K.4	Temperature limiter endurance; operating voltage (V)	WITEK WALTER WALTER WALTER W	N. N.
K.5	Thermal cut-out reliability	at set set of	N S
K.6	Stability of operation	white when when when	N

Ľ	ANNEX L, NORMAL LOAD CONDITIONS F BUSINESS EQUIPMENT (see 1.2.2.1 and 4		P
Ľ.1 🖑	Typewriters	inter white white white white	N ^
L.2	Adding machines and cash registers	t the state	
L.3	Erasers	ster with white white white wh	N
L.4 🦽	Pencil sharpeners	an in the est	← N <
L.5	Duplicators and copy machines	all's outer worth worth worth	_Ä
L.6	Motor-operated files	m m the	N
L.7 \	Other business equipment	Maximum normal load.	N <sup>I</sup> P

M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2	.3.1) N
M.1 🧹	Introduction	t of N
M.2	Method A	m m N
M.3	Method B	N
M.3.1	Ringing signal	Mr. Mr. MN
M.3.1.1	Frequency (Hz):	at at at
M.3.1.2	Voltage (V)	the ment show -
M.3.1.3	Cadence; time (s), voltage (V):	at at at
M.3.1.4	Single fault current (mA)	Mr Mr _M
M.3.2	Tripping device and monitoring voltage	N Start
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage	N N
M.3.2.2	Tripping device	MUN NIL MAN

Page 27 of 37

IEC 60950-1

Clause	Requirement + Test	Result - Remark	Verdict
M.3.2.3	Monitoring voltage (V)		SN N

N M	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.1	ITU-T impulse test generators	Not Not
N.2	IEC 60065 impulse test generator	N

		-	
Р	ANNEX P, NORMATIVE REFERENCES		

Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)	
I.E. M	- Preferred climatic categories	NUT NOT NOT
	- Maximum continuous voltage	N
INIT	- Combination pulse current	STE Nº
JEX	Body of the VDR Test according to IEC60695-11-5	L III
041 041	Body of the VDR. Flammability class of material (min V-1)	N

R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES	SEK-N NIL
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)	L N
R.2	Reduced clearances (see 2.10.3)	N

S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N N
S.1	Test equipment	at the set	N N
S.2	Test procedure	and the shirt of	N
S.3	Examples of waveforms during impulse testing	at at let ster i	N J

T TEK W	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)	N
	at install install white white white white white the set set	

U		ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)	JEKN WIND
2	t	ret ret that whit whit whit will all the state	<b>↓</b> — _\$

V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)	N, L
V.1	Introduction	N N

Page 28 of 37

IEC 60950-1

Clause	Requirement + Test	Result - Remark	Verdict
, et	the star with our we		the set
V2	TN power distribution systems	at at all the street	N N N

W S	ANNEX W, SUMMATION OF TOUCH CURRENTS	N N
W.1	Touch current from electronic circuits	AL ALN
W.1.1	Floating circuits	Nr Nr
W.1.2	Earthed circuits	- N. A
W.2	Interconnection of several equipments	JN JN
W.2.1	Isolation	L N-
W.2.2	Common return, isolated from earth	nt n v
W.2.3	Common return, connected to protective earth	N N

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

Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)	JE N N
Y.1	Test apparatus	N
Ŷ.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, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)	P
---	---	---

5

AA ANNEX AA, MANDREL TEST (see 2.10.5.8)

BB ANNEX BB, CHANGES IN THE SECOND EDITION

CC	ANNEX CC, Evaluation of integrated circuit (IC) current limiters	N
CC.1	General	N
CC.2	Test program 1	N <sup>(</sup>
CC.3	Test program 2	N
CC.4	Test program 3	N.
CC.5	Compliance	N

DD	DD ANNEX DD, Requirements for the mounting means of rack-mounted equipment	
DD.1	General	N .

Waltek Services (Foshan) Co., Ltd. http://www.waltek.com.cn

$$\bigcirc$$

Ν

Page 29 of 37



IEC 60950-1

Clause	Requirement + Test	Result - Remark	Verdict
DD.2	Mechanical strength test, variable N	A ALTER MATER MATTER WALTE	N N
DD.3	Mechanical strength test, 250N, including end stops	ret ret riet wret	N N
DD.4	Compliance	a up mu mu m	N

EE	ANNEX EE, Household and home/office document/media shredders	s N
EE.1	General	NT NT
EE.2	Markings and instructions	N
NUTER	Use of markings or symbols	THE NUTE N'N
et s	Information of user instructions, maintenance and/or servicing instructions	et tet tet
EE.3	Inadvertent reactivation test	No. No.
EE.4	Disconnection of power to hazardous moving parts:	Whitek whitek Nit
A	Use of markings or symbols	N
EE.5	Protection against hazardous moving parts	NUN NOL NON
A	Test with test finger (Figure 2A)	L N
in w	Test with wedge probe (Figure EE1 and EE2):	N S N N S

Page 30 of 37



IEC 60950-1

1.5.1	TA	BLE: List of critic	al components			P
Object/part	No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity <sup>1</sup> )
Plastic Enclosure	with	SABIC INNOVATIVE PLASTICS US L L C	940(f1)	V-0, 80°C, Thickness min. 1.1mm	UL 94	UL MITCH
PCB	LTEN	Interchangeable	Interchangeable	Min. V-1, Min. 130°C	UL 796, UL94	UL NIT
Battery	1 1	Mid Ocean Brands B.V.	5560100P	3.7V, 5000mAh	IEC/EN 62133	Waltek Report (WTF17S1194 905S)
Battery Wire	-ne	Interchangeable	Interchangeable	Min. 24AWG, min. 60°C, 300Vdc, VW-1	UL 758	UL STREET

<sup>1)</sup> Provided evidence ensures the agreed level of compliance. See OD-CB2039.

1.5.1	TABLE: Opto Electronic Devices	N
Manufacture	er	et white white w
Туре	The superior of the second states and the se	
Separately t	tested	
Bridging ins	sulation	
External cre	eepage distance:	
Internal cree	epage distance	
Distance th	rough insulation:	
Tested unde	er the following conditions:	white white white
Input		
Output		Nr. When whe
supplement	tary information	

1.6.2	TABLE:	Electrical dat	ta (in norm	al condition	ns)	A A A A AP
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
5VDC	0.633		3.165	et Tet	Junet	Charging for Empty battery by USB port
3.7VDC	A 4.3		15.91	m v		Output load to 5V/2.1A.

Supplementary information: --

Page 31 of 37

 $\bigcirc$ 

IEC 60950-1

2.1.1.5 c) 1)	TABLE:	max. V, A, VA test			white white w	Р
Voltage (V	(rated) ′)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
+ 💉 5	11th	2.1	5.1	2.7	11.0	

2.1.1.5 c) 2)	TABLE: store	BLE: stored energy					
Capacitan	ice C (μF)	Voltage U (V)	Energy E (J)	on - nu			
let set	LIEK OFF	INTER WALT WITH WITH	st at the	Alt i			
supplementa	ary information:	A HER LIFER	NATES ANTE WATE WALL W	2 24			

2.2	TABLE: evaluation of voltage limiting	TABLE: evaluation of voltage limiting components in SELV circuits					
Compon	ent (measured between)		ltage (V) operation)	Voltage Limiting Com	ponents		
1th	ater safet out outer of P	V peak	V d.c.	at at at	Jet		
er m	and the second	MUTER	LIE NN	ist white white	Nu. 1		
Fault test performed on voltage limiting components		Vol		ured (V) in SELV circu peak or V d.c.)	its		
WALTER	white white white we want the	TEK UT	* NUTER	INTER WALTER WALT	WALT		
<u>_</u>	Tet tet with ante wat with	- MIL	24	<u> </u>	JEX		
supplem	entary information:						

2.5	TABLE: Limited p	ower sources				_√ P	
Circuit output	tested: 5V output	in which we	10	at at	At At	JEt	
Note: Measur	ed Uoc (V) with all	load circuits di	sconnected: Se	e below.	IL. MIL	m n	
Components	Test condition	Uoc (V)	I <sub>sc</sub> (A)		at sat V	Aster at	
	(Single fault)	(Single fault)		Meas.		Meas.	Limit
5V output	Normal	5.1	2.7	<u>8</u>	11.0	100	
5V output	U1 pin1 to 8 Sc	5,1	0.0	8	0	100	
5V output	U1 pin1 to 6 Sc	5.1	2.7	8	11.0	100	
5V output	U3 pin1 to 6 Sc	5.1	in 0 m	N8 V	0	100	

Page 32 of 37



IEC 60950-1

2.5	TABLE: Limited power sources						
5V output	U1 pin1 to 4 Sc	5.1	2.7	uni 8 uni	11.0	100	
5V output	U2 pin5 to 6 Sc	5.1	10 11th	MITER MITE	and o and	100	
supplement	tary information:	n nr n		at at	THE THE	NITER IN	
	ircuit, Oc=Open circ	uit					

2.10.2	Table: working ve	able: working voltage measurement						
Location		RMS voltage (V)	Peak voltage (V)	Comments	MALTE			
.L	- it it	TEX STIER WALL	when when	In In I	A			
supplemen	tary information:	sut	let set	THE NUTER MUTER	N <sup>LIE</sup> N			

2.10.3 and 2.10.4	TABLE: Clearan	ce and cre	epage dista	nce measurer	nents		N
	l) and creepage at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Functional:	MALITE WAL	Mr.			* .et	JEt JEt	NUTER
	at at	et .1		NINLIL A.	MAL	me m	
Basic/supple	mentary:	-sur-		jit-	THE	THE STREET	NUTER
	at at	H A	NUTE	WAL	ne ne	w 1	
Reinforced:	it white white	2		it it	THE U	Et allet an	IE NAI
A	t at a	- ITEK	INLIE WAL	with w	in Mit	10. 2.	L .
Supplementa	ary information:				TE	NUTER INLIE	WALL

2.10.5	TABLE: Distance through inst	ulation measu	urements		TE. WALTE	N N N
Distance th	rough insulation (DTI) at/of:	U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Cumplemen	tary information:	St St	ART -	Set - S	et set	TEX WILLEY

4.3.8	TABLE: Batteries	White white white white v	P
The tests of data is not	of 4.3.8 are applicable only when appropriate battery available	WEEK WALTER WALTER WALTER WA	TEPNI
Is it possib	le to install the battery in a reverse polarity position?	- i i it it i	P S
m	Non-rechargeable batteries	Rechargeable batteries	m

Page 33 of 37



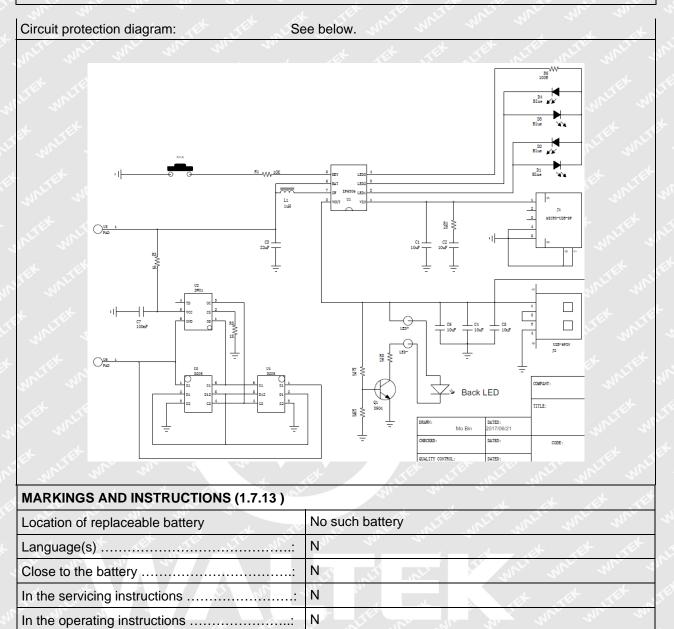
<u></u>	Diach	orging		Cha	raina	Diach	orging	Reve	rood
	Disch	arging	intentional	itentional		Disch	arging	char	
Nr w	Meas. current	Manuf. Specs.	charging	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition	WALTER W	NUTER WONL	et watter a	0.709	STE 5	4.3	Martin M	vin <u>2</u> v	it - w
Max. current during fault condition (U1 pin1 to pin4 Sc)	et white	WALTER WA	VOA VA			0	5	whitek	WALLER MILLER
Max. current during fault condition (U1 pin1 to 8 Sc)	untifer vun irex vuntif	at white	antirek yuni		5	0	5	LIEL WALLEY	A WALT
Max. current during fault condition (U1 pin3 to 8 Sc)	WALTER WAY	ALTER OF	ex south	0	ST 5	0		NUTER JUN	TEK DUNI
ALTER IN	SEL NINTE	MALT	ant an					it with	MLTER
Test result	s:			MALT	unti		MA	201	Verdict
- Chemical	leaks		e le			No	TEK	ALTER	LI <sup>E</sup> P_N
- Explosior	of the bat	tery	et sufer	IN THIN	in m	No			Р
- Emission	of flame of	expulsion	of molten me	tal	* *	No st	LITER .	NUTER NAL	R
- Electric s	trength tes	ts of equipr	ment after con	npletion of	tests	Mar	n n		N
Suppleme	ntary inform	nation:	241	e at		.Tet	JEK N	IE INLIE	NALI

IEC	60950-1
-----	---------

4.3.8	TABLE: Batteries	t at ret ret with write white Miles
Battery cate	gory	Li-Polymer
Manufacture	er:	See table 1.5.1
Type / mode	əl	See table 1.5.1
Voltage	······	See table 1.5.1
Capacity		See table 1.5.1
Tested and	Certified by (incl. Ref. No.):	See table 1.5.1

# $\bigcirc$

#### IEC 60950-1



4.5	TABLE: Thermal requirements									
WALTER N	Supply voltage (V)	Charging for empty battery	Discharging by full battery	LIEK WALT						
Ambient T <sub>min</sub> (°C):		the state of the	the state of the s	et set						
u n	Ambient T <sub>max</sub> (°C)	Tex outer outer	unit mar mor	211-						
Maximu part/at	im measured temperature T of	C (°	C)	Allowed T <sub>max</sub> (°C)						
Plastic	enclosure outside near PCB	44.0	72.2	75						
Plastic	enclosure inside near PCB	46.8	94.3	ur -our						
PCB near U1		49.4 117.4		<u> </u>						
PCB near U3		46.7 105.9		130						

Page 35 of 37



IEC 60950-1

PCB near J1, J2	TE WAL	51.3	m	114.	.4	130	
Battery body		42.0	JEt	52.9		13th	
Plastic enclosure inside near LE	nur	41.8	un .	50.9			
Ambient		40.0	THE	40.0		he the	
Supplementary information:	EX INLIET	WALTE V	ne m	. n	and the second		it i
Temperature T of winding:	t <sub>1</sub> (°C)	R <sub>1</sub> (Ω)	t <sub>2</sub> (°C)	R <sub>2</sub> (Ω)	T (°C)	Allowed T <sub>max</sub> (°C)	Insulatio n class
- MITE WALT WALT WALT	m		t <i>i</i> t		- 54	LITE - NI	The state
- i it it it	. d <sup>a</sup> 5	er Juli	NAL.	m-	- m 1		
Supplementary information:	me m		,L	it	de la	LEK LE	. The

4.5.5	TABLE: Ball pressure test of thermoplastic parts							
t st	Allowed impression diameter (mm):	≤ 2 mm						
Part	white white white the street white	Test temperature (°C)	Impression diamete (mm)					
NALIE .	which which which doll was supported by the second se	UNITER WAITER W	TER MULTE SUNT					
Supplem	entary information:	at at a	et aller aller					

4.7	TABLE	: Resistance to fire		et tiet	NUTER MUTER	Not Not	
Part		Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence	
1		t at at	stile white while	when wh	when a		
Supplemen	tary info	rmation:					

5.1	TABLE: touch curre	nt measuremen	t	The market with Name
Measured b	etween:	Measured Limit (mA) (mA)		Comments/conditions
supplement	ary information:	Martek White	MALTER MALTE	white white white with the with

A

5.2 TABLE: Electric strength tests, impulse tests	TABLE: Electric strength tests, impulse tests and voltage surge tests								
Test voltage applied between:	Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdo wn Yes / No						
Functional:	The down of	L at a	at de						
white with with the state the state	NUTER INLIE WALT	white white	m						
Basic/supplementary:	i i it	the A	t jet						

 $\bigcirc$ 

IEC 60950-1

at ret ret when when	uniter white when	July In	A D	- At	
Reinforced:	t Tet Jet	NUTER MUTER	WALTE WALT	when y	
ret ret ret with miter on	it was way	so si	× ×	. Att	
Supplementary information:	L A AT	THE NUTE OF	NIT WALK	m. m	

5.3	TABLE: Fault condition tests										
WALTER W	Ambient tempera	ture (°C)	25°C unless otherwise specified								
NUTEK MALT	Power source for EUT: Manufacturer, model/type, output rating										
Component No.	Fault	Supply voltage (V)	Test time	Fuse #		Fuse urrent (A)	Observation	itek			
Charging fo	r empty battery by	USB port.	Dischargir	ng by full b	atte	ery norr	nal working.				
U2 pin5 to 6	Short circuit	5.0VDC	10mins	INLI <sup>EK</sup>		- nni	Unit shutdown, no damage, n hazard.				
U3 pin1 to 4	Short circuit	5.0VDC	-7h	11 <sup>2</sup>			Unit shutdown, no damage, no hazard.				
U3 pin1 to 6	Short circuit	3.7VDC	7h			TEX	Unit shutdown, no damage, no hazard.				
USB1 port	Short circuit	5.0VDC	10mins	J.U.L.		/ `` ./t	Unit shutdown, no damage, no hazard.				
USB2 port	Short circuit	5.0VDC	10mins		n'	1º	Unit shutdown, no damage, no hazard.				
Supplement	tary information:			TEX	JE.	اللي ا	and white white	2m			

C.2	TABLE: transform	ners					N
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.	Loc. Tested insulation		WALTER W	Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
supplem	nentary information:	et ret	NILITE JUN		whe w	A TEX	VI VIIII

#### Page 37 of 37

IEC 60950-1

C.2	TABLE: transformers	with which which all and and	N
Transforme	er we we we	A ret ret lifet when when when	NIT WAL

=====End of Report ======

Page 1 of 17



IEC 60950-1 - Attachment

Clause	Requirement + Test	Result - Remark	Verdict

LIEK NALIEN	Clauses, subclauses, notes, tables and figures which are additional to those in IEC60950-1 and it's amendmets are prefixed "Z"	NITE P
Contents	Add the following annexes:       Annex ZA (normative)       Normative references to international publications with their corresponding European publications	IFK P
(A2:2013)	Annex ZB (normative)       Special national conditions         Annex ZD (informative)       IEC and CENELEC code designations for flexible cords	whi
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 3 & 4       5.3.7       Note 1         6       Note 2 & 5       6.1.2.1       Note 2       6.1.2.2       Note 1         6.2.2 Note       6.2.2.1       Note 2       6.2.2.2       Note 1         7.1 Note 3       7.2       Note 7.3       Note 1 & 2         6.2.1 Note 2       Annex H       Note 2       1.2.2       Note	
General (A1:2010)	Delete all the "country" notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list:1.5.7.1Note6.1.2.1Note 26.2.2.1Note 2EE.3Note	P Suri
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 26.2.2. Note * Note of secretary: Text of Common Modification remains unchanged.	P
1.1.1 (A1:2010)	<b>Replace</b> the text of NOTE 3 by the following. NOTE 3 The requirements of EN 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment. For television sets EN 60065 applies.	P N

#### Page 2 of 17

211	

IEC 60950-1 – Attachment

IEC 60950-1 – Attachment			
Clause	Requirement + Test	Result - Remark	Verdic
	at the all whi we	the state	
	Add the following subclause: 1.3.Z1Exposure 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.	NUTER WALTER WALTER WALTER	AUNN LITEX VIALIEX VIALIEX VIALIEX VIALIEX VIALIEX
(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	Antifet whitet whitet	N N
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 *	whitek whitek whitek white	Pri Martek
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.	when the south of the souther when	LTEN S
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.	WALTER WALTER WALTER WALTER	N
	Zx Protection against excessive sound pressure	from noroonal music playare	N

Г

#### Page 3 of 17



IEC 60950-1 - Attachment

IEC 60950-1 – Attachment			
Clause	Requirement + Test	Result - Remark	Verdic
NUTEX II	Zx.1 General	let set set	N N
	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.	NET WALL WALL W	
	A personal music player is a portable equipment for personal use, that:	WALTER WALTER WALTER	WALTE WALT
	<ul> <li>is designed to allow the user to listen to recorded or broadcast sound or video; and</li> </ul>	THEY MITEY MAITEY IN	NITEK WALTER
	<ul> <li>primarily uses headphones or earphones that can be worn in or on or around the ears; and</li> </ul>	at not stat as	Et BLIEK
	- allows the user to walk around while in use.	white white white	20 20
	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.	whitek whitek white	white white
	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.	Tet whitet whitet	at white
	The requirements in this sub-clause are valid for music or video mode only.	which which which	white whi
	The requirements do not apply:	sunt. sure sure	A A
	<ul> <li>while the personal music player is connected to an external amplifier; or</li> </ul>	L. TE WALTER W	NUTE MALIT
	<ul> <li>while the headphones or earphones are not used.</li> </ul>	the survey of the survey	JEX WLIER V
	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.	Whitek whitek white	whitek white
	The requirements do not apply to:	untit water water	NIT IN
	<ul> <li>hearing aid equipment and professional equipment;</li> </ul>	TEX WALTER WAITER W	VILL VINLIE
	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.	whitek whitek whit	ex whitek w

Page 4 of 17

12	

	IEC 60950-1 – Attachment			
Clause	Requirement + Test	Result - Remark	Verdict	
ountifet oun	<ul> <li>analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015.</li> </ul>	NUTER WAITER WAITER	N	
et waitet	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.	watter water water	white white	
INITEK WAY	For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.	when white whitek w	utet whitet	
JER INITE	Zx.2 Equipment requirements	at set set is	ST N.	
et set	No safety provision is required for equipment that complies with the following:	sonts when white		
white	<ul> <li>equipment provided as a package (personal music player with its listening device), where</li> </ul>	white white white	white white	
WALTER W	the acoustic output LAeq,T is ≤ 85 dBA measured while playing the fixed "programme simulation noise" as described in EN 50332-1; and	NUTEX WALLEX WALLEX	IFEK NUTEK	
SEK WALTER	<ul> <li>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.</li> </ul>	A WALLEY WALLEY WALL	A WAYER WAY	
UNLIEK WA	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.	WITT WITE WITTER	nitet ounitet.	
the work	All other equipment shall:	the second second	it with w	
et whitek	a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and	MALTER WALTER WALTER	whitek whit	
WALTER W	b) have a standard acoustic output level not exceeding those mentioned above, and	with with with	NALTER WALTER	
INLIEK WAT	automatically return to an output level not exceeding those mentioned above when the power is switched off; and	LIEX WALLEX WALLEY WA	tret whitek	

Page 5 of 17



IEC 60950-1 – Attachment

Clause	Requirement + Test	Result - Remark	Verdic
all is		at at at	
	c) provide a means to actively inform the user of the increased sound pressure when the	NET WALL WALL V	n su N
	equipment is operated with an acoustic output		at at
	exceeding those mentioned above. Any means	et alt ale a	The second second
	used shall be acknowledged by the user before	when we we	
	activating a mode of operation which allows for an		t at
	acoustic output exceeding those mentioned above.	THE STEP OF	and an
	The acknowledgement does not need to be	Mr. M. W.	
	repeated more than once every 20 h of cumulative	s at the	11 5
	listening time; and	still with white	ne ne
	NOTE 2 Examples of means include visual or	an an a	a st
	audible signals. Action from the user is always	to the set	JER JIE
	required.	LIE MIT WAL W	the state
	NOTE 3 The 20 h listening time is the	1 1 V. 1	1 At
	accumulative listening time, independent how	at let let i	ET IT
	often and how long the personal music player has been switched off.	all wat was	211. 2
	d) have a warning as specified in Zx.3; and		L A
	e) not exceed the following:	let set ste	NIT IN
	1) equipment provided as a package (player with	white white white	211. 24.
	Its listening device), the acoustic output shall be $\leq$		it li
	100 dBA measured while playing the fixed	Alt SET STE	INLIL WALL
	"programme simulation noise" described in EN	Int. When when	20. 21.
	50332-1; and	1 1 A	set set
	2) a personal music player provided with an	THE JEE NITE OF	in anti-
	analogue electrical output socket for a listening	when the star	
	device, the electrical output shall be $\leq$ 150 mV	and the state	
	measured as described in EN 50332-2, while	a alter mill wat	w nu
	playing the fixed "programme simulation noise"	201. 20. 1.	
	described in EN 50332-1.	the state	15 TO
	For music where the average sound pressure (long term LAeq,T) measured over the duration of	alle and and	me m
	the song is lower than the average produced by	24. 24. A.	1 1
	the programme simulation noise, the warning does		THE NUT
	not need to be given as long as the average sound	NY A WAY	12 211
	pressure of the song is below the basic limit of 85		it at
	dBA. In this case T becomes the duration of the		It with
	song.	all an all	-211 -
	NOTE 4 Classical music typically has an average		t et
	sound pressure (long term LAeq,T) which is much	- THE THE NITE	nn sin
	lower than the average programme simulation	when we we	24.
	noise. Therefore, if the player is capable to	1 st at	
	analyse the song and compare it with the	JER JEE NITE	Intit wat
	programme simulation noise, the warning does not	NU MU M	
	need to be given as long as the average sound	a at at	JEK JEK
	pressure of the song is below the basic limit of 85	THE OUT ON THE OW	The sure
	dBA.	- 201 - 201 - 21.	
	For example, if the player is set with the	at at at a	et set
	programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA,	a nut internet	m m
	there is no need to give a warning or ask an	In the L	1
	acknowledgement as long as the average sound	it it it	The
	level of the song is not above the basic limit of 85	intit with write	me m
	dBA.	24 24 2	AL A

#### Referen

Clause

IEC 60950-1 – Atta	chment	
Requirement + Test	Result - Remark	Verdic
7x 2 Warning	let the states state	N N
<b>Zx.3 Warning</b> The warning shall be placed on the equipme on the packaging, or in the instruction manual shall consist of the following:		TEX WITEK
<ul> <li>the symbol of Figure 1 with a minimum here</li> <li>5 mm; and</li> </ul>	ight of	* WINI EK WIN
- the following wording, or similar:	white with white the fit	10- 5
"To prevent possible hearing damage, do no at high volume levels for long periods."	tlisten	WALK WAL
Figure 1 – Warning label (IEC 60417-60 Alternatively, the entire warning may be give through the equipment display during use, w the user is asked to acknowledge activation thigher level.	n hen	White white
Zx.4 Requirements for listening devices (	headphones and earphones)	Mr N
Zx.4.1 Wired listening devices with analog input         With 94 dBA sound pressure output LAeq,T, input voltage of the fixed "programme simula noise" described in EN 50332-2 shall be ≥ 75	the tion	NET SUPER
This requirement is applicable in any mode we the headphones can operate (active or	vhere	whitek wh
passive), including any available setting (for example built-in volume level control).	NITER MITER WAITER WAITER	NUTER WALT
NOTE The values of 94 dBA – 75 mV corres	pond	LIEK INLIEK

## Page 7 of 17

Clause	Requirement + Test	Result - Remark	Verdic
Clause		Result - Remark	Veruic
unite vun tret vuntr et vuntret	<b>Zx.4.2 Wired listening devices with digital input</b> With any playing device playing the fixed "programme simulation noise" described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output LAeq,T of the listening device shall be $\leq$ 100 dBA.	NET WALTER WALTER WA	NUC SUNN
	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.).	WALTER WALTER WALTER WALTER	NUTEX UNITEX
	NOTE An example of a wired listening device with digital input is a USB headphone.	white white white	t nit it and
	Zx.4.3 Wireless listening devices	me me m	N
	In wireless mode:	THE THE THE	NITER MITE
	<ul> <li>with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and</li> </ul>	net set states	LIEX NLIEX
	<ul> <li>respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and</li> </ul>	t stift with white	et whitet w
	<ul> <li>with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output LAeq,T of the listening device shall be ≤ 100 dBA.</li> </ul>	with with whitek	whitek whitek
	NOTE An example of a wireless listening device is a Bluetooth headphone.	SUN SUN SUN	t while wh
A	Zx.5 Measurement methods	The second	N
	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.	UNLIEK WAITER WAITER	White white
	NOTE Test method for wireless equipment provided without listening device should be defined.	A white white whi	et wouter w

# Page 8 of 17

12	

IEC 60950-1 - Att	achment
-------------------	---------

Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	<ul> <li>Replace the subclause as follows:</li> <li>Basic requirements</li> <li>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):</li> <li>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;</li> <li>b) for components in series with the mains input to</li> </ul>		N
	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;	et whitet whitet whi	L CH
whitek whi	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.	ANTIER WALTER WALTER	NATES NATES
	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.	A WALTER WALTER WALTER	et win fet win
2.7.2	This subclause has been declared 'void'.	the state	N <sup>t</sup>
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.	St. Att white w	N N
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". In Table 3B, replace the first four lines by the	whitek whitek white	N
	following: Up to and including 6 $ $ 0,75 <sup>a)</sup> $ $ Over 6 up to and including 10 $ $ (0,75) <sup>b)</sup> 1,0 $ $ Over 10 up to and including 16 $ $ (1,0) <sup>c)</sup> 1,5	UNLIER WAITER WALTER	White white
	In the conditions applicable to Table 3B delete the words "in some countries" in condition <sup>a)</sup> . In NOTE 1, applicable to Table 3B, delete the second sentence.	Whitek whitek white	WIN I'L WIN
3.2.5.1 (A2:2013)	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD	THE STEEL STEEL	NUTER NUTER

Ju.	/
	ê
n <sup>s</sup>	

IEC 60950-1 – Attachment			
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	NUTER WALTER WALTER WA	
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 (artifical optical radiation).	WALTER WALTER WALTER	
A WALTER W	Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.	whitek whitek white	N 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 $\mu$ Sv/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.	ALTER MALTER WALTER	
Bibliography	Additional EN standards.	White white white	In In

ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS	

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
1.2.4.1	In <b>Denmark</b> , certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.	whitek whitek whitek white	N EK
1.2.13.14 (A11:2009)	In <b>Norway</b> and <b>Sweden</b> , for requirements see 1.7.2.1 and 7.3 of this annex.	The watthe water water	N N
1.5.7.1 (A11:2009)	In <b>Finland, Norway</b> and <b>Sweden</b> , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.	whitek white whitek	N IN

Г



IEC 60950-1 -	Attachment
---------------	------------

Clause	Requirement + Test	Result - Remark	Verdic
		Result - Remark	Verdic
1.5.8	In <b>Norway</b> , due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).	NUTER WALTER WALTER	IN SINN
1.5.9.4	In <b>Finland</b> , <b>Norway</b> and <b>Sweden</b> , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.	t stet stet with	
1.7.2.1	In <b>Finland</b> , <b>Norway</b> and <b>Sweden</b> , CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet.	When when the summer	Martin Martin
	The marking text in the applicable countries shall be as follows: In <b>Finland</b> : "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"	white white white	t whit it whit
	In <b>Norway</b> : "Apparatet må tilkoples jordet stikkontakt"	when when when	WALTEN WALTEN
	In <b>Sweden</b> : "Apparaten skall anslutas till jordat uttag"	Tet stret stret of	LITEX MITEX
1.7.2.1 (A11:2009)	In <b>Norway</b> and <b>Sweden</b> , the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system.	antifet antifet antifet	et was set was
	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.	at the set	INLIEK WALTER
	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:	when the weather and	t writer writer
	"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	Multer white white	white white
	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)."	The summer and the summer s	

## Page 11 of 17

12	

IEC	60950-1	<ul> <li>Attachment</li> </ul>
-----	---------	--------------------------------

	IEC 60950-1 – Attachmen		
Clause	Requirement + Test	Result - Remark	Verdict
ANTIER ANTIER	<ul> <li>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.</li> <li>Translation to Norwegian (the Swedish text will also be accepted in Norway):</li> <li>"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."</li> <li>Translation to Swedish:</li> <li>"Utrustning som är kopplad till skyddsjord via</li> </ul>	ALTER WALTER WALTER	AND
	jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medfőra risk főr brand. Főr att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet."	WALTER WALTER WALTER	MAL MALTER
1.7.2.1 (A2:2013)	In <b>Denmark</b> , CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in <b>Denmark</b> shall be as follows: In <b>Denmark</b> : "Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord."	A WALTER WALTER WALTER	
1.7.5 1.7.5 (A11:2009)	In <b>Denmark</b> , socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a. For <b>CLASS II EQUIPMENT</b> the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.	Martine while white	N N N

Г

## Page 12 of 17



IEC 60950-1 -	Attachment
---------------	------------

IEC 60950-1 – Attachment			
Clause	Requirement + Test	Result - Remark	Verdic
	tet ster strength white we are	the state	
1.7.5 (A2:2013)	In <b>Denmark</b> , socket-outlets for providing power to other equipment shall be in accordance with the DS 60884-2-D1:2011.	NUTER WALTE WALTER W	nti sunn ret stet
	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.	VINITE WALTER WALTE	win Et win
	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.	White white white w	er wiret w
t MALTER W	Justification the Heavy Current Regulations, 6c	stift outer watter	whitek whi
2.2.4	In <b>Norway</b> , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	when the state	NITES NEW
2.3.2	In <b>Finland</b> , <b>Norway</b> and <b>Sweden</b> there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.	ALL WALL WITH WALLEY	N
2.3.4	In <b>Norway</b> , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	t stat stat with	A SEKN
2.6.3.3	In the <b>United Kingdom</b> , the current rating of the circuit shall be taken as 13 A, not 16 A.	white with the	N
2.7.1	In the <b>United Kingdom</b> , to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.	antit wints wint a	NITEX NATEX
2.10.5.13	In <b>Finland</b> , <b>Norway</b> and <b>Sweden</b> , there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.	whe wires whites	INTER MALTE
3.2.1.1	In <b>Switzerland</b> , supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets: SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A	TEX WAITER WAITER WA	I I I I I I I I I I I I I I I I I I I

Г

Page 13 of 17



IEC 60950-1 – Attachment
--------------------------

IEC 60950-1 – Attachment			
Clause	Requirement + Test	Result - Remark	Verdict
WALIER WA	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	NUTER WALTER WALTER W	SUN N
	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: SEV 5932-2.1998: Plug Type 25, 3L+N+PE		white white
	230/400 V, 16 A SEV 5933-2.1998:Plug Type 21, L+N, 250 V, 16A	white with the second	ITEK WALTER
	SEV 5933-2.1998. Plug Type 21, L+N, 250 V, TOA SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V, 16 A	et white white white	* w tret w
3.2.1.1	In <b>Denmark</b> , 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.	WALTER WALTER WALTER	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.	ALL WALL WALL WALL	ret miret
	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.	whitek whitek whitek	NON-TEX NOLTEX
3.2.1.1 (A2:2013)	In <b>Denmark</b> , supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1.	The superior	N ST
	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.	whitek whitek whitek	White white
	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.	at whitet whitet white	TE WAITE WA
	Justification the Heavy Current Regulations, 6c	MALTER MALTER MALTE	white white

142	1

	IEC 60950-1 – Attachment		
Clause	Requirement + Test	Result - Remark	Verdic
3.2.1.1	In <b>Spain</b> , supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994.	NITER WAITER WALTER	N 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.	waitet waitet wait	* while whi
	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.	whitek whitek whitek	MALTE MALTER
ter would	If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.	et whitet whitet whi	ite will with wi
3.2.1.1	In the <b>United Kingdom</b> , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations.	NATER WAITER WAITER	MALE MALEX
	NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.	t wanter water water	et was set was
3.2.1.1	In <b>Ireland</b> , apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.	antin anti- anti-	N N N N
3.2.4	In <b>Switzerland</b> , for requirements see 3.2.1.1 of this annex.	white white we	N
3.2.5.1	In the <b>United Kingdom</b> , 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.	Inthe water water w	N N
3.3.4	In the <b>United Kingdom</b> , the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm <sup>2</sup> to 1,5 mm <sup>2</sup> nominal cross-sectional area.	whitek whitek whitek	

Reference	e No.: WTF17F1194903S Page 15 of 17		
t jet	IEC 60950-1 – Attachme	nt	fet ft
Clause	Requirement + Test	Result - Remark	Verdict
4.3.6	In the <b>United Kingdom</b> , the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.	Tet whilet whitet wh	MALE MALE
4.3.6	In <b>Ireland</b> , DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.	attet whitet whitet w	ALTER ON N
	<ul> <li>In Finland, Norway and Sweden TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment:</li> <li>STATIONARY PLUGGABLE EQUIPMENT TYPE A that         <ul> <li>is intended to be used in a RESTRICTED</li> <li>ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and has provision for a permanently connected</li> <li>PROTECTIVE EARTHING CONDUCTOR; and is provided with instructions for the installation of that conductor by a SERVICE PERSON;</li> <li>STATIONARY PLUGGABLE EQUIPMENT TYPE B;</li> <li>STATIONARY PERMANENTLY CONNECTED EQUIPMENT.</li> </ul> </li> </ul>	Tet wattet wattet wattet	

#### Page 16 of 17



IEC 60950-1 - Attachment

IEC 60950-1 – Attachment				
Clause	Requirement + Test	Result - Remark	Verdict	
6.1.2.1 (A1:2010)	In <b>Finland</b> , <b>Norway</b> and <b>Sweden</b> , add the following text between the first and second	NITE WALLS WALTER	Mark of N	
(((1.2010)	paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either	Set unifed unifed and	Tek waitek w K stek st	
WALTER WA	<ul> <li>two layers of thin sheet material, each of which shall pass the electric strength test below, or</li> <li>one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below.</li> </ul>	white white shire	white white	
Intres white	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	et whitet whitet whi	et white wh	
y waiter y	component passes the electric strength test in accordance with the compliance clause below and in addition	wontret wontret whites	would be would	
WALTER WAL	<ul> <li>passes the tests and inspection criteria of</li> <li>2.10.11 with an electric strength test of 1,5 kV</li> <li>multiplied by 1,6 (the electric strength test of</li> <li>2.10.10 shall be performed using 1,5 kV), and</li> </ul>	milet anifet anifet	untite untite	
IEX NITEX	<ul> <li>is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.</li> </ul>	Tex waiter waite wa	at white w	
whitek w	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b).	which white with	N N	
WALTER WAT	It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2.	and an an so	NITEK WINITEK.	
stek whitek	A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions:	the survey was	TEX WITEK W	
et whitet	- 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;	warret warret warre	white white	
INLIEK WINLIF	- the additional testing shall be performed on all the test specimens as described in EN 60384-14:	and same solution	tret untret v	
ret whitek	- 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.	of montreet montreet montre	et wheret wh	

Page 17 of 17



IEC 60950-1 – Attachment

Clause	Requirement + Test	Result - Remark	Verdict
1. And the second se	THE THE SHIT WIT AND		at at
6.1.2.2	In <b>Finland</b> , <b>Norway</b> and <b>Sweden</b> , the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.	NUTER WALTER WALTER WALTER	
7.2	In <b>Finland</b> , <b>Norway</b> and <b>Sweden</b> , for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.	et whitet whitet white	
7.3 (A11:2009)	In <b>Norway</b> and <b>Sweden</b> , for requirements see 1.2.13.14 and 1.7.2.1 of this annex.	White while white	N N

#### Annex ZD (informative) IEC and CENELEC code designations for flexible cords

Type of flexible cord Code designations		designations
	IEC	CENELEC
PVC insulated cords	m. m. m.	s at at a
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	NUTE NOT WIT W	- m m n
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	t at at	THE STREE STREET
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

===== End of Attachment ======



Page 1 of 5 **Photo Documentation** Reference No.: WTF17F1194903S



Photo 1 External View



Photo 2 External View



Page 2 of 5 **Photo Documentation** Reference No.: WTF17F1194903S



Photo 3 External View



Photo 4 Terminal View



Page 3 of 5 **Photo Documentation** Reference No.: WTF17F1194903S



Photo 5 Internal View



Photo 6 Internal View



Page 4 of 5 **Photo Documentation** Reference No.: WTF17F1194903S

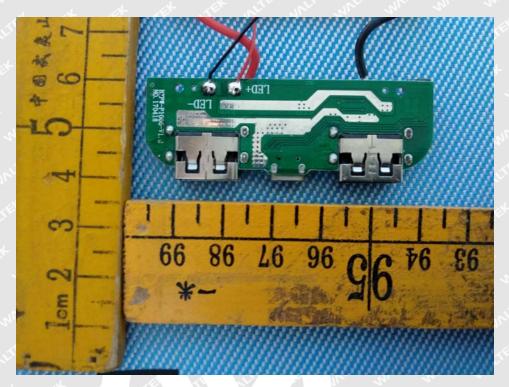


Photo 7 Solder side of main board

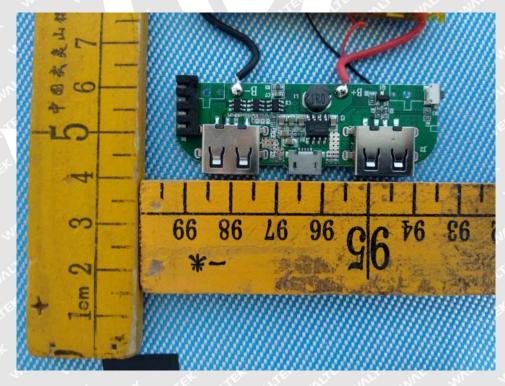


Photo 8 Component side of main board

 $\bigotimes$ 

Page 5 of 5 **Photo Documentation** Reference No.: WTF17F1194903S



Photo 9 Battery View

=====End of Photo======