



TEST REPORT

Reference No.	: 1	WTF22D07151596Y
Applicant	: 2	Mid Ocean Brands B.V.
Address	المالي. له	7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Manufacturer	NETES	114538
Address	j.	- of ref antiet antiet water water water water water
Product	Š	Power bank 2200 mAh in Bamboo case
Model(s)	ç:	MO9673
Total pages	:m	70 pages and 5 pages of photo.
Standards	: 🔬	EN IEC 62368-1:2020+A11:2020
		Audio/video, information and communication technology equipment- Part 1:Safety requirements
Date of Receipt sample	S.	2022-07-26
Date of Test	÷	2022-07-26 to 2022-08-10
Date of Issue	: -0	2022-09-01
Test Result	:	Pass and mathematic which when when your the

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 Testing Group Co., Ltd.

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Approved by:

Sam Qi / Designated Reviewer

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Reference No.: WTF22D07151596Y

Page 2 of 70

Test item description	m description Power bank 2200 mAh in Bamboo case		
Trademark	MOB		
Model and/or type reference:	MO9673		
a start start	USB Output:	put: 5Vdc, 1.0A 5Vdc, 1.0A m-ion cell: 3.7Vdc, 2200mAh, 8.14Wh	
Remark:	1 15	stream and	
Whether parts of tests for the product ha Yes No If Yes, list the related test items and lab Test items: Lab information:		contracted to other labs:	
Summary of testing:	we way	and the state state with the	
Tests performed (name of test and test	et clause)	Testing location:	
- EN IEC 62368-1:2020+A11:2020 The submitted samples were found to co the requirements of above specification.	omply with	No. 77, Houjie Section, Guantai Road, Houjie Town, Dongguan City, Guangdong, China	
		s (List of countries addressed): 368-1:2020+A11:2020 and BS EN IEC 62368-	
EU Group Differences		Tet wiret waitet waitet waitet waitet waitet	
EU Group Differences The product fulfils the requirements of 1:2020+A11:2020 Use of uncertainty of measurement for No decision rule is specified by the applicable limit according to the specified	of EN IEC 62 or decisions IEC standa fication in th	368-1:2020+A11:2020 and BS EN IEC 62368- on conformity (decision rule): rd, when comparing the measurement result with the at standard. The decisions on conformity are made	
EU Group Differences The product fulfils the requirements of 1:2020+A11:2020 Use of uncertainty of measurement for No decision rule is specified by the applicable limit according to the specifi without applying the measurement unce "accuracy method").	of EN IEC 62 or decisions IEC standa fication in th certainty ("sin	368-1:2020+A11:2020 and BS EN IEC 62368-	
EU Group Differences	of EN IEC 62 or decisions IEC standa fication in th certainty ("sin when requir ement: calculated by tion of test m he applicatio results with	368-1:2020+A11:2020 and BS EN IEC 62368- on conformity (decision rule): rd, when comparing the measurement result with the at standard. The decisions on conformity are made nple acceptance" decision rule, previously known as	



Copy of marking plate:

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

MOB MO9673 RoHS 🐲 PO BOX 644, 6710BP(NL) Input:DC 5V==1A Output:DC 5V=1A Capacity:2200mAh/8.14Wh Made in China _____110084

Remark:

- 1. The above markings are the minimum requirements required by the safety standard. For the final production, the additional markings which donot give rise to misunderstanding may be added.
- 2. The CE, UKCA marking and WEEE symbol should be at least 5.0mm and 7.0mm respectively in height.
- 3. According to the EU directives which have been aligned with EU NLF (new legislative framework), both of manufacturer and importer's name and address shall be affixed on the product or, where that is not possible, on its packaging or in a document accompanying the product before the product is placed on the EU market.

Page 4 of 70

TEST ITEM PARTICULARS:	net whe whe we we to the
Product group:	🛛 end product 🗌 built-in component
Classification of use by:	 Ordinary person Instructed person Skilled person
Supply Connection:	□ AC mains □ DC mains □ not mains connected: □ ES1 □ ES2 □ ES3
Supply % Tolerance:	□ +10%/-10% □ +20%/-15% □ +%/% ⊠ None
Supply Connection – Type:	 pluggable equipment type A - non-detachable supply cord appliance coupler direct plug-in pluggable equipment type B - non-detachable supply cord appliance coupler permanent connection mating connector in other: not Mains connected
Considered current rating of protective device as part of building or equipment installation:	UK: 13 A; Others: 16 A; Location: Duilding equipment
Equipment mobility:	movable hand-held transportable direct plug-in stationary for building-in wall/ceiling-mounted SRME/rack-mounted other:
Over voltage category (OVC):	□ OVC I □ OVC II □ OVC III □ OVC IV ☑ other: not Mains connected
Class of equipment:	□ Class I □ Class II □ Class II □ Class II
Access location:	N/A restricted access area outdoor location
Pollution degree (PD):	□ PD 1 🛛 PD 2 🗌 PD 3
Manufacturer's specified maxium operating ambient :	35°C 🔲 Outdoor: minimum°C
IP protection class	
Power Systems:	□ TN □ TT □ ITV _{L-L} ⊠ not AC mains
Altitude during operation (m):	🛛 2000 m or less 🔲m
Altitude of test laboratory (m):	🛛 2000 m or less 🗌 m
Mass of equipment (kg):	⊠ 0.08kg

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Page 5 of 70

POSSIBLE TEST CASE VERDICTS:	not wont when you we that it it
- test case does not apply to the test object:	N/A
- test object does meet the requirement:	P (Pass)
- test object does not meet the requirement:	F (Fail)
TESTING:	When we we at the
Date of receipt of test item:	2022-07-26
Date (s) of performance of tests:	2022-07-26 to 2022-08-10

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 \Box comma / \boxtimes point is used as the decimal separator.

GENERAL PRODUCT INFORMATION:

Product Description

- 1. The EUT covered by this report is a Power bank used as information apparatus. It is supplied by external power supply or by internal lithium ion battery cell or Micro USB supply.
- 2. The manufacturer specified maximum ambient temperature is 35°C. The specified altitude is up to and including 2000 m above sea level.

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3. The all circuits complied with ES1 and PS1, PS2, no other circuit existed.

Model Differences

N/A

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

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	V		٢

Clause	Possible Hazard				
5	Electrically-caused injury				
Class and Energy Source	Body Part	Safeguards			
(e.g. ES3: Primary circuit)	(e.g. Ordinary)	В	S	R	
ES1: All internal circuit	Ordinary	N/A	N/A	^NA	
ES1: Lithium Cell output	Ordinary	N/A	N/A	N/A	
3	Electrically-caused fire				
Class and Energy Source	Material part		Safeguards		
(e.g. PS2: 100 Watt circuit)	(e.g. Printed board)	В	1 st S	2 nd S	
PS2: >15 Watt circuits, <100 Watt circuits (Lithium Cells putput)	Enclosure	See 6.3	See 6.4.5 and 6.4.8	N/A	
PS1: <15 Watt circuits	РСВ	N/A	N/A	N/A S	
PS1: <15 Watt circuits	The other components/materials	N/A	N/A	N/A	
7	Injury caused by hazardous substances				
Class and Energy Source	Body Part		Safeguards		
e.g. Ozone)	(e.g., Skilled)	В	S	R	
N/A	N/A	N/A	N/A	N/A	
3	Mechanically-caused injury				
Class and Energy Source	Body Part		Safeguards		
e.g. MS3: Plastic fan blades)	(e.g. Ordinary)	В	S	R	
MS1: Edges and corners	Ordinary	N/A	N/A	N/A	
MS1: Mass of the unit	Ordinary	N/A	N/A	N/A	
	Thermal burn				
Class and Energy Source	Body Part		Safeguards		
e.g. TS1: Keyboard caps)	(e.g., Ordinary)	В	S	R	
S1: All accessible parts	Ordinary	N/A	N/A	N/A	
0	Radiation				
Class and Energy Source	Body Part		Safeguards		
e.g. RS1: PMP sound output)	(e.g., Ordinary)	В	S	R	
RS1: LED for indicating	Ordinary	N/A	N/A	N/A	

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Page 7 of 70



ENERGY SOURCE DIAGRAM

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

 \square ES \square PS \square MS \square TS \square RS

See details in OVERVIEW OF ENERGY SOURCES AND SAFEGUARDS

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Page 8 of 70

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Clause	Requirement – Test	Result – Remark	Verdict

4	GENERAL REQUIREMENTS			
4.1.1	Acceptance of materials, components and subassemblies	(See appended table 4.1.2)	P	
4.1.2	Use of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment. See also Annex G	P	
4.1.3	Equipment design and construction	Equipment is adequately designed and constructed.	SVI P	
4.1.4	Specified ambient temperature for outdoor use (°C)	Indoor use only	N/A	
4.1.5	Constructions and components not specifically covered	No such constructions and components.	N/A	
4.1.8	Liquids and liquid filled components (LFC)	No such parts.	N/A	
4.1.15	Markings and instructions	(See Annex F)	P	
4.4.3	Safeguard robustness	See below	_N ς Ρ	
4.4.3.1	General	2 Jun 2n 1	Р	
4.4.3.2	Steady force tests	(See Annex T.2 and T.5).	S P	
4.4.3.3	Drop tests	(See Annex T.7)	Р	
4.4.3.4	Impact tests	(See Annex T.6)	P	
4.4.3.5	Internal accessible safeguard tests	No such parts.	N/A	
4.4.3.6	Glass impact tests	No such glass used.	N/A	
4.4.3.7	Glass fixation tests	No such parts.	N/A	
in m	Glass impact test (1J)	white white white white w	N/A	
1 1	Push/pull test (10 N)	S A A A	N/A	
4.4.3.8	Thermoplastic material tests	(See Annex T.8)	Р	
4.4.3.9	Air comprising a safeguard		N/A	
4.4.3.10	Accessibility, glass, safeguard effectiveness	After tests of 4.4.3.2, 4.4.3.3, 4.4.3.4, 4.4.3.8, no safeguard damaged.	P	
4.4.4	Displacement of a safeguard by an insulating liquid	No such liquid.	N/A	
4.4.5	Safety interlocks	No such parts.	N/A	
4.5	Explosion	the state of the state of	وې P	
4.5.1	General	No explosion occurs during normal/abnormal operation and single fault conditions	P	

112



Page 9 of 70

20.	EN IEC 62368-1				
Clause	Requirement – Test	Result – Remark	Verdict		
4.5.2	No explosion during normal/abnormal operating condition	(See Clause B.2, B.3)	P		
Let 2	No harm by explosion during single fault conditions	(See Clause B.4)	Р		
4.6	Fixing of conductors	See below	P		
et se	Fix conductors not to defeat a safeguard	it it let bet	50° P.S		
	Compliance is checked by test	(See Clause T.2)	Р		
4.7	Equipment for direct insertion into mains sock	et-outlets	N/A		
4.7.2	Mains plug part complies with relevant standard	Not direct plug-in equipment.	N/A		
4.7.3	Torque (Nm)	tet the state out	N/A		
4.8	Equipment containing coin/button cell batteries	and an an a	N/A		
4.8.1	General	No coin/button cell batteries used.	N/A		
4.8.2	Instructional safeguard	of the set set of	N/A		
4.8.3	Battery compartment door/cover construction	mur mur m n	N/A		
INLIE IN	Open torque test	the state state with	N/A		
4.8.4.2	Stress relief test	when all an an	N/A		
4.8.4.3	Battery replacement test	at ante white	N/A		
4.8.4.4	Drop test		N/A		
4.8.4.5	Impact test	all all mark white	N/A		
4.8.4.6	Crush test	SN 1 At	N/A		
4.8.5	Compliance	the introduction in the superior while while	N/A		
A	30N force test with test probe	a stat	N/A		
mr. m	20N force test with test hook	MUTER WALT WALT WALT	<∿ [®] N/A		
4.9	Likelihood of fire or shock due to entry of cond	luctive object	P		
4.10	Component requirements	Inter white white white	N/A		
4.10.1	Disconnect Device	is at at at	N/A		
4.10.2	Switches and relays	in which which which we	N/A		

5	ELECTRICALLY-CAUSED INJURY		<i>√</i> ⁰ P
5.2	Classification and limits of electrical energy sou	irces	Р
5.2.2 🔊	ES1, ES2 and ES3 limits	White white white white	ALL P
5.2.2.2	Steady-state voltage and current limits	(See appended table 5.2)	Р
5.2.2.3	Capacitance limits	No such capacitors	N/A
5.2.2.4	Single pulse limits	No such single pulses	N/A
5.2.2.5	Limits for repetitive pulses	No such repetitive pulses	N/A
5.2.2.6	Ringing signals	No such ringing signals	N/A

5



Reference	No.:	WTF22D07	151596Y

Page 10 of 70

EN IEC 62368-1			
Clause	Requirement – Test	Result – Remark	Verdict
<u> </u>		Et white white white wh	
5.2.2.7	Audio signals	* * * * 5	N/A
5.3 📣	Protection against electrical energy sources	water and when when	_√ [™] P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons	and and and another	UNITE P
5.3.1 a)	Accessible ES1/ES2 derived from ES2/ES3 circuits	n with the state	N/A
5.3.1 b)	Skilled persons not unintentional contact ES3 bare conductors	NEX WALTER WALTER WALTER S	N/A
5.3.2.1	Accessibility to electrical energy sources and safeguards	Only ES1 circuit and the enclosure (safeguard) are accessed to person.	Р
ine in	Accessibility to outdoor equipment bare parts	white white white white	_s∿N/A
5.3.2.2	Contact requirements	a with the	N/A
in men	Test with test probe from Annex V	the write while white	s —
5.3.2.2 a)	Air gap – electric strength test potential (V)	e it at at	N/A
5.3.2.2 b)	Air gap – distance (mm)	NUT WILL WAL W	N/A
5.3.2.3	Compliance	the states	N/A
5.3.2.4	Terminals for connecting stripped wire	No stripped wire used.	N/A
5.4	Insulation materials and requirements	11 . 11 . 11	°
5.4.1.2	Properties of insulating material	No insulation as a safeguard.	N/A
5.4.1.3	Material is non-hygroscopic	the set of the	N/A
5.4.1.4	Maximum operating temperature for insulating materials	(See appended table 5.4.1.4, 9.3, B.1.5, B.2.6, B.3, B.4)	P
5.4.1.5	Pollution degrees	white white where whe	N/A
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound	stret intret aniret anti	N/A
5.4.1.5.3	Thermal cycling test	i i at st	N/A
5.4.1.6	Insulation in transformers with varying dimensions	NUTE MUTE MALL MAL	N/A
5.4.1.7	Insulation in circuits generating starting pulses	a at at at	N/A
5.4.1.8	Determination of working voltage	white white white all	N/A
5.4.1.9	Insulating surfaces	. It let let i	N/A
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted	which which when the	N/A
5.4.1.10.2	Vicat test	INTER NUTE WATE WALL	N/A
5.4.1.10.3	Ball pressure test	s at the left	N/A
5.4.2	Clearances	TE WALT WALL WAL	N/A
5.4.2.1	General requirements	a at at at	N/A
NU .	Clearances in circuits connected to AC Mains, Alternative method	with white white white	N/A
5.4.2.2	Procedure 1 for determining clearance	street outer south south	N/A



Page 11 of 70

EN IEC 62368-1			
Clause	Requirement – Test	Result – Remark	Verdict

	Temporary overvoltage		—
5.4.2.3	Procedure 2 for determining clearance	white white white white	N/A
5.4.2.3.2.2	a.c. mains transient voltage	the second second	
5.4.2.3.2.3	d.c. mains transient voltage	NUTE INTE WALL WILL	
5.4.2.3.2.4	External circuit transient voltage	+ + + At	
5.4.2.3.2.5	Transient voltage determined by measurement	ice white white white w	
5.4.2.4	Determining the adequacy of a clearance using an electric strength test	milet whilet whilet whi	N/A
5.4.2.5	Multiplication factors for clearances and test voltages	and with whith whith	N/A
5.4.2.6	Clearance measurement	an an a st	N/A
5.4.3	Creepage distances	LIER MILE MALE MALE	N/A
5.4.3.1	General	i i stat	N/A
5.4.3.3	Material group	et unite white white wh	
5.4.3.4	Creepage distances measurement	a at at a	N/A
5.4.4	Solid insulation	white white whe whe	N/A
5.4.4.1	General requirements	at the set	N/A
5.4.4.2	Minimum distance through insulation	and and and	N/A
5.4.4.3	Insulating compound forming solid insulation		N/A S
5.4.4.4	Solid insulation in semiconductor devices	a nut mu an a	N/A
5.4.4.5	Insulating compound forming cemented joints	t ret wet with with	N/A
5.4.4.6	Thin sheet material	me me me	N/A
5.4.4.6.1	General requirements	and and when the	N/A
5.4.4.6.2	Separable thin sheet material	me me in the	N/A
The men	Number of layers (pcs)	THE STREE MUTER WATER .	N/A
5.4.4.6.3	Non-separable thin sheet material	and the second second	N/A
me	Number of layers (pcs)	let write white white we	N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material	- the state strat mit	N/A
5.4.4.6.5	Mandrel test	me m m	N/A
5.4.4.7	Solid insulation in wound components	and when the mare	N/A
5.4.4.9	Solid insulation at frequencies >30 kHz, $E_{\rm P}$, $K_{\rm R}$, d , $V_{\rm PW}$ (V)	at the state state	N/A
t	Alternative by electric strength test, tested voltage (V) , K_R	and the set	N/A
5.4.5	Antenna terminal insulation	whit whit whe are	N/A
5.4.5.1	General	s at at all	N/A



Page 12 of 70

EN IEC 62368-1				
Clause	Requirement – Test	Result – Remark	Verdict	
<u></u>	N N T	in the white white		
5.4.5.2	Voltage surge test	* *	N/A	
5.4.5.3	Insulation resistance (MΩ)	MOLITE SUNCT MALL	N/A	
det de	Electric strength test	a at at	N/A	
5.4.6	Insulation of internal wire as part of supplementary safeguard	MITE MAIL MALL M	N/A	
5.4.7	Tests for semiconductor components and for cemented joints	fex white white wh	N/A	
5.4.8	Humidity conditioning	t set set se	N/A	
JEt N	Relative humidity (%), temperature (°C), duration (h)	when when we		
5.4.9	Electric strength test	White white white	•//A	
5.4.9.1	Test procedure for type test of solid insulation	at at at	N/A	
5.4.9.2	Test procedure for routine test	it was not m	N/A	
5.4.10	Safeguards against transient voltages from external circuits	et muset muset whit	N/A	
5.4.10.1	Parts and circuits separated from external circuits	at the At	N/A	
5.4.10.2	Test methods	NALIE MALL MAL	N/A	
5.4.10.2.1	General		N/A	
5.4.10.2.2	Impulse test	S Junit 4	N/A	
5.4.10.2.3	Steady-state test		5 N/A	
5.4.10.3	Verification for insulation breakdown for impulse test	which which which	N/A	
5.4.11	Separation between external circuits and earth	NATE WALE WAY	N/A	
5.4.11.1	Exceptions to separation between external circuits and earth	stret stret swiret	N/A	
5.4.11.2	Requirements	Star Star Star	N/A	
in which	SPDs bridge separation between external circuit and earth	NITE WALTE WALTE W	N/A	
MULT	Rated operating voltage U _{op} (V)	et wet with an	<u> </u>	
	Nominal voltage U _{peak} (V)			
white w	Max increase due to variation ΔU_{sp}	NUTE INVITE INVITE	white	
de la	Max increase due to ageing ∆U _{sa}	A A		
5.4.11.3	Test method and compliance	NUTER AND ALLEN AND A	N/A	
5.4.12	Insulating liquid		N/A	
5.4.12.1	General requirements	LICE INTERNITE M	N/A	
5.4.12.2	Electric strength of an insulating liquid		N/A	
5.4.12.3	Compatibility of an insulating liquid	and white white	N/A	
5.4.12.4	Container for insulating liquid		N/A	

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Page 13 of 70

EN IEC 62368-1				
Clause	Requirement – Test	Re	esult – Remark	Verdict

5.5	Components as safeguards		N/A
5.5.1	General	No such components as safeguards.	N/A
5.5.2	Capacitors and RC units	the set she with	N/A
5.5.2.1	General requirement	the me me in	N/A
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector	LET MALIER WALLER WALLER	N/A
5.5.3	Transformers	t at all of a	N/A
5.5.4	Optocouplers	white white white white	N/A
5.5.5	Relays	let the state with	N/A
5.5.6	Resistors	mer me me	N/A
5.5.7	SPDs	Tet Jet aller miles	N/A
5.5.8	Insulation between the mains and an external circuit consisting of a coaxial cable	at the sat sat	N/A
5.5.9	Safeguards for socket-outlets in outdoor equipment	when when when we	N/A
m 1	RCD rated residual operating current (mA)	white white white white	
5.6	Protective conductor	at a set of	N/A
5.6.2	Requirement for protective conductors	a contraction	N/A
5.6.2.1	General requirements	Class III equipment	N/A
5.6.2.2	Colour of insulation	and the solution	N/A
5.6.3	Requirement for protective earthing conductors	t let ret with a	N/A
	Protective earthing conductor size (mm ²)	me me me	_
mere w	Protective earthing conductor serving as a reinforced safeguard	WALTER WALTER WALTER WALT	N/A
iter whi	Protective earthing conductor serving as a double safeguard	NITER WAITER WAITER WAITER	N/A
5.6.4	Requirements for protective bonding conductors	s at at at	* N/A <</td
5.6.4.1	Protective bonding conductors	in which which which we	N/A
Ster	Protective bonding conductor size (mm ²)	· A A A A	< —
5.6.4.2	Protective current rating (A)	Mar Mar Mar M	N/A
5.6.5	Terminals for protective conductors	at all all all	N/A
5.6.5.1	Terminal size for connecting protective earthing conductors (mm)	when when we we we	N/A
t set	Terminal size for connecting protective bonding conductors (mm)	the write when when	N/A
5.6.5.2	Corrosion	er marte white white white	N/A
5.6.6	Resistance of the protective bonding system	a stated	N/A
5.6.6.1	Requirements	white white white white	N/A



Page 14 of 70

	EN IEC 62368-1			
Clause	Requirement – Test	Result – Remark	Verdict	
5.6.6.2	Test Method	and and are all	N/A	
5.6.6.3	Resistance (Ω) or voltage drop	. itet autet antifet and	N/A	
5.6.7	Reliable connection of a protective earthing conductor	tet stet suret miret	N/A	
5.6.8	Functional earthing	the man and	N/A	
in white	Conductor size (mm ²)	Tex street white white a	N/A	
- 15	Class II with functional earthing marking	and the second	N/A	
when	Appliance inlet cl &cr (mm)	ALTER MUTER MALTE WA	N/A	
5.7	Prospective touch voltage, touch current and pr	otective conductor current	N/A	
5.7.2	Measuring devices and networks	INTER MALIE MALL MALL	<∿ [™] N/A	
5.7.2.1	Measurement of touch current	a at at at	N/A	
5.7.2.2	Measurement of voltage	LIEL MALT WALL WALL	N/A	
5.7.3	Equipment set-up, supply connections and earth connections	et ouret oniret oniret ou	N/A	
5.7.4	Unearthed accessible parts	the state	N/A	
5.7.5	Earthed accessible conductive parts	white white white whi	<√N/A	
5.7.6	Requirements when touch current exceeds ES2 limits	at with with	N/A	
A A	Protective conductor current (mA)		N/A	
mouth	Instructional Safeguard	The out of any and the	N/A	
5.7.7	Prospective touch voltage and touch current associated with external circuits	t the state with the	N/A	
5.7.7.1	Touch current from coaxial cables	me m m	N/A	
5.7.7.2	Prospective touch voltage and touch current associated with paired conductor cables	Whitek whitek white whit	N/A	
5.7.8	Summation of touch currents from external circuits	LIFE MALTER WALTER WALTER	N/A	
EK WALTER	a) Equipment connected to earthed external circuits, current (mA)	et wret wret waret	N/A	
MUTER	b) Equipment connected to unearthed external circuits, current (mA)	The set with a	N/A	
5.8	Backfeed safeguard in battery backed up supplie	es	N/A	
mere on	Mains terminal ES	No battery used	N/A	
A 1	Air gap (mm)	in the second	N/A	
		A A A A		

6	ELECTRICALLY- CAUSED FIRE	Р
6.2	Classification of PS and PIS	P



Page 15 of 70

EN IEC 62368-1				
Clause	Requirement – Test	Result – Remark	Verdict	
6.2.2	Power source circuit classifications	PS (power source) classification determined by measuring the maximum power in Figures 34 and 35 for load and power source circuits. (See appended table 6.2.2)	P.	
6.2.3	Classification of potential ignition sources	See the following details.	5° P 5	
6.2.3.1	Arcing PIS	No Arcing PIS exist in the equipment	N/A	
6.2.3.2	Resistive PIS	(See appended table 6.2.3.2)	-√ ¹ P	
6.3	Safeguards against fire under normal operating conditions	and abnormal operating	Р	
6.3.1	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials	No ignition and no such temperature attained within the equipment. (See appended table B.1.5 & B.3)	NITE P	
4	Combustible materials outside fire enclosure	No such parts	N/A	
6.4	Safeguards against fire under single fault condit	ions	P	
6.4.1	Safeguard method	Control fire spread	P	
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits	white white	N/A	
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits	TE WATE WAITE WATE	N/A	
6.4.3.1	Supplementary safeguards	t at at at	N/A	
6.4.3.2	Single Fault Conditions	Mar war war war	N/A	
. TEN	Special conditions for temperature limited by fuse	at let set set	N/A	
6.4.4	Control of fire spread in PS1 circuits	white white white white	Р	
6.4.5	Control of fire spread in PS2 circuits	at at all all	, Ś́Р	



Page 16 of 70

EN IEC 62368-1				
Clause	Requirement – Test	Result – Remark	Verdict	
6.4.5.2	Supplementary safeguards	Compliance detailed as follows: 1) Printed board: rated V-0	P	
	antiet whilet whilet whilet whilet while while	 2) Internal wires: complying with UL 758 standard, which test method and testing condition equal to IEC/EN 60695-11-21. 	WALFER SIN	
	United white white white white white	 All other components: at least V-2 except for parts mounted on min. V-1 material or small parts of combustible material (with mass less than 4g) or components complying with relevant IEC standard. 	et sunist sunist	
at whet	THE ALTER WATER WALTER WALTER WALTER WATER	4) V-0 of plastic enclosure and fire barriers used	ret o	
6.4.6	Control of fire spread in PS3 circuits	antit whit whit whe w	N/A	
6.4.7	Separation of combustible materials from a PIS	at at set 5	P	
6.4.7.2	Separation by distance	while she she wh	N/A	
6.4.7.3	Separation by a fire barrier	V-0 of fire barrier used.	, SP	
6.4.8	Fire enclosures and fire barriers	See below.	Р	
6.4.8.2	Fire enclosure and fire barrier material properties	V-0 of plastic enclosure and fire barriers used	P	
6.4.8.2.1	Requirements for a fire barrier	V-0 of fire barrier used.	e Ps	
6.4.8.2.2	Requirements for a fire enclosure	V-0 of plastic enclosure used	P	
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier	See below	P	
6.4.8.3.1	Fire enclosure and fire barrier openings	No openings	N/A	
6.4.8.3.2	Fire barrier dimensions	with white white white	м ^с Р4	
6.4.8.3.3	Top openings and properties	No top opening	N/A	
an	Openings dimensions (mm)	white white where we	N/A	
6.4.8.3.4	Bottom openings and properties	No bottom opening	N/A	
In I	Openings dimensions (mm)	white white white white	N/A	
WITTER WIN	Flammability tests for the bottom of a fire enclosure	milet whilet while while	N/A	
At St	Instructional Safeguard	a at at at	N/A	
6.4.8.3.5	Side openings and properties	No side openings	N/A	
the state	Openings dimensions (mm)	+ at at at	N/A	
6.4.8.3.6	Integrity of a fire enclosure, condition met: a), b) or c)	No enclosure can be opened by an ordinary person	N/A	

1



Page 17 of 70

	EN IEC 62368-1				
Clause	Requirement – Test	Result – Remark	Verdict		
sin	M. M. S. Start S.	the street whit all she she	- m		
6.4.8.4	Separation of a PIS from a fire enclosure and a fire barrier distance (mm) or flammability rating	V-0 of plastic enclosure and fire barriers used	P P		
6.4.9	Flammability of insulating liquid	mer we me w	N/A		
6.5	Internal and external wiring		JULY P. JULY		
6.5.1	General requirements	The internal wires are complied with UL standard, of which the test method and testing condition are equal to IEC/EN 60695-11-21.	STAL P		
6.5.2	Requirements for interconnection to building wiring	See 6.5.1.	Р		
6.5.3	Internal wiring size (mm2) for socket-outlets	No such wire used	N/A		
6.6	Safeguards against fire due to the connection to ac	dditional equipment	S P S		

7	INJURY CAUSED BY HAZARDOUS SUBSTANCES	At P At
7.2	Reduction of exposure to hazardous substances	N/A
7.3	Ozone exposure	N/A
7.4	Use of personal safeguards or personal protective equipment (PPE)	N/A
JEK	Personal safeguards and instructions	_
7.5	Use of instructional safeguards and instructions	N/A
Set a	Instructional safeguard (ISO 7010)	_
7.6	Batteries and their protection circuits	Р

8	MECHANICALLY-CAUSED INJURY		Р
8.2	Mechanical energy source classifications	at at at at	Р
8.3	Safeguards against mechanical energy sources	when whe we we	Р
8.4	Safeguards against parts with sharp edges and corners		NUT P NUT
8.4.1	Safeguards	V. M. M. M.	Р
IFT WALT	Instructional Safeguard:	MS1: Edges and corners of enclosure	P
8.4.2	Sharp edges or corners	Edges and corners of the enclosure are rounded.	P
8.5	Safeguards against moving parts	and the second	N/A
8.5.1	Fingers, jewellery, clothing, hair, etc., contact with MS2 or MS3 parts	No moving parts.	N/A
in whi	MS2 or MS3 part required to be accessible for the function of the equipment	See above.	N/A
A NUTE	Moving MS3 parts only accessible to skilled person	at the state street in	N/A
8.5.2	Instructional safeguard:	me me me	N/A

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Page 18 of 70

	EN IEC 62368-	<u> </u>	
Clause	Requirement – Test	Result – Remark	Verdict
8.5.4	Special categories of equipment containing moving parts	the set and and all	N/A
8.5.4.1	General	MULT MULT WITH THE	N/A
8.5.4.2	Equipment containing work cells with MS3 parts	The set when when	N/A
8.5.4.2.1	Protection of persons in the work cell	the same same	N/A
8.5.4.2.2	Access protection override	let whet while while w	N/A
8.5.4.2.2.1	Override system	the second second	- N/A
8.5.4.2.2.2	Visual indicator	antife antife anti- and	N/A
8.5.4.2.3	Emergency stop system	a at at all	N/A
No NO	Maximum stopping distance from the point of activation (m)	white white white white	N/A
i wat	Space between end point and nearest fixed mechanical part (mm):	are white white white	N/A
8.5.4.2.4	Endurance requirements	et wet aller mile w	N/A
NUTEX II	Mechanical system subjected to 100 000 cycles of operation	with the state with	N/A
50 S	- Mechanical function check and visual inspection	When all all all	N/A
NETE MALT	- Cable assembly:	at all the other	N/A
8.5.4.3	Equipment having electromechanical device for destruction of media		N/A
8.5.4.3.1	Equipment safeguards	in my my me a	N/A
8.5.4.3.2	Instructional safeguards against moving parts:	t set set with m	N/A
8.5.4.3.3	Disconnection from the supply	Mr. Mr. M. M.	N/A
8.5.4.3.4	Cut type and test force (N):	where where marked and	N/A
8.5.4.3.5	Compliance	all the set	N/A
8.5.5	High pressure lamps	No high pressure lamps used.	N/A
A 15	Explosion test:	i i it it	N/A
8.5.5.3	Glass particles dimensions (mm)	the water water water w	N/A
8.6	Stability of equipment	i stat at a	N/A
8.6.1	General	MS1: Mass of the unit	[∞] N/A
JER N	Instructional safeguard:	at at at at	N/A
8.6.2	Static stability	white white white white	N/A
8.6.2.2	Static stability test:	at the set state	N/A
8.6.2.3	Downward force test	and the second of	N/A
8.6.3	Relocation stability	at that what what we	N/A
A	Wheels diameter (mm):	m m m	_
no un	Tilt test	THE STREET OF OUR	N/A

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250

Reference No.: WTF22D07151596Y

Page 19 of 70

241	EN IEC 62368-	the mer white white	an a
Clause	Requirement – Test	Result – Remark	Verdict
8.6.4	Glass slide test	White water where an	N/A
8.6.5	Horizontal force test:	uter witer white wh	N/A
8.7	Equipment mounted to wall, ceiling or other stru	Joture	N/A
8.7.1	Mount means type:	No wall or ceiling	N/A
8.7.2	Test methods	e at at at	N/A
m	Test 1, additional downwards force (N):	see water water water	N/A
WALTER	Test 2, number of attachment points and test force (N)	t wifet whilet whilet w	N/A
Intrek w	Test 3 Nominal diameter (mm) and applied torque (Nm):	and and white with	N/A
8.8	Handles strength	when the second second	N/A
8.8.1	General	No handles	N/A
8.8.2	Handle strength test	the state	N/A
with	Number of handles:	Et MITER MATTER MATTER	<u>"n —</u>
Alt	Force applied (N):	a at let	st 5
8.9	Wheels or casters attachment requirements		N/A
8.9.2	Pull test	No such parts	N/A
8.10	Carts, stands and similar carriers	and sunt when	N/A
8.10.1	General	No carts, stands or similar carriers	N/A
8.10.2	Marking and instructions:	in the lite	N/A
8.10.3	Cart, stand or carrier loading test	A SUNTE SUNTE SUNTE SUNTE SU	N/A
JEt .	Loading force applied (N):	to the the s	N/A
8.10.4	Cart, stand or carrier impact test	While when whe with	>>` N/A
8.10.5	Mechanical stability	at set set set	N/A
	Force applied (N):	ner when when wh	
8.10.6	Thermoplastic temperature stability	let allet allet and	N/A
8.11	Mounting means for slide-rail mounted equipme	ent (SRME)	N/A
8.11.1	General	No such parts	N/A
8.11.2	Requirements for slide rails	A A A 5	N/A
an ca	Instructional Safeguard:	unit unit whe when	N/A
8.11.3	Mechanical strength test	TEX NUEX MUTER MUTER	N/A
8.11.3.1	Downward force test, force (N) applied:	i i i it it	N/A
8.11.3.2	Lateral push force test	et antife while while a	N/A
8.11.3.3	Integrity of slide rail end stops	the the states	< N/Â



Page 20 of 70

EN IEC 62368-1					
Clause	Requirement – Test	Result – Remark	Verdict		
8.11.4	Compliance	White White white white	N/A		

8.12	Telescoping or rod antennas		N/A
NUTER INTE	Button/ball diameter (mm):	No such parts	

9	THERMAL BURN INJURY	THERMAL BURN INJURY	
9.2	Thermal energy source classifications	ite white white where wi	Р
9.3	Touch temperature limits	e at at at a	e P
9.3.1	Touch temperatures of accessible parts:	(See appended table 5.4.1.4, 9.3, B.1.5, B.2.6)	Р
9.3.2	Test method and compliance	See B.1.6 & B.2.3	1 P 1
9.4	Safeguards against thermal energy sources	Safeguards against thermal energy sources	
9.5	Requirements for safeguards		Р
9.5.1	Equipment safeguard	Enclosure provided to limit the transfer of thermal energy of internal parts under normal operating conditions and abnormal operating conditions.	P
9.5.2	Instructional safeguard:	Instructional safeguard is not required.	N/A
9.6	Requirements for wireless power transmitters		N/A
9.6.1	General	No wireless power transmitters	N/A
9.6.2	Specification of the foreign objects	Str. W. St.	N/A
9.6.3	Test method and compliance:	t the street on the sone	N/A

10	RADIATION		Р
10.2	Radiation energy source classification		
10.2.1	General classification	See below	Mr. P.M.
de de	Lasers:	the second second	
whitek	Lamps and lamp systems:	RS1: LED only for indicating use which is considered as low power application.	—
20	Image projectors:	Main Mar Mar M	
NUTER OF	X-Ray:	set set set set	_
	Personal music player:	Nur Mur Mur M	
10.3	Safeguards against laser radiation		
* Juret	The standard(s) equipment containing laser(s) comply:	No laser radiation	N/A
10.4	Safeguards against optical radiation from lamps and lamp systems (including LED types)		Р
10.4.1	General requirements	LED indication light: Classed	<i>~</i> ⁹ Р <



	EN IEC 62368-	2 re white white white	
Clause	Requirement – Test	Result – Remark	Verdict
SUL		as RS1 (Exempt Group)	Ver aller
. Stat	Instructional action used provided for approxible		N/A
	Instructional safeguard provided for accessible radiation level needs to exceed	white white white whe	IN/A
LIFE MAL	Risk group marking and location:	let set set set all	N/A
	Information for safe operation and installation	and me me	N/A
10.4.2	Requirements for enclosures	set ster ster with	N/A
	UV radiation exposure:	a mu mu mu	N/A
10.4.3	Instructional safeguard:	of the state of a	N/A
10.5	Safeguards against X-radiation	Mr. M. M.	N/A
10.5.1 🔊	Requirements	No X-radiation	N/A <
de de	Instructional safeguard for skilled persons	out out of	
10.5.3	Maximum radiation (pA/kg)	ster alle white white	- 2
10.6 🦽	Safeguards against acoustic energy sources		_ </td
10.6.1	General	No such equipment	N/A
10.6.2	Classification	A A A .	N/A
m a	Acoustic output <i>L</i> _{Aeq,T} , dB(A):	white white white wh	N/A
Set as	Unweighted RMS output voltage (mV):		N/A
the star	Digital output signal (dBFS):	a sure and	N/A
10.6.3	Requirements for dose-based systems		N/AS
10.6.3.1	General requirements	and the same	N/A
10.6.3.2	Dose-based warning and automatic decrease	at the set wet wet	N/A
10.6.3.3	Exposure-based warning and requirements	my me me m	N/A
Intre ou	30 s integrated exposure level (MEL30):	THE STER STER WITH	N/A
	Warning for MEL ≥ 100 dB(A):	and the second	N/A
10.6.4	Measurement methods	the set she all	N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A N/A

Protection of persons

Cordless listening devices

earphones, etc.)

Instructional safeguards:

Requirements for listening devices (headphones,

Listening device input voltage (mV):

Max. acoustic output L_{Aeq,T}, dB(A):

Max. acoustic output *L*_{Aeq,T}, dB(A):

Corded listening devices with analogue input

Corded listening devices with digital input

10.6.5

10.6.6

10.6.6.1

10.6.6.2

10.6.6.3



Reference	No.:	WT	F22D	07	151	596Y
Reference	NO.:	VV I	F22D	100	151	596Y

Page 22 of 70

EN IEC 62368-1					
Clause	Requirement – Test	Result – Remark	Verdict		

В	NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS			
B.1	General	mer me m m	Р	
B.1.5	Temperature measurement conditions (See appended table B.1.5) Normal operating conditions (See appended table B.1.5)		Nº P N	
B.2			Р	
B.2.1	General requirements:	(See Test Item Particulars and appended test tables)	P.	
WALTER	Audio Amplifiers and equipment with audio amplifiers:	Martine water water water	N/A	
B.2.3	Supply voltage and tolerances	Rated input 5Vdc	Р	
B.2.5	Input test:	(See appended table B.2.5)	~ ^у Р	
B.3 🔬	Simulated abnormal operating conditions	the state of the	P	
B.3.1	General	(See appended table B.3)	Р	
B.3.2	Covering of ventilation openings	No ventilation openings.	N/A	
	Instructional safeguard:	MUC MUC MU M	N/A	
B.3.3	DC mains polarity test	Not supplied by D.C. mains	N/A	
B.3.4	Setting of voltage selector	No such selector	N/A	
B.3.5	Maximum load at output terminals	(See appended table B.3)	P	
B.3.6	Reverse battery polarity	verse battery polarity No such battery		
B.3.7	Audio amplifier abnormal operating conditions	No such audio	N/A	
B.3.8	Safeguards functional during and after abnormal operating conditions	All safeguards remained effective	et P.C	
B.4	Simulated single fault conditions	mer mer mer m	Р	
B.4.1	General	Tet the street of the	P	
B.4.2	Temperature controlling device	NTC used on battery protective board. The test is carried out for three times, no failure. See appended table B.4 for details	Intre Mart	
B.4.3	Blocked motor test	No motors	N/A	
B.4.4	Functional insulation	See below.	Р	
B.4.4.1	Short circuit of clearances for functional insulation	(See appended table B.4)	P	
B.4.4.2	Short circuit of creepage distances for functional insulation	(See appended table B.4)	JUL P J	
B.4.4.3	Short circuit of functional insulation on coated printed boards	No coated printed boards within the EUT	N/A	
B.4.5	Short-circuit and interruption of electrodes in tubes and semiconductors	(See appended table B.4)	Set PLIC	
B.4.6	Short circuit or disconnection of passive components	(See appended table B.4)	P	



5

Reference No.: WTF22D07151596Y

Page 23 of 70

-20.	EN IEC 62368-	the are and and	24. A.
Clause	Requirement – Test	Result – Remark	Verdict
B.4.7	Continuous operation of components	The EUT is continuous operating type and no such components intended for short time operation or intermittent operation	N/A
B.4.8	Compliance during and after single fault conditions:	No change to circuits classified in 5.3	P
B.4.9	Battery charging and discharging under single fault conditions	See annex M	P
С	UV RADIATION	·	N/A
C.1	Protection of materials in equipment from UV ra	adiation	N/A
C.1.2	Requirements	No such UV generated from the equipment.	N/A
C.1.3	Test method	LIER MITER MALTE WALL	N/A
C.2	UV light conditioning test	and the state	~- N/A
C.2.1	Test apparatus	the must move more with	N/A
C.2.2	Mounting of test samples	at at at a	N/A
C.2.3	Carbon-arc light-exposure test	while while while whe	N/A
C.2.4	Xenon-arc light-exposure test	10 10 10 10 10 10 10 10 10 10 10 10 10 1	N/A
D	TEST GENERATORS		N/A
D.1	Impulse test generators	and the set	N/A
D.2	Antenna interface test generator	the work when when a	N/A
D.3	Electronic pulse generator	at not not when we	N/A
E	TEST CONDITIONS FOR EQUIPMENT CONTAIN	IING AUDIO AMPLIFIERS	N/A
E.1	Electrical energy source classification for audio	o signals	N/A
	Maximum non-clipped output power (W):	where the same same	
inter which	Rated load impedance (Ω):	wet whet white white	_
at dit	Open-circuit output voltage (V):	the second second	
with	Instructional safeguard:	It white white white w	r —
E.2 🦽	Audio amplifier normal operating conditions	, i at at	N/A
men 1	Audio signal source type:	white white white wh	_
dit .	Audio output power (W):	a at at all	é
1. 24	Audio output voltage (V):	white white white white	_
JEA JIE	Rated load impedance (Ω):	at at all set	
-00-	Requirements for temperature measurement	WALL MAN MAN	N/A
E.3	Audio amplifier abnormal operating conditions	it at at at	N/A



Verdict

Reference No.: WTF22D07151596Y

Page 24 of 70

b	1	the second second	EN IEC 62368-1			
A	Clause	Requirement – Test	Result – Remark	Å		

F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND SAFEGUARDS	INSTRUCTIONAL	P
F.1	General	my my m	Р
Lite MA	Language	English	
F.2	Letter symbols and graphical symbols	her we we the	, P
F.2.1	Letter symbols according to IEC60027-1	Letter symbols for quantities and units are complied with IEC 60027-1.	P
F.2.2	Graphic symbols according to IEC, ISO or manufacturer specific	Graphical symbols are complied with IEC 60417, ISO 3864-2, ISO 7000 or ISO 7010.	Whitek Militek
F.3 🔨	Equipment markings	it it it it	_ر ه کې
F.3.1	Equipment marking locations	The required marking is located on the enclosure of the equipment and is easily visible.	P
F.3.2	Equipment identification markings	See below for details.	Р
F.3.2.1	Manufacturer identification:	See copy of marking plate	Р
F.3.2.2	Model identification:	See copy of marking plate	"У́Р
F.3.3	Equipment rating markings	See below for details.	Р
F.3.3.1	Equipment with direct connection to mains	Supplying by 5Vdc	N/A
F.3.3.2	Equipment without direct connection to mains	See above.	Р
F.3.3.3	Nature of the supply voltage:	See copy of marking plate.	P
F.3.3.4	Rated voltage:	See copy of marking plate.	P
F.3.3.5	Rated frequency:	DC supply	JULY P
F.3.3.6	Rated current or rated power:	See copy of marking plate.	P
F.3.3.7	Equipment with multiple supply connections	Single supply connection.	N/A
F.3.4	Voltage setting device	No voltage setting device.	⊘ [_] N/A
F.3.5	Terminals and operating devices	its white white white wh	N/A
F.3.5.1	Mains appliance outlet and socket-outlet markings	MITER MITER MAILER WALT	N/A
F.3.5.2	Switch position identification marking:	N A A A	N/A
F.3.5.3	Replacement fuse identification and rating markings	white white white whe	N/A
at when	Instructional safeguards for neutral fuse	Tet still still shire shire at	N/A
F.3.5.4	Replacement battery identification marking:	No such battery.	N/A
F.3.5.5	Neutral conductor terminal	No such parts.	N/A
F.3.5.6	Terminal marking location	10 m	N/A



Page 25 of 70

0	EN IEC 62368-		Manaliat
Clause	Requirement – Test	Result – Remark	Verdict
F.3.6	Equipment markings related to equipment classification	Class III equipment	N/A
F.3.6.1	Class I equipment	mer mer mer me	N/A
F.3.6.1.1	Protective earthing conductor terminal:	ret ret wret wret write	N/A
F.3.6.1.2	Protective bonding conductor terminals:	the man in the	N/A
F.3.6.2	Equipment class marking:	tet attet with which an	N/A
F.3.6.3	Functional earthing terminal marking:	The second second	N/A
F.3.7	Equipment IP rating marking:	This equipment is classified as IPX0.	- June
F.3.8	External power supply output marking:	See copy of marking plate.	N ^N P
F.3.9	Durability, legibility and permanence of marking	Marking is considered to be legible and easily discernible. See also the following details.	N. CON
	Test for permanence of markings	The label was subjected to the permanence of marking test. The label was rubbed with cloth soaked with water for 15 sec. And then again for 15 sec, with the cloth soaked with petroleum spirit. After this test there was no damage to the label. The marking on the label did not fade. There was no curling and lifting of the label edge. After each test, the marking remained legible.	
F.4	Instructions	SUPER WALL WALL WAT WAT	P
J.T. M.	a) Information prior to installation and initial use	See user manual	Р
an an	b) Equipment for use in locations where children not likely to be present	which which when when	N/A
r. m	c) Instructions for installation and interconnection	NUTER ANTIFE AUNITY AUNITY	N/A
	d) Equipment intended for use only in restricted access area	et suret muset wourst an	N/A
. At	e) Equipment intended to be fastened in place	and the state	N/A
white w	f) Instructions for audio equipment terminals	MUTER MATE MALT WAL	N/A
de la	g) Protective earthing used as a safeguard	a state state	N/A
in with	h) Protective conductor current exceeding ES2 limits	MILLER WALTE WALL WALL	N/A
The WALK	i) Graphic symbols used on equipment	TEL ALTER WITE WALT -	N/A
* Whitek	j) Permanently connected equipment not provided with all-pole mains switch	at the set what we	N/A
jet-	k) Replaceable components or modules providing safeguard function	when we we we	N/A



Page 26 of 70

	EN IEC 62368-		2
Clause	Requirement – Test	Result – Remark	Verdict
SIL	I) Equipment containing inculating liquid	With water water	N/A
and the second	I) Equipment containing insulating liquid	the state	
n n	m) Installation instructions for outdoor equipment	white where where a	N/A
F.5	Instructional safeguards	1 st at	N/A
G	COMPONENTS		P
G.1	Switches	a at at a	N/A
G.1.1	General	No switch used	N/A
G.1.2	Ratings, endurance, spacing, maximum load	e at at at	N/A
G.1.3	Test method and compliance	white white white	N/A
G.2	Relays	at at at	N/A
G.2.1	Requirements	No relay used.	N/A
G.2.2	Overload test	at at at a	N/A
G.2.3	Relay controlling connectors supplying power to other equipment	at when when we	N/A
G.2.4	Test method and compliance	WALL WALL WALL	N/A
G.3	Protective devices	in the state	N/A
G.3.1	Thermal cut-offs	No such component	N/A
NITER WIL	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)	at white w	N/A
LEK WALTE	Thermal cut-outs tested as part of the equipment as indicated in c)	Star Line Scient with	N/A
G.3.1.2	Test method and compliance	Mr Su St	N/A
G.3.2	Thermal links	No such component	N/A
G.3.2.1	a) Thermal links tested separately according to IEC 60691 with specifics	the state state	N/A
4	b) Thermal links tested as part of the equipment	me me mi	N/A
G.3.2.2	Test method and compliance	the the the of	N/A
G.3.3	PTC thermistors	No such component	N/A
G.3.4	Overcurrent protection devices	No such component	N/A
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.4	- the set set	N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided	with with with	N/A
G.3.5.2	Single faults conditions:	NUT MUSS MUSS M	N/A
G.4	Connectors	at the tot of	N/A
G.4.1	Spacings	No such component	N/A
G.4.2	Mains connector configuration	A 10 10 50	N/A
G.4.3	Plug is shaped that insertion into mains socket- outlets or appliance coupler is unlikely	which which which	N/A



Page 27 of 70

in me	Mr. In the	EN IEC 62368-1	white white whe whe
Clause	Requirement – Test	Result – Re	emark Verdict

G.5	Wound components		N/A
G.5.1 📣	Wire insulation in wound components	No such component	N/A
G.5.1.2	Protection against mechanical stress	Shi wa sh	N/A
G.5.2	Endurance test	NUTER INTERIORNALITY WAL	N/A
G.5.2.1	General test requirements	a state of	N/A
G.5.2.2	Heat run test	ALL WALT WALT WAL	
- Set	Test time (days per cycle):	e at at at	. –
24. 2	Test temperature (°C):	white white white	14°. —
G.5.2.3	Wound components supplied from the mains	at at at	N/A
G.5.2.4	No insulation breakdown	were were were we	N/A
G.5.3	Transformers	it the set of all	N/A
G.5.3.1	Compliance method:	the me me	N/A
NNLIE.	Position:	at whit what what	N/A
	Method of protection:	me in in	N/A
G.5.3.2	Insulation	The street on the se	N/A
dt i	Protection from displacement of windings:	M. M	<u> </u>
G.5.3.3	Transformer overload tests	ist white whi	N/A
G.5.3.3.1	Test conditions		N/A
G.5.3.3.2	Winding temperatures	ren mile white white	N/A
G.5.3.3.3	Winding temperatures - alternative test method	i s st st	N/A
G.5.3.4	Transformers using FIW	WALTE WALT WALT	N/A
G.5.3.4.1	General	at at at	N/A
m m	FIW wire nominal diameter:	white white white w	_
G.5.3.4.2	Transformers with basic insulation only	at at at 5	N/A
G.5.3.4.3	Transformers with double insulation or reinforced insulation	which which will	N/A
G.5.3.4.4	Transformers with FIW wound on metal or ferrite core	white white white	N/A
G.5.3.4.5	Thermal cycling test and compliance	- ALTER MUTER MAILE	N/A
G.5.3.4.6	Partial discharge test	AN A A	N/A
G.5.3.4.7	Routine test	mitter intite matter was	N/A
G.5.4	Motors	No motors used.	,N/A
G.5.4.1	General requirements	LIER WALTE WALL WAL	N/A
G.5.4.2	Motor overload test conditions	s at at at	N/A
G.5.4.3	Running overload test	white white white	N/A
G.5.4.4.2	Locked-rotor overload test	s at at	N/A



Page 28 of 70

EN IEC 62368-1	
Result – Remark	Verdict

đ	Test duration (days)	211 24	/ -
G.5.4.5	Running overload test for DC motors	white mile white wh	N/A
G.5.4.5.2	Tested in the unit	Star I A	N/A
G.5.4.5.3	Alternative method	NUTER ANUTE MALL MALL	N/A
G.5.4.6	Locked-rotor overload test for DC motors	1 A A A	N/A
G.5.4.6.2	Tested in the unit	recursic water way	N/A
- Set	Maximum Temperature:	L A A A	N/A
G.5.4.6.3	Alternative method	white white white all	N/A
G.5.4.7	Motors with capacitors	at at at 5	N/A
G.5.4.8	Three-phase motors	Matter Mater Mar Mar	N/A
G.5.4.9	Series motors	it it is an	N/A
i i i	Operating voltage:	e. me me m	
G.6	Wire Insulation	et alt with with	N/A
G.6.1	General	Only ES1 existed	N/A
G.6.2	Enamelled winding wire insulation	The street with white wh	N/A
G.7	Mains supply cords	W. W. W.	N/A
G.7.1	General requirements	No such component	N/A
at at	Туре:		
G.7.2	Cross sectional area (mm ² or AWG):	TE INTE WALT WALT	N/A
G.7.3	Cord anchorages and strain relief for non- detachable power supply cords	t aret writer writer an	N/A
G.7.3.2	Cord strain relief	40 40 4	N/A
G.7.3.2.1	Requirements	white miles white whi	N/A
15 1	Strain relief test force (N):	and the state of	N/A
G.7.3.2.2	Strain relief mechanism failure	NUTER INTER WALT WAT	N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm):	1 & A At	N/A
G.7.3.2.4	Strain relief and cord anchorage material	the write write write	N/A
G.7.4	Cord Entry	the state	N/A
G.7.5	Non-detachable cord bend protection	white white when we	N/A
G.7.5.1	Requirements	1 1 1 1 S	N/A
G.7.5.2	Test method and compliance	white white where white	N/A
TER MALTE	Overall diameter or minor overall dimension, <i>D</i> (mm)	Tet white white white	
t set	Radius of curvature after test (mm):	1 A do do	_
G.7.6	Supply wiring space	white white white a	N/A
G.7.6.1	General requirements	1 A At	<n td="" â<=""></n>



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Reference No.: WTF22D07151596Y

Page 29 of 70

EN IEC 62368-1			
Clause	Requirement – Test	Result – Remark	Verdict
sure .	n n the set of	the mart white white wh	- alle
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Requirements	White white white white	_√N/A
G.7.6.2.2	Test with 8 mm strand	s as at at	N/A
G.8	Varistors	muter antite water water	N/A
G.8.1	General requirements	No such component	_<∕N/A
G.8.2	Safeguards against fire	ser while while white w	N/A
G.8.2.1	General	L of of the s	N/A
G.8.2.2	Varistor overload test	white white any and	N/A
G.8.2.3	Temporary overvoltage test	at at set set	N/A
G.9	Integrated circuit (IC) current limiters	while while whe whe	N/A
G.9.1	Requirements	No such component	N/A
24	IC limiter output current (max. 5A):	it was and an	_
at antipat	Manufacturers' defined drift:	at the state state of	
G.9.2	Test Program	Mr. Mr. Mr. C.	N/A
G.9.3	Compliance	THE LER NE ME	N/A
G.10	Resistors	WITT WITT OUT ON	N/A
G.10.1	General	No such component	N/A
G.10.2	Conditioning		N/A
G.10.3	Resistor test	TER NUTE MUT MUT I	N/A
G.10.4	Voltage surge test	the state	⊘∽ N/A ́
G.10.5	Impulse test	muter intro which whi	N/A
G.10.6	Overload test		N/A
G.11	Capacitors and RC units	WITE WATE WATE WATE	N/A
G.11.1	General requirements	No such component	. N/A
G.11.2	Conditioning of capacitors and RC units	NUTER NUTER WALL WALL	N/A
G.11.3	Rules for selecting capacitors	a at at at	N/A
G.12	Optocouplers	in which which with wi	N/A
WALTER N	Optocouplers comply with IEC 60747-5-5 with specifics	No such component	N/A
de la	Type test voltage V _{ini,a} :	a a at at	
les des	Routine test voltage, V _{ini, b} :	until while while while	_
G.13	Printed boards	it it it it	N/A
G.13.1	General requirements	Only need to comply with functional insulation, see only B.4.4.	N/A
G.13.2	Uncoated printed boards	The the the th	N/A
14	Coated printed boards		



Page 30 of 70

	EN IEC 62368-	1 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	
Clause	Requirement – Test	Result – Remark	Verdict
G.13.4	Insulation between conductors on the same inner surface	the set set	N/A
G.13.5	Insulation between conductors on different surfaces	WALL MAR WALLS	N/A
- m	Distance through insulation:	Mercanner war with	N/A
et stet	Number of insulation layers (pcs):	at at at at	- 1
G.13.6	Tests on coated printed boards	mus mus mus	N/A
G.13.6.1	Sample preparation and preliminary inspection	t at at set	N/A
G.13.6.2	Test method and compliance	me me m	N/A
G.14	Coating on components terminals	At 5th Str.	N/A
G.14.1	Requirements:	me m m	N/A
G.15	Pressurized liquid filled components	TEX STER MITER MY	N/A
G.15.1	Requirements	No such component	N/A
G.15.2	Test methods and compliance	set while white white	N/A
G.15.2.1	Hydrostatic pressure test	the state	N/A
G.15.2.2	Creep resistance test	INLIER WALTE WALTE	N/A
G.15.2.3	Tubing and fittings compatibility test		N/A
G.15.2.4	Vibration test	The survey with	N/A
G.15.2.5	Thermal cycling test		of N/A
G.15.2.6	Force test	white white white white	N/A
G.15.3	Compliance	a the set set	N/A
G.16	IC including capacitor discharge function (ICX)	when when when	N/A
G.16.1	Condition for fault tested is not required	No such component	N/A
In se	ICX with associated circuitry tested in equipment	white white white a	N/A
street and	ICX tested separately	let let we as	N/A
G.16.2	Tests	we we we w	N/A
WALTE	Smallest capacitance and smallest resistance specified by ICX manufacturer for impulse test:	Tet white white white	- w
WALTER W	Mains voltage that impulses to be superimposed on	Instead and the monthey	whit -
METER WAS	Largest capacitance and smallest resistance for ICX tested by itself for 10000 cycles test	whet whet while a	Junk —
G.16.3	Capacitor discharge test:	an an	N/A
Н	CRITERIA FOR TELEPHONE RINGING SIGNAL	S	N/A
H.1 🔬	General	and the state	N/A
H.2	Method A	ret intre inter white	N/A
H.3 🖉	Method B	the second second	N/A



Reference No.: WTF22D07151596Y

Page 31 of 70

-	EN IEC 62368-	in the start of	an a
Clause	Requirement – Test	Result – Remark	Verdict
H.3.1	Ringing signal	No telephone ringing signal generated within the equipment.	N/A
H.3.1.1	Frequency (Hz)		
H.3.1.2	Voltage (V)	NUT NUT WAT WALL	
H.3.1.3	Cadence; time (s) and voltage (V):	a at at at	
H.3.1.4	Single fault current (mA):	MALL MALL MALL	<u> </u>
H.3.2	Tripping device and monitoring voltage	t at the set of	N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage	AND AND ADD AND	N/A
H.3.2.2	Tripping device	white white white white	N/A
H.3.2.3	Monitoring voltage (V):	at the set set	N/A
J	INSULATED WINDING WIRES FOR USE WITHO INSULATION	UT INTERLEAVED	N/A
J.1	General	in white white white w	N/A
State .	Winding wire insulation:	at all all a	<u> </u>
14. 0	Solid round winding wire, diameter (mm)	white white and an	N/A
Intre whi	Solid square and rectangular (flatwise bending) winding wire, cross-sectional area (mm ²)::	at white white	N/A
J.2/J.3	Tests and Manufacturing		50-
к	SAFETY INTERLOCKS		N/A
K.1	General requirements		N/A
	Instructional safeguard:	No safety interlock provided within the equipment.	N/A
K.2	Components of safety interlock safeguard mec	hanism	N/A
K.3	Inadvertent change of operating mode	at the set set	N/A
K.4	Interlock safeguard override	inter white white white	N/A
К.5 🧹	Fail-safe	at let get get	N/A
K.5.1	Under single fault condition	white white white a	N/A
K.6	Mechanically operated safety interlocks	+ set set with a	N/A
K.6.1	Endurance requirement	Mur Mur M. M.	N/A
K.6.2	Test method and compliance:	and and all the same	N/A
K.7	Interlock circuit isolation	with the the	N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements	ares anales and and	N/A
WALTER	In circuit connected to mains, separation distance for contact gaps (mm):	of an inter an inter an inter all	N/A
. Alt	In circuit isolated from mains, separation distance	s at the a	N/A



Reference No.: WTF22D07151596Y

Page 32 of 70

	EN IEC 62368-	2. <u>11. 26. 2.</u>	
Clause	Requirement – Test	Result – Remark	Verdict
Whitek as	Electric strength test before and after the test of K.7.2	(See appended table 5.4.9)	N/A
K.7.2	Overload test, Current (A):	men me me	N/A
<.7.3	Endurance test	ret ret wret wret writer	N/A
۲.7.4	Electric strength test	he will be a st	N/A
_	DISCONNECT DEVICES		N/A
L.1 🔬	General requirements	Sur In St	N/A
2	Permanently connected equipment	t still mill white white white	N/A
L.3	Parts that remain energized	W A A A	N/A
L:4 🗸	Single-phase equipment	milet inite white white	~^ [©] N/A <
L.5	Three-phase equipment	a state state	N/A
L.6 🐠	Switches as disconnect devices	the white white white	N/A
L.7	Plugs as disconnect devices	1 A A A	<∕ [←] N/A<
L.8	Multiple power sources	while while when wh	N/A
Set	Instructional safeguard:	A 14 14 5	N/A
M	EQUIPMENT CONTAINING BATTERIES AND TH	EIR PROTECTION CIRCUITS	Р
M.1	General requirements	at a star	ς S Ρ
M.2	Safety of batteries and their cells	a sur su	Р
M.2.1	Batteries and their cells comply with relevant IEC standards	Approved battery pack used	NI RIN
M.3	Protection circuits for batteries provided within the equipment	* maret instret instret uni	St P.16
M.3.1	Requirements	s at at al	- P+
M.3.2	Test method	with white white white	JUL P
ister and	Overcharging of a rechargeable battery	(See appended table Annex M)	MITEP M
et untret	Excessive discharging	(See appended table Annex M)	TEL P
	Unintentional charging of a non-rechargeable battery	No such battery used	N/A
SUL S	Reverse charging of a rechargeable battery	Built-in battery used, reverse charging is prevented	N/A
M.3.3	Compliance	No chemical leakage, no spillage of liquid, no explosion of the battery, no emission of flame or expulsion of molten metal	SUP P S
W.4	Additional safeguards for equipment containing lithium battery	g a portable secondary	Р
M.4.1	General	at at at a	P



112

Reference No.: WTF22D07151596Y

Page 33 of 70

0	The state of the set of the		11 11 1
Clause	Requirement – Test	Result – Remark	Verdict
M.4.2	Charging safeguards	Under normal operating conditions, abnormal operating conditions or single fault conditions, the charging voltage, charging current of the battery no exceed the maximum specified charging voltage and maximum specified charging current.	- Py
M.4.2.1	Requirements	t at set set at	N/A
M.4.2.2	Compliance	(See appended table M.4.2)	Р
M.4.3	Fire enclosure:	V-0 of plastic enclosure and fire barriers used	W ^C P
M.4.4	Drop test of equipment containing a secondary lithium battery	the super source sources	N. T. P
M.4.4.2	Preparation and procedure for the drop test	i de at	J P
M.4.4.3	Drop, Voltage on reference and dropped batteries (V); voltage difference during 24 h period (%)::	The voltage difference not exceed 5%.	Р
M.4.4.4	Check of the charge/discharge function	Three complete discharge and charge cycles under normal operating conditions.	ND P
M.4.4.5	Charge / discharge cycle test	No fire, explosion and any electrolyte leakage	N P
M.4.4.6	Compliance	The street on the south of	S [™] R√
M.5	Risk of burn due to short-circuit during carryin	g	P .
M.5.1	Requirement	No bare conductive terminal used	P
M.5.2	Test method and compliance	and all mark water	N/A
M.6	Safeguards against short-circuits	Mr. M. m	Р
M.6.1	External and internal faults	ister aller white white	N/A
M.6.2	Compliance	The battery complied with IEC 62133-2 which considered the internal fault tests. No such explosion or fire likely to result from short circuits.	P V
M.7	Risk of explosion from lead acid and NiCd batte	eries	N/A
M.7.1	Ventilation preventing explosive gas concentration	No such battery used	N/A
THE MILE	Calculated hydrogen generation rate:	et set set set	N/A
M.7.2	Test method and compliance	and and and a	N/A
INLIE	Minimum air flow rate, Q (m ³ /h):	at set set with a	N/A
M.7.3	Ventilation tests	we we we	N/A
M.7.3.1	General	let set set of	N/A



Page 34 of 70

EN IEC 62368-1					
Clause	Requirement – Test	Result – Remark	Verdict		
M.7.3.2	Ventilation test – alternative 1	the sheet when all all	N/A		
NALIER IN	Hydrogen gas concentration (%):	with which which which	N/A		
M.7.3.3	Ventilation test – alternative 2	The the of the	N/A		
NAT WAY	Obtained hydrogen generation rate:	uter sure white white	N/A		
M.7.3.4	Ventilation test – alternative 3	producer site	N/A		
- mar	Hydrogen gas concentration (%):	ret miles while while w	N/A		
M.7.4	Marking:	and the second second	N/A		
M.8	Protection against internal ignition from external spark sources of batteries with aqueous electrolyte		N/A		
M.8.1 📣	General	street multi- while while	_s ^{€®} N/A		
M.8.2	Test method	and the set set	N/A		
M.8.2.1	General	LIFE MALTE MALTE WAL	N/A		
M.8.2.2	Estimation of hypothetical volume V _Z (m ³ /s):	e et at at	10 - C		
M.8.2.3	Correction factors:	white white white wi	-20		
M.8.2.4	Calculation of distance d (mm):	at at at it	10 <u>_</u> 10		
M.9	Preventing electrolyte spillage		N/A		
M.9.1	Protection from electrolyte spillage	the state state	N/A		
M.9.2	Tray for preventing electrolyte spillage	- s . shi shi	N/A		
M.10	Instructions to prevent reasonably foreseeable misuse	The watthe watthe watthe w	N/A		
J.F.	Instructional safeguard:	t at at at	N/A		
N	ELECTROCHEMICAL POTENTIALS	mer mer me m	N/A		
MITER NO	Material(s) used:	wet wet wet with	NIT .		
0	MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES		N/A		
inter and	Value of <i>X</i> (mm):	ret ret wret wret with	marin-		
P	SAFEGUARDS AGAINST CONDUCTIVE OBJECTS		, P		
P.1	General	See below	P.		
P.2	Safeguards against entry or consequences of entry of a foreign object		, ⊢ P,⊲		
P.2.1	General	white mile water wat	<i>√</i> 1⁄₽		
P.2.2	Safeguards against entry of a foreign object		P		
we m	Location and Dimensions (mm):	No opening.	mer-		
P.2.3	Safeguards against the consequences of entry of a foreign object	Tet wiret wiret awaret	N/A		
P.2.3.1	Safeguard requirements	the state	N/A		
me	The ES3 and PS3 keep-out volume in Figure P.3 not applicable to transportable equipment	et white white white yur	N/A		

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Page 35 of 70

	EN IEC 62368-	1. 1. 1. 1. I.	
Clause	Requirement – Test	Result – Remark	Verdict
with		and which which when	
	Transportable equipment with metalized plastic parts	at 10t 10t 5	N/A
P.2.3.2	Consequence of entry test:	Mr. Mr. M. M.	N/A
P.3	Safeguards against spillage of internal liquids		
P.3.1	General No such liquids.		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Compliance	t still out to south white	N/A
P.4	Metallized coatings and adhesives securing pa	rts	N/A
P.4.1 📣	General	No such construction.	_√ [™] N/A
P.4.2	Tests	i state at	N/A
an an	Conditioning, T _C (°C):	LIER WALTE WALT WAL	1 _ s
the set	Duration (weeks):	a stat st	× -
Q S	CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING		Р
Q.1	Limited power sources	See appended table Annex Q.1	P
Q.1.1	Requirements		Р
tes no	a) Inherently limited output	and white white	N/A
et 6	b) Impedance limited output		Р _
- In.	c) Regulating network limited output	in which which which is	N/A
t ster	d) Overcurrent protective device limited output	t at at the	N/A
-14	e) IC current limiter complying with G.9	Mur nur me m	N/A
Q.1.2	Test method and compliance:	See below	P
	Current rating of overcurrent protective device (A)	See appended table Annex Q.1	P
Q.2	Test for external circuits – paired conductor cable	No such circuit for connection to the EUT	N/A
Mar	Maximum output current (A)	The must white white white	N/A
. At	Current limiting method:	i at at a	* -
R	LIMITED SHORT CIRCUIT TEST		N/A
R.1	General No such consideration.		N/A
R.2	Test setup	WALTE WALL WALL WALL	N/A
	Overcurrent protective device for test:	at at at st	5 ⁶¹ -
R.3	Test method	the work with which we	N/A
	Cord/cable used for test:	at left set set a	16 m
R.4	Compliance	and me in in	N/A

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Page 36 of 70

EN IEC 62368-1							
Clause	Requirement – Test	where we we	Result – Remark	Verdict			

S	TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
LIE M	Samples, material:	THE THE NUMBER OF THE	11-11-N
A A	Wall thickness (mm):	In the the second	
Mr. C.	Conditioning (°C):	let allet mile waite w	-4n
- MALTER	Test flame according to IEC 60695-11-5 with conditions as set out	t Tet with with mi	N/A
A	- Material not consumed completely	Mr. M. M. M.	N/A
Mar 1	- Material extinguishes within 30s	ifter with mithe white	N/A
de la	- No burning of layer or wrapping tissue	m m t	N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
* 1	Samples, material:	the state	st - 3
m	Wall thickness (mm):	et intre intre inter in	- The
J.t.	Conditioning (°C):		
S.3	Flammability test for the bottom of a fire enclosure		N/A
S.3.1	Mounting of samples		N/A
S.3.2	Test method and compliance	a sunt sure s	N/A
it wi	Mounting of samples:		JER-N
	Wall thickness (mm):	white where where we	
S.4 🍼	Flammability classification of materials	t the state what we	N/A
S.5	Flammability test for fire enclosure materials of equipment with a steady state power exceeding 4 000 W	whet which while while	N/A
dt .	Samples, material:	the state	1 the
in the	Wall thickness (mm):	NITE MALTE WALL WALL I	10
1× 54	Conditioning (°C):	a at at at	(h _ (
L AU	MECHANICAL STRENGTH TESTS	and which we we	Р
T.1 5	General		Р
Т.2	Steady force test, 10 N:	(See appended table T.2)	Р
Т.3	Steady force test, 30 N:	at at and and	N/A
Т.4	Steady force test, 100 N:	me me me	N/A
T.5	Steady force test, 250 N:	(See appended table T.5)	ST P _S S
Т.6	Enclosure impact test	(See appended table T.6)	Р
with	Fall test	at what where where why	P
de .	Swing test	so so a t	P
Т.7	Drop test:	(See appended table T.7)	√ [™] P



Page 37 of 70

	EN IEC 62368-	2 4 - 1 - 2	
Clause	Requirement – Test	Result – Remark	Verdict
T.8	Stress relief test:	(See appended table T.8)	P +
T.9	Glass Impact Test:		N/A
T.10	Glass fragmentation test		N/A
1.10	Number of particles counted:		N/A
T.11	Test for telescoping or rod antennas	NO SUCH glass	N/A
	1. N. 1. 1.	No. 2014 Anti- 2014	and the second
	Torque value (Nm):	within the equipment.	N/A
UN	MECHANICAL STRENGTH OF CATHODE RAY T PROTECTION AGAINST THE EFFECTS OF IMPL		N/A
U.1 📣	General	white multi white white	N/A
LIEK MAL	Instructional safeguard:	No CRT provided within the equipment.	N/A
U.2	Test method and compliance for non-intrinsical	y protected CRTs	N/A
U.3	Protective screen	set with outer only and	N/A
V	DETERMINATION OF ACCESSIBLE PARTS	Mr. In St.	N/A
V.1	Accessible parts of equipment	ALTER MUTER WALT WAT	N/A
V.1.1	General		N/A
V.1.2	Surfaces and openings tested with jointed test probes	The function where	N/A
V.1.3	Openings tested with straight unjointed test probes	The street with a solution of	N/A
V.1.4	Plugs, jacks, connectors tested with blunt probe	the second second	N/A
V.1.5	Slot openings tested with wedge probe	A STER MITER WAITE WA	N/A
V.1.6	Terminals tested with rigid test wire	w w at at a	N/A
V.2	Accessible part criterion	NUTER INTERNATION	_√ [®] N/A
X	ALTERNATIVE METHOD FOR DETERMINING CL INSULATION IN CIRCUITS CONNECTED TO AN 420 V PEAK (300 V RMS)		N/A
et alle	Clearance:	at let let state	N/A
Y	CONSTRUCTION REQUIREMENTS FOR OUTDO	OR ENCLOSURES	N/A
Y.1	General	Indoor equipment	N/A
Y.2	Resistance to UV radiation	m. m. m. s.	N/A
Y.3	Resistance to corrosion	Tet with aller white	N/A
Y.3	Resistance to corrosion	when we we we	N/A
Y.3.1	Metallic parts of outdoor enclosures are resistant to effects of water-borne contaminants by	TER WAITER WAITER WAITE	N/A
Y.3.2	Test apparatus	at that the state of	N/A
Y.3.3	Water – saturated sulphur dioxide atmosphere	men me m m	N/A
Y.3.4	Test procedure:	it it it it i	N/A



Reference No.: WTF22D07151596Y Page 38 of 70

	EN IEC 62	2368-1	
Clause	Requirement – Test	Result – Remark	Verdict
m	M W	atter with only whit	me me
Y.3.5	Compliance	and an an at at	N/A
Y.4	Gaskets	STER STER WITE WATE	N/A
Y.4.1	General	It in the state	N/A
Y.4.2	Gasket tests	ret nifet unife unit v	N/A
Y.4.3	Tensile strength and elongation tests		N/A
m	Alternative test methods	Not white white wh	N/A
Y.4.4	Compression test	L A A A	N/A
Y.4.5	Oil resistance	white white white white	N/A
Y.4.6	Securing means	s at at at	N/A
Y.5	Protection of equipment within an outdoor	enclosure	N/A
Y.5.1	General	it at at at	N/A
Y.5.2	Protection from moisture	with white when wi	N/A
A NUTE	Relevant tests of IEC 60529 or Y.5.3		N/A
Y.5.3	Water spray test	Mr. Mr. Mr. M.	N/A
Y.5.4	Protection from plants and vermin	at the set with	N/A
Y.5.5	Protection from excessive dust	N.C. MILL MILL MILL	N/A
Y.5.5.1	General	At At July	N/A
Y.5.5.2	IP5X equipment		N/A
Y.5.5.3	IP6X equipment	y see she want w	N/A
Y.6	Mechanical strength of enclosures	240 200 200 200	N/A
Y.6.1	General	IT ALLE MUTE MAIL	N/A
Y.6.2	Impact test		N/A



Reference No.: WTF22D07151596Y

Page 39 of 70

EN IEC 62368-1

Clause

Requirement – Test

Result – Remark

Verdict

(Audi	ATTACHMENT TO TEST R IEC 62368-1 EUROPEAN GROUP DIFFERENCES AND N. o/video, information and communication technology ed	ATIONAL DIFFERENCES	ients)
Difference	es according to EN IEC 62368-1:2020+A	11:2020	
Attachme	ent Form No EU_GD_IEC62368_1E	ret wiret white white whi	an'
Attachme	ent Originator: UL(Demko)		
Master At	tachment		
	t © 2021 IEC System for Conformity Testing and Co Geneva, Switzerland. All rights reserved.	ertification of Electrical Equipmo	ent
in ma	CENELEC COMMON MODIFICATIONS (EN)	LIER INTE MATE WALL W	Р
WINLIEK WINLIEK S	Clause numbers in the cells that are shaded light g IEC 62368-1:2020+A11:2020. All other clause num those in the paragraph below, refers to IEC 62368- Clauses, subclauses, notes, tables, figures and and those in IEC 62368-1:2018 are prefixed "Z".	bers in that column, except for 1:2018.	MALE P
tet white	Add the following annexes: Annex ZA (normative)Normative references to intern corresponding European publications Annex ZB (normative)Special national conditions Annex ZC (informative)A-deviations Annex ZD (informative)IEC and CENELEC code des	and white white white wh	P
1	Modification to Clause 3.		N/A
3.3.19	Sound exposure Replace 3.3.19 of IEC 62368-1 with the following d	efinitions:	N/A
3.3.19.1	momentary exposure level, MEL metric for estimating 1 s sound exposure level from the HD 483-1 S2 test signal applied to both channels, based on EN 50332-1:2013, 4.2. Note 1 to entry: MEL is measured as A-weighted levels in dB.	Not such equipment	N/A



Page 40 of 70

24	EN IEC 62368-1	Lite unit wat wat	an an
Clause	Requirement – Test	Result – Remark	Verdict
3.3.19.3	sound exposure, E A-weighted sound pressure (<i>p</i>) squared and integrated over a stated period of time, <i>T</i> Note 1 to entry: The SI unit is Pa ² s. $E = \int_{0}^{T} p(t)^{2} dt$	antifet whitet whitet	N/A
	A CONTRACT OF A	the set set	
3.3.19.4	sound exposure level, SEL logarithmic measure of sound exposure relative to a reference value, <i>E</i> ₀ , typically the 1 kHz threshold of hearing in humans.	wints white white	N/A
	Note 1 to entry: <i>SEL</i> is measured as A-weighted levels in dB.	Tet white white whi	iex writer wr
	$SEL = 10 \lg \left(\frac{E}{E_0}\right) dB$	A WALTER WALTER WALTER	whitek white
	Note 2 to entry: See B.4 of EN 50332-3:2017 for additional information.	NALTER WALTER WALTER	WILL'S SUNLY
3.3.19.5	digital signal level relative to full scale, dBFS levels reported in dBFS are always r.m.s. Full scale level, 0 dBFS, is the level of a dc-free 997- Hz sine wave whose undithered positive peak value is positive digital full scale, leaving the code corresponding to negative digital full scale unused Note 1 to entry: It is invalid to use dBFS for non-r.m.s. levels. Because the definition of full scale is based on a sine wave, the	Set of antifer white	N/A
WALLER W	level of signals with a crest factor lower than that of a sine wave may exceed 0 dBFS. In particular, square wave signals may reach +3,01 dBFS.	Whitek anitek antitek a	NUTER MALIER
2	Modification to Clause 10		N/A
10.6	Safeguards against acoustic energy sources Replace 10.6 of IEC 62368-1 with the following:		N/A
10.6.1.1	Introduction Safeguard requirements for protection against long-term exposure to excessive sound pressure levels from personal music players closely coupled to the ear are specified below. Requirements for earphones and headphones intended for use with personal music players are also covered. A personal music player is a portable equipment intended for use by an ordinary person , that: - is designed to allow the user to listen to audio or audiovisual content (material: and	niset whiset whiset wh	N/A
	audiovisual content / material; and – uses a listening device, such as headphones or earphones that can be worn in or on or around the ears; and	which which which	MUTEX MALTER



Page 41 of 70

	EN IEC 62368-	1. The mere white white	
Clause	Requirement – Test	Result – Remark	Verdict
whitek w	– has a player that can be body worn (of a size suitable to be carried in a clothing pocket) and is intended for the user to walk around with while in continuous use (for example, on a street, in a subway, at an airport, etc.).	MALTER WALTER WALTER	minet aniset
	EXAMPLES Portable CD players, MP3 audio players, mobile phones with MP3 type features, PDAs or similar equipment.	White white white wh	n an an an A let i
	Personal music players shall comply with the requirements of either 10.6.2 or 10.6.3.	Cet watter waite wait	with with
	NOTE 1 Protection against acoustic energy sources from telecom applications is referenced to ITU-T P.360.	watter waite waite	white white
	NOTE 2 It is the intention of the Committee to allow the alternative methods for now, but to only use the dose measurement method as given in 10.6.5 in future. Therefore, manufacturers are encouraged to implement 10.6.5 as soon as possible.	ALTER MAILER WALTER W	ret on ret on
	Listening devices sold separately shall comply with the requirements of 10.6.6. These requirements are valid for music or video	The waiter waiter waite	whit at whit
	mode only. The requirements do not apply to: – professional equipment;	watter watter watter	NOTIFEK NUTER
	NOTE 3Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.	and a function of	et whet w
	 hearing aid equipment and other devices for assistive listening; the following type of analogue personal music 	e mutet mutet water	white white
	 players: long distance radio receiver (for example, a multiband radio receiver or world band radio receiver, an AM radio receiver), and cassette player/recorder; 	whitet whitet whitet	nutet unitet
	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.	a cite white white white	t white white
	 a player while connected to an external amplifier that does not allow the user to walk around while in use. 	Whitek whitek whitek	white white
	For equipment that is clearly designed or intended primarily for use by children, the limits of the relevant toy standards may apply.	ANTER WAITER WAITER W	et in fet wi
t whitek	The relevant requirements are given in EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.	states and sub-	WALT & WALT
10.6.1.2	Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz	at at at	N/A

Page 42 of 70



an.	EN IEC 62368-1		the and an an
Clause	Requirement – Test	Result – Remark	Verdict
antiret av	The amount of non-ionizing radiation is regulated by European Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz). For intentional radiators, ICNIRP guidelines should be taken into account for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz). For hand- held and body mounted devices, attention is drawn to EN 50360 and EN 50566.		
10.6.2	Classification of devices without the capacity to	estimate sound dose	N/A
10.6.2.1	General This standard is transitioning from short-term based (30 s) requirements to long-term based (40 hour) requirements. These clauses remain in effect only for devices that do not comply with sound dose estimation as stipulated in EN 50332- 3.	Not such equipment	N/A
	For classifying the acoustic output L_{Aeq}, τ , measurements are based on the A-weighted equivalent sound pressure level over a 30 s period.	whitet whitet whitet wh	er uner
	For music where the average sound pressure (long term $LAeq, \tau$) measured over the duration of the song is lower than the average produced by the programme simulation noise, measurements may be done over the duration of the complete song. In this case, <i>T</i> becomes the duration of the song.	white white white	NUTE MANUTE
anaron an Linet anni Anniret Anniret	NOTE Classical music, acoustic music and broadcast typically has an average sound pressure (long term $L_{Aeq,7}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the content and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song does not exceed the required limit. For example, if the player is set with the programme simulation noise to 85 dB, but the average music level of the song is only 65 dB, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dB.	whitek whitek whitek white	AND
10.6.2.2	RS1 limits (to be superseded, see 10.6.3.2) RS1 is a class 1 acoustic energy source that does not exceed the following: – for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or where the combination of player and listening device is known by other means such as setting or automatic detection, the $LAeq, \tau acoustic$ output shall be \leq 85 dB when playing the fixed	White white white white	N/A

Page 43 of 70



- In	EN IEC 62368-	the wat wat wat	In In
Clause	Requirement – Test	Result – Remark	Verdict
- Mrs	sur an a star star st	et all and and and a	me me
	50332-1. – for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output voltage shall be ≤ 27 mV (analogue interface) or -25 dBFS (digital interface) when playing the fixed "programme simulation noise" described in EN 50332-1.	antifet antifet antifet an	EX WATER
<u></u>	- The RS1 limits will be updated for all devices as per 10.6.3.2.	with with the	1 1
10.6.2.3	RS2 limits (to be superseded, see 10.6.3.3)	NATE WATE WATE	N/A
	RS2 is a class 2 acoustic energy source that does not exceed the following: – for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or when the combination of player and listening device is known by other means such as setting or automatic 130 detection, the <i>L</i> Aeq, <i>τ</i> acoustic output shall be ≤ 100 dB(A) when playing the fixed "programme simulation noise" as described in EN 50332-1. – for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output voltage shall be ≤ 150 mV (analogue interface) or -10 dBFS (digital interface) when playing the fixed "programme simulation noise" as described in EN 50332-1.		A AN ANALAS
10.6.2.4	RS3 limits	the state state	N/A
wifet a	RS3 is a class 3 acoustic energy source that exceeds RS2 limits.	white white white	with with
10.6.3	Classification of devices (new)	mer me me m	N/A
10.6.3.1	General Previous limits (10.6.2) created abundant false negative and false positive PMP sound level warnings. New limits, compliant with The Commission Decision of 23 June 2009, are given below.	Not such equipment	N/A
10.6.3.2	RS1 limits (new)	white white white y	5 N/A
	RS1 is a class 1 acoustic energy source that does not exceed the following: – for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or where the combination of player and listening device is known by other means such as setting or automatic detection, the $LAeq, \tau$ acoustic output shall be \leq 80 dB when playing the fixed "programme simulation noise" described in EN 50332-1. – for equipment provided with a standardized	and an and an and an and an and an and an and and	AREA MALTER

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25.

Reference No.: WTF22D07151596Y

Page 44 of 70

an.	EN IEC 62368-1	in min wat wat	the ch
Clause	Requirement – Test	Result – Remark	Verdict
antiet an	connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output voltage shall be ≤ 15 mV (analogue interface) or -30 dBFS (digital interface) when playing the fixed "programme simulation noise" described in EN 50332-1.		
10.6.3.3	RS2 limits (new)		N/A
	RS2 is a class 2 acoustic energy source that does not exceed the following: – for equipment provided as a package (player with its listening device), and with a proprietary connector between the player and its listening device, or where the combination of player and listening device is known by other means such as setting or automatic detection, the weekly sound exposure level, as described in EN 50332-3, shall be ≤ 80 dB when playing the fixed "programme simulation noise" described in EN 50332-1. – for equipment provided with a standardized connector (for example, a 3,5 phone jack) that allows connection to a listening device for general use, the unweighted r.m.s. output level, integrated over one week, as described in EN50332-3, shall be ≤ 15 mV (analogue interface) or -30 dBFS (digital interface) when playing the fixed "programme simulation noise" described in EN 50332-1.	at some and	white white shite white thet white white white white white white white white white white
10.6.4	Requirements for maximum sound exposure		N/A
10.6.4.1	Measurement methods All volume controls shall be turned to maximum during tests. Measurements shall be made in accordance with	Not such equipment	N/A
10.6.4.2	EN 50332-1 or EN 50332-2 as applicable. Protection of persons	her all all a	N/A
ALTER WALTER	 Except as given below, protection requirements for parts accessible to ordinary persons, instructed persons and skilled persons are given in 4.3. NOTE 1 Volume control is not considered a safeguard. Between RS2 and an ordinary person, the basic safeguard may be replaced by an instructional safeguard in accordance with Clause F.5, except that the instructional safeguard shall be placed on the equipment, or on the packaging, or in the instruction manual. Alternatively, the instructional safeguard may be given through the equipment display during use. 	A STATES AND	
	The elements of the instructional safeguard	with the start	all su

Page 45 of 70



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	EN IEC 62368-1	and the second s	
Clause	Requirement – Test	Result – Remark	Verdict
Jun .	an an an an at at at	still with white	an m
A		th the	it it
	– element 1a: the symbol 49, IEC 60417-	at let set	STE NICE
	6044 (2011-01)	min when when w	1. 24
	– element 2: "High sound pressure" or equivalent	31	st it
	wording	let let set is	No.
	– element 3: "Hearing damage risk" or equivalent	the way when when	21 2
	wording		- J.
	– element 4: "Do not listen at high volume levels	at the star star	no va
	for long periods." or equivalent wording	me in in	23.
		i it it	10 10
	An equipment safeguard shall prevent exposure	THE STREET	mer wat
	of an ordinary person to an RS2 source without	mer me m	
	intentional physical action from the ordinary	a de de	St St
	person and shall automatically return to an output	TET STE MAL	in which
	level not exceeding what is specified for an RS1	her the to a	
	source when the power is switched off.	a at at a	it set
	No start of the	ater intre inthe main	in m
	The equipment shall provide a means to actively	20 20	s.
	inform the user of the increased sound level when	at at at at	. S . S
	the equipment is operated with an output	inter and white	The an
	exceeding RS1. Any means used shall be	20 2	1 1
	acknowledged by the user before activating a	. It let the	JIE MIL
	mode of operation which allows for an output	mit whit whit w	20
	exceeding RS1. The acknowledgement does not		A A
	need to be repeated more than once every 20 h of	At the second	The NUT
	cumulative listening time.	and the sale	-2
	NOTE 2 Examples of means include visual or audible signals.		t at .
	Action from the user is always needed.	the star with	and an
	NOTE 3 The 20 h listening time is the accumulative listening	m m m	
	time, independent of how often and how long the personal	that at at	- S - S
	music player has been switched off.	with mile white	ne an
	A - 1 - 1 - A A	an in s.	a st
	A skilled person shall not be unintentionally exposed to RS3.	at at at	JEE JEE
0.6.5	Requirements for dose-based systems	with the set of	N/A
0.6.5.1		Not such aquipment	A 15
0.0.5.1	General requirements	Not such equipment	N/A
	Personal music players shall give the warnings as		-
	provided below when tested according to EN	at let let the	in the
	50332-3, using the limits from this clause.	when when when	20. 20
	The manufacturer may offer optional settings to		18 18
	allow the users to modify when and how they wish	Alt Set Sto	INTER MALL
	to receive the notifications and warnings to	when when when a	3. Dr.
	promote a better user experience without	i i it	at at
	defeating the safeguards. This allows the users to	the star stre w	and the second
	be informed in a method that best meets their	her me in m	
	physical capabilities and device usage needs. If	i it it is	* 1
	such optional settings are offered, an administrator	tet ster stre with	in m
	(for example, parental restrictions,	m in m	
	business/educational administrators, etc.) shall be	1 it it it	S 12
	able to lock any optional settings into a specific	a the with with	when when
	configuration.	me in in	
		1 A A	15 15

Page 46 of 70

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	V	5
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EN IEC 62368-1				
Clause	Requirement – Test	Result – Remark	Verdict	
whitek whi	easy to understand explanation to the user of the dose management system, the risks involved, and how to use the system safely. The user shall be made aware that other sources may significantly contribute to their sound exposure, for example work, transportation, concerts, clubs, cinema, car	antifet whitet whitet white	NAL WALLER	
0.6.5.2	races, etc.	I A A A	N/A	
10.6.3.2	Dose-based warning and requirements When a dose of 100 % <i>CSD</i> is reached, and at least at every 100 % further increase of <i>CSD</i> , the device shall warn the user and require an acknowledgement. In case the user does not acknowledge, the output level shall automatically decrease to compliance with class RS1.	antiet antiet antiet antiet	N/A	
TEX WALT	The warning shall at least clearly indicate that listening above 100 % <i>CSD</i> leads to the risk of hearing damage or loss.	Tet white white white	NU TER OU	
10.6.5.3	Exposure-based requirements	at the set set	N/A	
	With only dose-based requirements, cause and effect could be far separated in time, defying the purpose of educating users about safe listening practice. In addition to dose-based requirements, a PMP shall therefore also put a limit to the short- term sound level a user can listen at.	white white white	ILTER WALTER	
	The exposure-based limiter (EL) shall automatically reduce the sound level not to exceed 100 dB(A) or 150 mV integrated over the past 180 s, based on methodology defined in EN 50332-3. The EL settling time (time from starting level reduction to reaching target output) shall be 10 s or faster.	A CE TEE TEE	WAITE WALTE	
	Test of EL functionality is conducted according to EN 50332-3, using the limits from this clause. For equipment provided as a package (player with its listening device), the level integrated over 180 s shall be 100 dB or lower. For equipment provided with a standardized connector, the unweighted level integrated over 180 s shall be no more than 150 mV for an analogue interface and no more than -10 dBFS for a digital interface.	A WALLEY WALLEY WALLEY WALLEY	A SUPER SUPER	
	NOTE In case the source is known not to be music (or test signal), the EL may be disabled.	at at at a	Let NUTER .	
10.6.6	Requirements for listening devices (headphone	s, earphones, etc.)	N/A	
10.6.6.1	Corded listening devices with analogue input With 94 dB <i>L</i> Aeq acoustic pressure output of the listening device, and with the volume and sound settings in the listening device (for example, built- in volume level control, additional sound features like equalization, etc.) set to the combination of positions that maximize the measured acoustic	Not such equipment	N/A	

Page 47 of 70



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20	EN IEC 62368-1	it's with white when	An An
Clause	Requirement – Test	Result – Remark	Verdict
MALIEK MI	output, the input voltage of the listening device when playing the fixed "programme simulation noise" as described in EN 50332-1 shall be ≥ 75 mV. NOTE The values of 94 dB and 75 mV correspond with 85 dB and 27 mV or 100 dB and 150 mV.	antifet antifet antifet	Martinet animet
10.6.6.2	Corded listening devices with digital input	at the tet of	N/A
ANTIPE ANTIPE	With any playing device playing the fixed "programme simulation noise" described in EN 50332-1, and with the volume and sound settings in the listening device (for example, built-in volume level control, additional sound features like equalization, etc.) set to the combination of positions that maximize the measured acoustic output, the $LAeq, \tau$ acoustic output of the listening device shall be ≤ 100 dB with an input signal of - 10 dBFS.	Martin Martin Martinet	NATES ANTES
10.6.6.3	Cordless listening devices	i i it de	⊢ _ N/A≦
WALTER WALTER	In cordless mode, – with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and – respecting the cordless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and – with volume and sound settings in the receiving device (for example, built-in volume level control, additional sound features like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the above mentioned programme simulation noise, the $LAeq, \tau$ acoustic output of the listening device shall be \leq 100 dB with an input signal of -10 dBFS.	Antifet antifet antifet antifet	Whitek whitek
10.6.6.4	Measurement method	which which where y	N/A
LIEK MALI	Measurements shall be made in accordance with EN 50332-2 as applicable.	and and all of a	Tet Martet M
3	Modification to the whole document		Р



Page 48 of 70

in me	-24	n in	4	EN I	EC 62368-1	See Mile N	ner when w	2 m
Clause	R	equirement -	- Test	white	24. 24.	Result – Rema	ark	Verdict
Whitek and	Delete all the "country" notes in the reference document according to the followin list:					to the following	P	
at .	et-	0.2.1	Note 1 and 2	1	Note 4 and 5	5 3.3.8.1	Note 2	At .
NET WAL		3.3.8.3	Note 1	4.1.15	Note	4.7.3	Note 1 and 2	here and
ret untre	4 10-	5.2.2.2	Note	5.4.2.3.2.2 Table 12	Note c	5.4.2.3.2.4	Note 1 and 3	EK WALTE
whitek	NULL	5.4.2.3.2.4 Table 13	Note 2	5.4.2.5	Note 2	5.4.5.1	Note	MALTER
UNLIEK WI	55EX	5.4.10.2.1	Note	5.4.10.2.2	Note	5.4.10.2.3	Note	WALTER M
LIEK MALT	et s	5.5.2.1	Note	5.5.6	Note	5.6.4.2.1	Note 2 and 3 and 4	NETEX MAL
et white	an'	5.6.8	Note 2	5.7.6	Note	5.7.7.1	Note 1 and Note 2	Set white
whitek a	INTE	8.5.4.2.3	Note	10.2.1 Table 39	Note 3 and 4 and 5	10.5.3	Note 2	whitek
STER OF	58	10.6.1	Note 3	F.3.3.6	Note 3	Y.4.1	Note	NUTEX NO
nt n	*	Y.4.5	Note					
The solution		a dification (15 1	e or i	lle va v	ST. WALL
4		odification					1 4 10 1	Р
1 white	N0 ele		ving note: e of certain substa ent is restricted w					P
5	М	odification	to 4.Z1					Р



Page 49 of 70

	EN IEC 62368-1		
Clause	Requirement – Test	Result – Remark	Verdict
4.Z1	Add the following new subclause after 4.9:	Not directly connected to the	N/A
	To protect against excessive current, short-circuits and earth faults in circuits connected to an a.c. mains , 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): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of B.3.1 and B.4 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; 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. If reliance is placed on protection in the building installation, the installation shall so state, except that for pluggable equipment type A the building installation shall be regarded as		WALLEY WALLEY WALLEY WALLEY WALLEY WALLEY WALLEY WALLEY WALLEY
EXINATE	providing protection in accordance with the rating of the wall socket outlet.	ter and mint white wh	SER WAL
6	Modification to 5.4.2.3.2.4		N/A
5.4.2.3.2.4	Add the following to the end of this subclause:	No connection to external	N/A
Jet .	The requirement for interconnection with external circuit is in addition given in EN 50491-3:2009.	circuit.	NUTEX.
7	Modification to 10.2.1		N/A
10.2.1	Add the following to c) and d) in table 39: For additional requirements, see 10.5.1.	No such radiation from the equipment.	N/A
8	Modification to 10.5.1		N/A



Page 50 of 70

	EN IEC 62368-1	LIE WILL WALL WALL	
Clause	Requirement – Test	Result – Remark	Verdict
M	W W Strate at a star	atte mile white	-Mrs - Mrs
10.5.1	Add the following after the first paragraph: For RS 1 compliance is checked by measurement under the following conditions: In addition to the normal operating conditions, all controls adjustable from the outside by hand, by any object such as a tool or a coin, and those internal adjustments or pre-sets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made.	antifet antifet antifet antifet	N/A
	 NOTE Z1 Soldered joints and paint lockings are examples of adequate locking. The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm², at any point 10 cm from the outer surface of the apparatus. Moreover, the measurement shall be made under fault conditions causing an increase of the high voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made. 	ANTER MAILER MAILER MA	ALTER AND AND A
	For RS1, the dose-rate shall not exceed 1 µSv/h taking account of the background level. NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.	in white white white	et win fet wint
9	Modification to G.7.1		N/A
G.7.1	Add the following note: NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.	Whitek whitek whitek	N/A
10	Modification to Bibliography		Р

Page 51 of 70



Verdict

Clause

Requirement – Test

EN IEC 62368-1 Result - Remark

July .	an an a	the second second	at all inter white white white	- July
	Add the following note	es for the standards indicated	an a stat	P
	IEC 60130-9	NOTE Harmonized as EN 6013	30-9.	with 4
	IEC 60269-2	NOTE Harmonized as HD 602	69-2.	
	IEC 60309-1 NOTE Harmonized as EN 60309-1.		STEL S	
	IEC 60364	NOTE some parts harmonized	in HD 384/HD 60364 series.	the con
	IEC 60601-2-4	NOTE Harmonized as EN 6060	D1-2-4.	A A
		NOTE Harmonized as EN 6066		Che Main
		NOTE Harmonized as EN 6103		
		NOTE Harmonized as EN 6150		the set
		NOTE Harmonized as EN 615		MAL
		NOTE Harmonized as EN 615		
		NOTE Harmonized as EN 615		1
		NOTE Harmonized as EN 616		n n
		NOTE Harmonized as EN 6164		1
		NOTE Harmonized as EN 6164		Ster In
		NOTE Harmonized as EN 6164		1. 20
	IEC 61643-331	NOTE Harmonized as EN 6164	+0-001.	1 13
MALI	3 m - 5m - 5m	A At A	et all all and and	white
11	ADDITION OF ANNE	XES		Р
ZB	ANNEX ZB, SPECIAL	NATIONAL CONDITIONS (EN) Set Street Mile South	NO P
4.1.15	Denmark, Finland, N	orway and Sweden	Not directly connected to the	N/A
	connection to other eq if safety relies on conn if surge suppressors a network terminals and marking stating that th	uipment type A intended for uipment or a network shall, thection to reliable earthing or re connected between the accessible parts, have a	Se white white white wh	a set white
	The marking text in the be as follows:	e applicable countries shall	white white white wires	NUTEX MAN
	stikkontakt med jord so stikproppens jord." In Finland : "Laite on li varustettuun pistorasia In Norway : "Apparated stikkontakt"	t må tilkoples jordet	antifet antifet antifet antifet	Set white
where we	uttag"	n skall anslutas till jordat	MITER WAITER WAITER WALTER	unit w
4.7.3	United Kingdom		e at at at	N/A
	To the end of the subc added:	lause the following is	VINITE WALT WILL W	4 .el



Page 52 of 70

EN IEC 62368-1				
Clause	Requirement – Test	Result – Remark	Verdict	
311 3		N. M. M. Marker M.	10	
5.2.2.2	Denmark After the 2nd paragraph add the following:	No high touch current measured.	N/A	
lifet while	A warning (marking safeguard) for high touch current is required if the touch current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.	LIEK WALTER WALTER WALTER	Whenek M	
5.4.11.1	Finland and Sweden	No such external circuits.	N/A	
and Annex G	To the end of the subclause the following is added:	er white white white v	NN	
	For separation of the telecommunication network from earth the following is applicable:	white white white wh	et unet	
	If this insulation is solid, including insulation forming part of a component, it shall at least consist of either	MITE WHIT WHIT WHIT	JEX .	
	two layers of thin sheet material, each of which shall pass the electric strength test below, or	s at at at	11 - 11 . 17 - 11	
	• one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below.	White white white white	TEX WALTER	
	If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that clearances and creepage distances do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition	where where where where w	an set and	
	• passes the tests and inspection criteria of 5.4.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 5.4.9 shall be performed using 1,5 kV),	whitet whitet whitet white	Whitek W	
	and	at the stat with	mitet whi	
	 is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5 kV. 	white white white	LEY WALLEY	
	It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2.	ALTER WALTER WALTER WALTE	* UNLIEK	
	A capacitor classified Y3 according to EN 60384- 14:2005, may bridge this insulation under the following conditions:	t at ret ret	WALT & WALT	
	 the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 	white white white we	IEX WALTER	



Page 53 of 70

2hr	EN IEC 62368-	in which which which	due du
Clause	Requirement – Test	Result – Remark	Verdict
When when a	testing, is tested with an impulse test of 2,5 kV defined in 5.4.11;	at ret ret	white white
	 the additional testing shall be performed on all the test specimens as described in EN 60384- 14; 	antife white white	ret whitek w
er volter	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.	et wantet watet wate	whilet whi
5.5.2.1	Norway	the set set	N/A
	After the 3rd paragraph the following is added:	white white white .	set set
nt m	Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).	MULTER WAITE WALL WA	er une s
5.5.6	Finland, Norway and Sweden	No such resistors.	N/A
	To the end of the subclause the following is added:	at sold with minet	where whit
	Resistors used as basic safeguard or bridging basic insulation in class I pluggable equipment type A shall comply with G.10.1 and the test of G.10.2.	white white white	Milet Whitet
5.6.1	Denmark	No such equipment.	N/A
	Add to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. <i>Justification:</i>	Ser untile pontiet ontiet	wint wint
	In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.	UNLIEK WALLEY WALLEY W	NUTER MAILE
5.6.4.2.1	Ireland and United Kingdom	a de de la	N/A
et wintret	After the indent for pluggable equipment type A , the following is added: - the protective current rating is taken to be 13 A, this being the largest rating of fuse used in the mains plug.	et would would would	NI NI NINI EX NINI NINI EX
5.6.4.2.1	France	JER STER STE	N/A
NUTEX JUN	After the indent for pluggable equipment type A , the following is added: – in certain cases, the protective current rating of the circuit supplied from the mains is taken as 20 A instead of 16 A.	WATE WATER WATER	tret whitek w
5.6.5.1	To the second paragraph the following is added:	the main wat wat	N/A
	The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current over 10 A and up to and including 13 A is: 1,25 mm ² to 1,5 mm ² in cross-sectional area.	white white white	suning suning



Reference No.: WTF22D07151596Y

Page 54 of 70

0	EN IEC 62368-1	in the she	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Clause	Requirement – Test	Result – Remark	Verdict
m	Mr. W. S.	and a share white	- Mr - Mr
5.6.8	 Norway To the end of the subclause the following is added: Equipment connected with an earthed mains plug is classified as class I equipment. See the Norway marking requirement in 4.1.15. The symbol IEC 60417-6092, as specified in F.3.6.2, is accepted. 	antifet antifet antifet an	
5.7.6	Denmark	me m m	Р
	To the end of the subclause the following is added: The installation instruction shall be affixed to the equipment if the protective conductor current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.	wonthet wonthet wonthet	MALTE WALTE
5.7.6.2	Denmark	at set ster of	P.I.
at whitek	To the end of the subclause the following is added: The warning (marking safeguard) for high touch current is required if the touch current or the protective current exceed the limits of 3,5 mA.	MULTER WALTER WALTE	WINT A WALT
5.7.7.1	Norway and Sweden	Not such system.	N/A
	 To the end of the subclause the following is added: The screen of the television distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation needs to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by a retailer, for example. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: "Apparatus connected to the protective earthing of the building installation through the mains connection to protective earthing – and to a television distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a television 		and a providence of the set of th
	distribution system therefore has to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)"	water water water	which which
	NOTE In Norway, due to regulation for CATV-installations, and	the she is	10. 10.



Page 55 of 70

	EN IEC 62368-1	- 11. 20. 2.	
Clause	Requirement – Test	Result – Remark	Verdict
-m.		Mr. All and and and and and	- nu
	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.	whet many manet white	* MALTER
	Translation to Norwegian (the Swedish text will also be accepted in Norway):	under waret united waited	WALTER W
	 "Apparater som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et koaksialbasert kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av apparater til kabel-TV nett installeres en galvanisk isolator mellom apparatet og kabel-TV nettet." 	at white white white white	E Et WALTER
nt wn Tek wnith wnitek	Translation to Swedish: "Apparater som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medfőra risk főr brand. Főr att undvika detta skall vid anslutning av apparaten till kabel-TV nät galvanisk isolator finnas mellan apparaten och kabel-TV nätet."	Anticet annines annines annines	von
3.5.4.2.3	 United Kingdom Add the following after the 2nd dash bullet in 3rd paragraph: An emergency stop system complying with the requirements of IEC 60204-1 and ISO 13850 is required where there is a risk of personal injury. 	No external circuits.	N/A
B.3.1 and B.4	Ireland and United Kingdom The following is applicable:	Not directly connected to the mains	N/A
UNLITER UNIT	To protect against excessive currents and short- circuits in the primary circuit of direct plug-in equipment , tests according to Annexes B.3.1 and B.4 shall be conducted using an external miniature circuit breaker complying with EN 60898-1, Type B, rated 32A. If the equipment does not pass these tests, suitable protective devices shall be included as an integral part of the direct plug-in equipment , until the requirements of Annexes B.3.1 and B.4 are met	Whitek whitek whitek whitek	antifet austet aun tret aunti et autret
G.4.2	Denmark To the end of the subclause the following is added:	Not directly connected to the mains	N/A
	Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1:2011.	Tet waitet waitet waitet w	n ^{stek} wn
	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	whitet whitet whitet wh	A MALTER



Page 56 of 70

24	EN IEC 62368-	the white white a	he con
Clause	Requirement – Test	Result – Remark	Verdict
	 rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a polyphase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Mains socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance DS 60884-2-D1:2011 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c. Mains socket-outlets with earth shall be in compliance with DS 60884-2-D1:2011 	Result – Remark	Verdict
G.4.2	Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1- 5a or DK 1-7a <i>Justification:</i> Heavy Current Regulations, Section 6c United Kingdom To the end of the subclause the following is	Not directly connected to the mains	N/A
and and	added: The plug part of direct plug-in equipment shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16, and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		5
G.7.1	 United Kingdom To the first paragraph the following is added: Equipment which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord shall be fitted with a 'standard plug' in accordance with the Plugs and Sockets etc. (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768, unless exempted by those regulations. NOTE "Standard plug" is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or 	and an arek and an arek and an arek an	N/A

Page 57 of 70



	EN IEC 62368-1				
Clause	Requirement – Test	Result – Remark	Verdict		
- m	N N I I I I I I I I I I I I I I I I I I	- nett whet whe whe	-24		
G.7.1	Ireland To the first paragraph the following is added: Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. S.I. 525 provides for the recognition of a standard of another Member State which is equivalent to the relevant Irish Standard	WALTER WALTER WALTER WALTER	N/A		
G.7.2	Ireland and United KingdomTo the first paragraph the following is added:A power supply cord with a conductor of 1,25 mm²is allowed for equipment which is rated over 10 Aand up to and including 13 A.	water water water water	N/A		
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)	in me me m n	N/A		
	GermanyThe following requirement applies:For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorization is required, or application of type approval (Bauartzulassung) and marking.Justification: German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM.NOTE Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D- 38116 Braunschweig,	No CRT within the equipment.	N/A		
ZD	Tel.: Int+49-531-592-6320, Internet: http://www.ptb.de IEC and CENELEC CODE DESIGNATIONS FOR	FLEXIBLE CORDS (EN)	Р		

1011



Page 58 of 70

L 20.	the state of the s	EN IEC 62368-1	
Clause	Requirement – Test	Result – Remark	Verdict
- Mar	M M A	. The street out and and	me me

Type of flexible cord	Code de	signations
	IEC	CENELEC
PVC insulated cords		
Flat twin tinsel cord	60227 IEC 41	H03VH-Y
Light polyvinyl chloride sheathed flexible cord	60227 IEC 52	H03VV-F H03VVH2-F
Ordinary polyvinyl chloride sheathed flexible cord	60227 IEC 53	H05VV-F H05VVH2-F
Rubber insulated cords		
Braided cord	60245 IEC 51	H03RT-F
Ordinary tough rubber sheathed flexible cord	60245 IEC 53	H05RR-F
Ordinary polychloroprene sheathed flexible cord	60245 IEC 57	H05RN-F
Heavy polychloroprene sheathed flexible cord	60245 IEC 66	H07RN-F
Cords having high flexibility		
Rubber insulated and sheathed cord	60245 IEC 86	H03RR-H
Rubber insulated, crosslinked PVC sheathed cord	60245 IEC 87	нозрv4-н
Crosslinked PVC insulated and sheathed cord	60245 IEC 88	H03V4V4-H
Cords insulated and sheathed with halogen- free thermoplastic compounds		
Light halogen-free thermoplastic insulated and sheathed flexible cords		H03Z1Z1-F H03Z1Z1H2-
Ordinary halogen-free thermoplastic insulated and sheathed flexible cords		H05Z1Z1-F H05Z1Z1H2-

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Page 59 of 70

20		EN IEC 62368-1	24. 2.
Clause	Requirement – Test	Result – Remark	Verdict

5.2	TABLE: Classification	on of electrical er	ergy source	es		the set	_́Р
Supply	Location (e.g.	Test conditions		Parame	eters		ES Class
Voltage	circuit designation)		U (V)	I (mA)	Type ¹⁾	Additional Info ²⁾	Class
5Vdc		Normal	<60Vdc	1 - 1	SS	CDC	ES1
designed to be supplied by Micro USB port	designed to be supplied by Micro	Abnormal	man - Linn	an a	m 1	-20	
		t intret in	Tet-	et whiter	Whiter y		
4.20Vdc	The EUT is	Normal	<60Vdc	Ţ.	SS	DC	ES1
supp Inter	designed to be supplied by	Abnormal	Jet - Lie	NALIT- NALI	-4°	m. m	20
	Internal Li-ion battery cell	Single fault – SC/OC		JEL	miter	INLIEK MILL	

Supplementary information:

Type: Steady state (SS), Capacitance (CP), Single pulse (SP), Repetitive pulses (RP), etc.
 Additional Info: Frequency, Pulse duration, Pulse off time, Capacitance value, etc.

3) Test Conditions:

Normal –Full load and no load.

Abnormal - Overload output

SC= short circuit; OC= open circuit

5.4.1.8 TABLE: Wo	rking voltage measu	rement				<n <<="" a="" th=""></n>
Location	RMS voltage (V)	Peak voltage (V)	Frequency (Hz)		Comment	ts
-me me m		t 5 ⁴ 5	et intre N	LAN W	er "the	m
- JEt JIEt MIET	white white wh	20 20		d 1	et z et	JEt
Supplementary information	on:	•	•			

5.4.1.10.2 TABLE: Vicat softening temperature of thermoplastics							
Method			:	ISO 306 / B50	me m		
Object/ Part No./Material Manufacturer/trademark				Thickness (mm)	T soften	ing (°C)	
-242 A		at the state of	5	white where we	in the	24 1	
Supplemen	tary information:				L		

2	5.4.1.10.3 TABLE: Ball pressure test of thermoplastics						. m	N/A
Allowed impression diameter (mm):					≤ 2 m	m, st se	کی خ	
14 million - 14	Object/Part	No./Material	Manufacturer/trademark	Thickness	(mm)	Test temperature (°C)	Imp diame	ression eter (mm)



Reference No.: WTF22D07151596Y Page 60 of 70

EN IEC 62368-1								
Clause	Requirement – Test	Result – Remark	Verdict					
Mr	M M A	the cites with out which	we we					
4	A AT - AT SET ST	with the second	1 A-					

Supplementary information:

5.4.2, 5.4.3 TABLE: Minimum	Clearan	ces/Cre	epage o	listance			4	N/A
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U _{rms} (V)	Freq ¹⁾ (kHz)	Required cl (mm)	cl (mm)	E.S. ²⁾ (V)	Required cr (mm)	cr (mm)
- INTE MALL WALL WALL	m.	20	,;		4	5 ⁶⁵ 5	er Trie	NOL.

Supplementary information:

1) Only for frequency above 30 kHz

2) Complete Electric Strength voltage (E.S. (V) when 5.4.2.4 applied)

5.4.4.2 TABLE: Minimum distance through insulation						
Distance t (DTI) at/of	hrough insulation	Peak voltage (V)	Insulation*	Required DTI (mm)	Mea	asured DTI (mm)
	Set Set al	Martin Martin Mar	24 - 24		,dt	- 1
Suppleme	ntary information:					

*See also sub-clause 5.4.4.9

5.4.4.9 TABLE: Solid in	nsulation at	frequencies	>30 kHz	3	and the	N/A
Insulation material	E _P	Frequency (kHz)	K _R	Thickness d (mm)	Insulation	V _{PW} (Vpk)
- INTE WATT WAT W	- m		,	1et . 5e	- NITER I	The Main
Supplementary information:						
N 0 0 0					10 1	

5.4.9 TABLE: Electric strength tests	s at at	Tet Jet NI	N/A
Test voltage applied between:	Voltage shape (Surge, Impulse, AC, DC, etc.)	Test voltage (V)	Breakdown Yes / No
Functional:	m. m. m.	i i it it	to the
- when when when the state	- Jet Jet mile	- white white w	1. m. 1
Basic/supplementary:	when the second	A St.	et det s
the set and the set	The suffer while	Mult when whe	m. m.
Reinforced:	the state of the s	at at a	t set st
- with the state of the state	the other white w	the mer way	m m
Routine Tests:		at at at	with with
- w it is at the will	- mitter white whe	- mer mer .	90 <u>- 7</u> .
Supplementary information:	•	•	



N

Reference No.: WTF22D07151596Y

Page 61 of 70

m. mu	M A A	EN IEC 62368-1	her an
Clause	Requirement – Test	Result – Remark	Verdict

5.5.2.2	TABLE:	Stored discharge of	on capacitors			N/A
Location		Supply voltage (V)	Operating and fault condition ¹⁾	Switch position	Measured voltage (Vpk)	ES Class
r 20 -		A - A	Normal	With BULL	alle - alle	
Tek white	white v	net wat and	Single fault: SC/ OC	Liet whitek	BLIEK WALLER	White White

Supplementary information:

X-capacitors installed for testing are:

[] bleeding resistor rating:

[] ICX: 1) Normal operating condition (e.g., normal operation, or open fuse), SC= short circuit, OC= open circuit

5.6.6	TABLE: Resistance of protective conductors and terminations					
Location		Test current (A)	Duration (min)	Voltage drop (V)	Re	sistance (Ω)
,+	at let set	The mark with	m m		A	- 1
Supplama	atory information:					

Supplementary information:

5.7.4 TABLE	: Unearthed acces	ssible parts				N/A
Location	Operating and	rating and Supply		Parameters		ES class
	fault conditions		Voltage (V _{rms} or V _{pk})	Current (A _{rms} or A _{pk})	Freq. (Hz)	
/N to secondary	Normal	6	Set and and	in white	-41 m	-201-
erminals	Abnormal: overload	n <u>-</u> n	- 58 58	NUTET WALTER	Whitek	WILLIER V
Tet intret intre	Single fault: SC/OC	when - when	sur - su	Tet Tet	S.S.E.	LIEK- UNI
Supplementary infor	SC/OC	the st	at set		ntiet	3

SC= short circuit; OC= open circuit

	N/A
Power Distribution System []]TN []TT []IT Location Fault Condition No in IEC Touch current (mA) Comm	_
Location Fault Condition No in IEC Touch current Comm 60990 clause 6.2.2 (mA)	
60990 clause 6.2.2 (mA)	9
	ent
	1 I
Metal enclosure neutral open 0.024 ES	- NUT



Page 62 of 70

10		EN IEC 62368-1	24. 14.
Clause	Requirement – Test	Result – Remark	Verdict

5.8	TABLE: Backfeed safeguard in battery backed up supplies					N/A	
Location		Supply voltage (V)	Operating and fault condition	Time (s)	Open-circuit voltage (V)	Touch current (A)	ES Class
TTE MAIN	Maria	m. m		de s	at . 5 th .	LIER	white wh
Supplement	tary infor	mation:	·				

6.2.2	TABLE: Power source	e circuit classifi	cations	10 10	55	P
Location	Operating and fault condition	Voltage (V)	Current (A)	Max. Power ¹⁾ (W)	Time (S)	PS class
Battery ce	ell Output pin + to -	3.46	8.0	27.68	5S	PS2
Main boa	rd Signal fault (U1 Pin 4-16 SC)	0*	0*	0*	3S	PS1
Main boa	rd Signal fault (U1 Pin 4-10 SC)	0*5 ^{ct} 3	0*	0*	3S	PS1
Main boa	rd Signal fault (R1 SC)	0*	0*	0*	3S	PS1
Main boa	rd Signal fault (R2 SC)	0*	0*	0*	3S	PS1
Main boa	rd Signal fault (NTC OC)	0*	0*	0*	35	PS1

Abbreviation: SC= short circuit; OC= open circuit

1) Measured after 3 s for PS1 and measured after 5 s for PS2 and PS3.

* Unit shutdown immediately, recoverable, no hazard.

6.2.3.1 TABLE: De	etermination of Arcing PIS	24. 24.	at at a	N/A
Location	Open circuit voltage after 3 s (Vpk)	Measured r.m.s current (A)	Calculated value	Arcing PIS? Yes / No
E mile more and		at - at .	et unter muter	min - mui
Supplementary information	on:			
	Mr. W.	1 1 1	1. 15 15	. 1° . 1°

6.2.3.2 TABLE: Deter	mination of resistive PIS		50 . 5 P .
Location	Operating and fault condition	Dissipate power (W)	Arcing PIS? Yes / No
All primary circuits/components	TEX NUTEX INTEX WATER W	The white white whi	Yes (declaration)
Supplementary information:			
All circuits are considered as A combination of voltmeter.	s resistive PIS; VA and ammeter IA may be used ins	tead of a wattmeter.	to the

If a separate voltmeter and ammeter are used, the product of (VA x IA) is used to determine Resistive PIS

4		
		/

Reference	10.: WTF22D0/151596Y	Page 63 of 70			5 ⁰ . 5 ⁰
n nu	211. 24. 24	EN IEC 62368-1	ater white white a	ne m	- the
Clause	Requirement – Test	the wet and a	Result – Remark	1 1	Verdict

classification.

A Resistive PIS: (a) dissipates more than 15 W, measured after 30 s of normal operation, or (b) under single fault conditions has either a power exceeding 100 W measured immediately after the introduction of the fault if electronic circuits, regulators or PTC devices are used, or has an available power exceeding 15 W measured 30 s after introduction of the fault.

8.5.5 TABLE: High pr	essure lamp	t At A	to the fl	N/A
Lamp manufacturer	Lamp type	Explosion method	Longest axis of glass particle (mm)	Particle found beyond 1 m Yes / No
- it it it it	- street intre way	- m with		
Supplementary information:				

9.6 TAI	BLE: Temper	rature mea	surement	s for wirel	ess power	transmitte	ers	N/A
Supply voltage (V)			1th	10 - 10.	at aller	-INLIER ST	_
Max. transmit po	wer of transr	nitter (W)	🥍 .	m m	24			
		eiver and contact		eiver and contact		ver and at of 2 mm		eiver and at ce of 5 mm
Foreign objects	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)	Object (°C)	Ambient (°C)
et ni ^{ft} n		_/ - _					- Blik	NUTET- NUT
Supplementary i	nformation:							

5.4.1.4, TABLE: Temperature measuren 9.3, B.1.5, B.2.6	nents	iet wallet	NALTEX N	NUTER WITT	WILL P
Supply voltage (V):	Condition 1 (5Vdc):	Condition 2 (4.2Vdc):	SEK-	White	
Ambient temperature during test T_{amb} (°C):	See below	See below	* - 3	5	
Maximum measured temperature T of part/at:		T (°C)		Allowed T _{max} (°C)
L1 winding	48.9	50.1	. anti-	mer - m	130
PCB near U1	55.1	58.0	, Ţ	10- 10	130
Battery body	40.6	42.0	1-1- M	-+In	For ref.
Battery wire	37.9	40.5	d x	et -50t	80
Internal wooden enclosure near battery	39.2	39.5	4	w.	For ref.
Internal plastic enclosure near U1	40.7	41.4	1	and the second	For ref.
Ambient	35.0	35.0	m	m - n	
Accessible parts	4	at at	. et	State St	In Intro N

Page 64 of 70

in m	AN E	EN IEC 62368-1	me in
Clause	Requirement – Test	Result – Remark	Verdict

External wooden enclos	ure near batter	'y	27.7	28.6	· · · ·		107*
External plastic enclosu	re near U1	A	28.1	29.7	er nur	unin - un	77*
Ambient	NUTER MUTE	which is	25.0	25.0		A - 10	4 . 4 .
Temperature T of winding:	t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class
in min me m	nu - 1	- ~	- ,+	7.15	10th 5	5	min - min

Supplementary information:

* Temperature limit for TS1 of accessible enclosure according to Table 38 to be measured at normal ambient temperature.

Note 1: The apparatus was submitted and evaluated for maximum manufacturer's recommended ambient (Tma) of 35°C.

Note 2: The temperatures were measured under the worse case normal mode defined in clause B.2.1. Condition 1: Only charge with internal empty battery

Condition 2: Only discharge with internal fully battery

B.2.5	T	ABLE: Inp	out test					P. N. N. P.
U (V)	Hz	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
Conditior	n 1: O	nly charge	e with interi	nal empty	battery	. nº 0	an	Mr. M. M.
5.0Vdc ¹⁾	5.1	0.846	17	4.23			- .	Battery charge current: 0.846A
Conditior	n 2: O	nly discha	arge with in	ternal full	y battery	5		a la st
4.2Vdc ²⁾		1.88		7.89	J. J. Carlo	Jet .	NUTER N	Battery discharge current: 1.88A, USB output: 5Vdc, 1A

¹⁾ Supply by external DC source, ²⁾ Measured battery cells voltage and current. The maximum measured current under rated voltage did not exceed 110% of the rated current.

B.3, B.4 TA	ABLE: Abnor	mal operating	g and fau	It condit	ion tes	sts	a at at	_⊘P
Ambient temp	erature T _{amb} (°C)		<u>}</u>		See b	elow	
Power source	for EUT: Man	ufacturer, mod	del/type,	outputrati	ng:		t at at	
Component No.	Condition	Supply voltage (V)	Test time	Fuse no.		use ent (A)	Observation	١
Condition 1: O	nly charge wi	th internal emp	oty batter	y de	JER	NUE	white white white	m
U1 Pin 4-16	S-C	5Vdc ¹⁾	7hrs	et smit	t W	<u></u> LTEK W	Unit shut down immed damage, no hazard. Recoverable. Battery cell charge cur 0.846→0.001	when a
R1	S-C	5Vdc ¹⁾	7hrs	NC Nicht s	MITER	W	Unit normally working. damage, no hazard. Recoverable. Battery cell charge cur 0.846	



Reference No.: WTF22D07151596Y Page 65 of 70

n. Mur			EN	IEC 6236	8-1	
Clause	Requirement -	Test	which	m.	Result -	- Remark Verdict
in the	n - 40 - 2		d.	A.	Str. Str	inter when when when
R2	S-C	5Vdc ¹⁾	7hrs	97 39 584 39	et watter	Unit normally working. No damage, no hazard. Recoverable. Battery cell charge current(A): 0.846
LI L	S-C	5Vdc ¹⁾	7hrs	VINLIEK.	white white	Unit normally working. No damage, no hazard. Recoverable. Battery cell charge current(A): 0.846
NTC	0-C	5Vdc ¹⁾	7hrs	NIT - NI	ANNITES S	Unit shut down immediately. Repeat 3 times No damage, no hazard. Recoverable. Battery cell charge current(A): 0.846→0.001
Condition 2:	Only discharge	with internal	fully batte	ry		
U1 Pin 4-10	S-C	4.20 Vdc ²⁾	7hrs	antiet a	NITEK WALTE	Unit shut down immediately. No damage, no hazard. Recoverable. Battery cells discharge current(A): 1.88→0.001
R3	S-C	4.20Vdc ²⁾	7hrs			Unit normally working. No damage, no hazard. Recoverable. Battery cells discharge current(A): 1.88
C2	S-C	4.20Vdc ²⁾	7hrs	and an	ant - ant	Unit shut down immediately. No damage, no hazard. Recoverable. Battery cells discharge current(A): 1.88→0.001
USB output	S-C	4.20Vdc ²⁾	10mins	A WALLEY	whitek wh	Unit shut down immediately. No damage, no hazard. Recoverable. Battery cells discharge current(A): 1.88→0.001
USB output	o-l	4.20Vdc ²⁾	1hours 10mins	win x er v	nere-oner	USB output overload to 1.4A, over 1.4A unit shutdown, no hazard no damage. Recoverabl when fault removed and no hazards.
	NITEX WALFER	JUNITER JUN	VIEK WALTER	ret white		Battery Body: 33.1°C; External wooden enclosure nea battery: 29.2C; External plastic enclosure near U1: 30.4°C; Ambient: 25.0°C
MALTEX MAL	set whites wh	TEK WALTER	WALTE .	unit v List ni	et white	No higher temperature rise exceeding its limit occurred. Battery cells discharge current(A): $1.88 \rightarrow 2.04 \rightarrow 0.001$

Page 66 of 70

EN IEC 62368-1

Clause Requirement - Test Result – Remark

Supplementary information:

¹⁾ Supply by external DC source, ²⁾ Measured battery cell voltage and current. Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column "Abnormal/Fault." Specify if test condition by indicating "Abnormal" then the condition for a Clause B.3 test or "Single Fault" then the condition for Clause B.4.

1) s-c: Short-circuited; o-l: Overloaded; BL=Blocked.

2) The test result shown all safeguards remained effective and didn't lead to a single fault condition during abnormal operating condition; In addition all safeguards complied with applicable requirements in this standard after restoration of normal operating conditions.

3) The test result showed no Class 1 or 2 energy source become Class 3 level during and after single fault condition.

4) Limit temperature:

Plastic material: 87°C;

Wooden material: 117°C

M.3	TABLE: Pr	otection circu	its f	or batterie	es provid	ed w	vithin	the equ	lipment	N. BUL		
Is it possible	to install the	battery in a re	vers	e polarity	position?	:	-m		I st	_		
					C	ging	ing					
Equipment S	pecification		Vo	ltage (V)				Current (A)				
		a at		5Vdc	A NUTER	<i>.</i> .	1.0A					
					Battery	/ spe	ecification					
		Non-recharge	able	batteries	Rechargea			hargeat	le batteries			
		Discharging		ntentional	Charç		ging		Discharging			
Manufactu	urer/type	current (A) chargin current (Voltage (V)		Curr	ent (A)	current (A)	charging current (A)		
Nanping To Energy Tech Ltd / 186	nology Co.,	when when	. n	street suns	3.7	*	N. C.	2.2	4.4	and water		
Note: The tes	sts of M.3.2 a	are applicable o	only v	when abov	e appropr	iate	data is	s not ava	ailable.			
Specified bat	tery tempera	ature (°C)	<u>.</u>		20	<u>.</u>		at.	10-45			
Component No.	Fault condition	Charge/ discharge mo	ode	Test time	Temp. (°C)		rrent A)	Voltage (V)	e Obs	ervation		
U1 Pin 4-16	SC VINTER	Charge	*	7h	aret <mark>-</mark> www www.	0.	001	4.20	Unit shutd immediate Recoverat damaged,	ly.		
R1	SC	Charge	h	7h	<u>n</u>	0.	846	4.20		ng normally, e, no hazard		
R2	SC	Charge	Jan 1	7h	mr.	0.	846	4.20		ng normally, e, no hazard		
L1	SC	Charge	J.E.	7h	mer- w	0.	846	4.20		ng normally, e, no hazard		
U1 Pin 4-10	SC	Discharge	. h.	7h	Set	0.	001	4.20	Unit shutd immediate Recoverat damaged,	ly.		



Verdict



an a	h_{-} .	24. 24.		EN IE	C 62368	-1	5	× 1	.0	JNY .	de	ap.
		Test	- At		02300	<u> </u>) a a u lá	Der	o o rile	20	1/2	raliat
Clause R	kequire	ment – Test	me m		1		Result –	Rer	nark		ve	rdict
R3	SC	Disch	arge	7h			1.88	4.	.20	Unit worki no damag		
C2	SC	Disch	arge	7h	WALTER.		0.001	4.	.20 ^{- 5}	Unit shuto immediate Recovera damaged	ely. ble. No	
Supplementary	y inform	nation:				_				<u>a at</u>		
	NF= no		ame or exp	ulsion c	of molten	me	tal.	m	5 ⁴⁴	MALTER MA	L'ER S	; NE= P
Maximum spe	attery cified c	harging voltag	e (V)				4.25	<u></u>		er alle	-22	
Maximum spe	cified c	harging currer	nt (A)				2.2	Ç.	102	NAL	-1	
Highest specif	ied cha	rging tempera	ture (°C)	<u> </u>	<u> </u>	:	45	L	Å			
Lowest specifi	ed cha	rging temperat	ture (°C)			S.	10	6.	10	me n	5	
Battery		Operating						t C			vation	
manufacturer/t	уре	and fault condition	Charging voltage (V		arging rent (A)		Temp. (°C)					
Lowest specifie	ed char	ging temperati	ure: 10°C	. Alt	55			Υ.	AL.	in white	m	-201
Nanping Tong New Energy Technology Co	r	Normal	4.20	0	0.712	ter	Battery nperatu 10°C		line -	battery cha reases	irging c	current
/ 18650S22	N. W	Abnormal-	me - a		7.	d-			S. S. S.	NUTER I	56	Mile
	- vnič	Single fault – (R1 SC under condition 1)	4.20		0.712	ter	Battery nperatu 10°C			battery cha reases	irging c	urrent
Highest specifi	ied cha	rging temperat	ure: 45°C	đ	de-		et :	Set-		let intre	MALTIN	n.
Nanping Tong New Energy Technology Co	ST.	Normal	4.20	0.	001A	ter	Battery nperatu 49.5°C	ire:		battery cha charging	irging c	ircuit
/ 18650S22	1 I.	Absormal	The all	- 24	$-a_0$					-	1	de

specified charging temperature

Supplementary information:

Q.1

Output

Abnormal-

Single fault -

(R1 SC

under

condition 1)

Condition

4.20

 $U_{oc}\left(V\right)$

--

0.001A

Abbreviation: SC= short circuit; OC= open circuit; MSCV= maximum specified charging voltage; MSCC= maximum specified charging current; HSCT= highest specified charging temperature; LSCT= lowest

TABLE: Circuits intended for interconnection with building wiring (LPS)

Time (s)

Battery

temperature:

49.5°C

 $I_{sc}(A)$

The battery charging circuit

Ρ

S (VA)

stop charging



K

12.

Reference No.: WTF22D07151596Y Page 68 of 70

Clause	Requirement – Test			Result	– Remark		Verdict	
in the	h. the a	1 1	, Ar	55 5	Nº.	and an	- nn	
Circuit				Meas.	Limit	Meas.	Limit	
mer me	Normal	5.12	5S	1.47	8.0	6.90	J100 V	
USB output	Single fault - U1 pin 4-10 SC*	0	5S	0	8	at 0 set	100	
	Single fault - R3 SC*	0	5S	4º0 4	8	0	100	
Supplement	ary Information:							

* Unit shutdown immediately, recoverable, no hazard.

T.2, T.3, T.4, T.5	TABLE: Steady force test							
Location / Part	Material Thickness (mm)		Probe	Force (N)	Test Duration (s)	Observation		
Internal components (T.2)	ili - wat	white whi	Figure V.1 and Figure V.2	10	5	No reduction the clearances and creepage distances		
Enclosure top(T.5)	Wooden*	See table 4.1.2	Jun Et	250	² 5 ¹	Enclosure remained intact, no crack/ opening developed		
Enclosure side(T.5)	Plastics*	See table 4.1.2	47 L	250	5	Enclosure remained intact, no crack/ opening developed		
Enclosure bottom (T.5)	Wooden*	See table 4.1.2	JEK JAN	250	5	Enclosure remained intact, no crack/ opening developed		

*Test was performed on product with each source listed in table 4.1.2.

Т.6, Т.9	TABLE: Impa	ct test 🦽 🔬		and and an an P
Location/Pa	rt Material	Thickness (mm)	Height (mm)	Observation
Enclosure Top	Wooden*	See table 4.1.2	1300	Enclosure remained intact, no crack/ opening developed. No hazards.
Enclosure Side	Plastics*	See table 4.1.2	1300	Enclosure remained intact, no crack/ opening developed. No hazards.
Enclosure Wooden* See table 4.1.2 Bottom		1300	Enclosure remained intact, no crack/ opening developed. No hazards.	
Supplement	ary information	:		
*Test was pe	erformed on pro	oduct with each so	urce listed ir	n table 4.1.2.

Т.7 Л	ABLE: Drop	test		et at at an P
Location/Part	Material	Thickness (mm)	Height (mm)	Observation
Enclosure	Wooden*	See table 4.1.2	1000	Enclosure remained intact, no crack/ opening



Reference No.: WTF22D07151596Y	Reference	No.: \	WTF22	2D071	51596Y
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Page 69 of 70

EN IEC 62368-1								
Clause	Requirement	– Test	to a	Result – Remark	Verdict			
Тор	t th		int which	developed. No hazards.	when when			
Enclosure Side	Plastics*	See table 4.1.2	1000	Enclosure remained intact, no crack/ opening developed. No hazards.				
Enclosure Bottom	Wooden*	See table 4.1.2	1000	Enclosure remained intact, no developed. No hazards.	crack/ opening			

Supplementary information:

*Test was performed on product with each source listed in table 4.1.2.

Т.8 ТА	ABLE: Stres	s relief test			STATISTICS OF SUPP
Location/Part	Material	Thickness (mm)	Oven Temperatur e (°C)	Duration (h)	Observation
Enclosure Plastic* See table 4.1.2		70°C	7h N ^{NN}	Enclosure remained intact, no cracking/opening developed in the enclosure joint. No hazards.	
Supplementary	information:	·			
*Test was perfo	ormed on pro	duct with each sou	urce listed in t	able 4.1.2.	L A A

X	TABLE: Alterna	ative method for determinin	g minimum clearance	s distances N/A
Clea	rance distanced between:	Peak of working voltage (V)	Required cl (mm)	Measured cl (mm)
Ser Ind	with su			At out of any only and
Suppleme	entary information:			
and the	with white of	S all is a	the state of the	the street of



Verdict

シン

Clause

Page 70 of 70

Un In		EN IEC 62368-1	LIET IN	
Dequirement	Teet	1. W. W.	Deput	

Result – Remark Requirement - Test

4.1.2	TABLE: Critical components information							
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹ Test with appliance			
NTC	Shenzhen Zeyuxing Electronics Co., Ltd	104F3950K	R25=100KΩ±1%, B25/50=3950K±1%	IEC/ EN IEC 62368-1				
Fire barriers wrap the battery cell Ltd		PVC V-0		UL 94	Approved by SGS, report no.: GZIN221090 54958MR_C N			
Fire barriers near terminal	Huizhou Fanzhongbao Rubber and Plastic Foaming Factory Co. LTD	whitek whitek	HF-1. Contract white	UL 94	Approved by SGS, report no.: GZMR21120 0450303			
Wooden enclosure	Interchangeable	Interchangeabl e	Min. thickness: 1.0mm	IEC/ EN IEC 62368-1	Test with appliance			
PCB	Shenzhen Hecheng Fast Electronic Technology Co Ltd	1,1a	V-0, 130°C	UL 796	UL E159194			
(Alternative)	Interchangeable	Interchangeabl e	V-0, 130°C	UL 796	UL			
Plastic enclosure	LG CHEM LTD	AF312C	V-0, min. thickness: 2.5mm, 70°C	UL94	UL E67171			
Battery lead wire	Interchangeable	Interchangeabl e	Min. 30V, min. 80°C, min. 26AWG, VW-1	UL 758	UL			
Internal Li- ion Cell	Nanping Tongxin New Energy Technology Co., Ltd	18650S22	3.7V, 2200mAh, 8.14Wh	IEC 62133-2: 2017, IEC 62133-2: 2017/AMD1: 2021	Approved by TUV RH, report no.: CN21YQFC 001			

Supplementary information: ¹⁾ License available upon request. Provided evidence ensures the agreed level of compliance. See OD-CB2039.



Page 1 of 5

Photo Documentation

Reference No.: WTF22D07151596Y



Figure 1: Over view



Figure 2: Side view



Page 2 of 5
Photo Documentation
Reference No.: WTF22D07151596Y

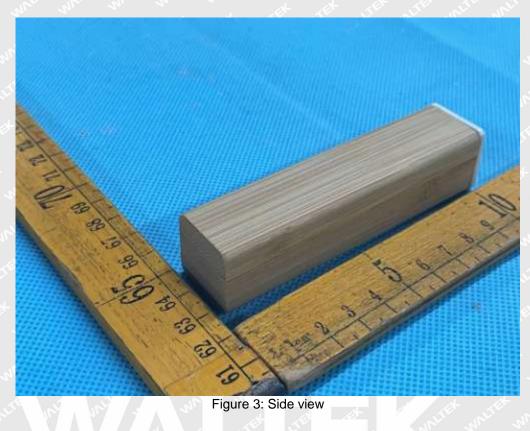




Figure 4: Terminal view



5

Page 3 of 5

Photo Documentation

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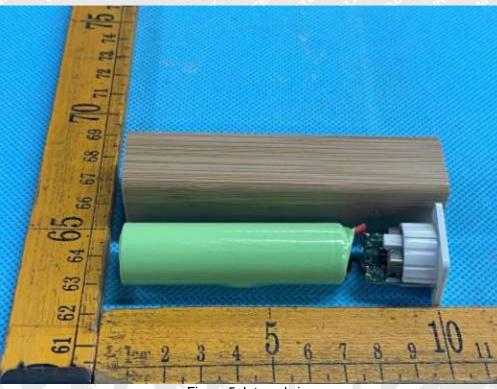


Figure 5: Internal view



Figure 6: Internal view



Page 4 of 5

Photo Documentation

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Figure 7: Internal view

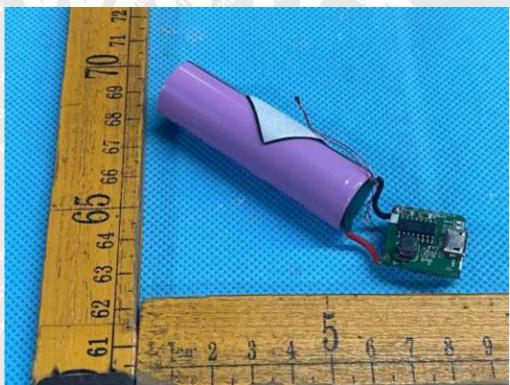


Figure 8: Internal view



Page 5 of 5

Photo Documentation

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Figure 9: Internal view

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