

## TEST REPORT IEC 62368-1 Audio/video, information and communication technology equipment Part 1: Safety requirements

Report Number:	EBSZ241225659S-R1
Date of issue:	2025-01-13
Total number of pages:	81
Name of Testing Laboratory preparing the Report:	Guangdong Eurber Testing Co., Ltd. Room 401/402, Building A, Tangxi Zhigu, No.21, Xijing Road, Gushu, Xixiang Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Applicant's name:	JIB-Germany Technology GmbH
Address:	Am Großen Rohrpfuhl 25, 12355 Berlin-Germany
Test specification:	
Standard:	IEC 62368-1:2018
Test procedure:	Test Report
Non-standard test method:	N/A
TRF template used:	IECEE OD-2020-F1:2021, Ed.1.4
Test Report Form No:	IEC62368_1E
Test Report Form(s) Originator:	UL(US)
Master TRF:	Dated 2022-04-14
General disclaimer:	
	elate only to the object tested. pt in full, without the written approval of the Issuing CB Testing Report and its contents can be verified by contacting the NCB,
Test item description:	Audio Video cable
Trade Mark(s):	JIB, Boaacoustic
Manufacturer:	JIB-Germany Technology GmbH Am Lückefeld 83, 15831 Blankenfelde-Mahlow Germany
Model and/or type reference:	BEB, RB, BB, BAS, GEB series
Rating(s)	300V Max, 1000W Max



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Res	ponsible Testing Laboratory (as applicat	ole), testing procedure	and testing location(s):
$\boxtimes$	Testing Laboratory:	Guangdong Eurber Tes	ting Co., Ltd.
Testing location/ address:		Room 401/402, Building A, Tangxi Zhigu, No.21, Xijing Road, Gushu, Xixiang Subdistrict, Bao'an District, Shenzhen, Guangdong, China	
Tes	ted by (name, function, signature):	Erik Deng	Erep Deng
Арр	proved by (name, function, signature) :	Tommy Wei	Contraction of the second second
	Testing procedure: CTF Stage 1:		
Tes	ting location/ address:		
Tes	ted by (name, function, signature):		
Арр	proved by (name, function, signature) :		
	Testing procedure: CTF Stage 2:		
Tes	ting location/ address:		
Tes	ted by (name, function, signature)		
Witı	nessed by (name, function, signature) :		
Арр	proved by (name, function, signature) :		
	Testing procedure: CTF Stage 3:		
	Testing procedure: CTF Stage 4:		
Tes	ting location/ address:		
Tes	ted by (name, function, signature):		
Witı	nessed by (name, function, signature) :		
Арр	proved by (name, function, signature) :		
Sun	ervised by (name, function, signature) :		



List of Attachments (including a total number of				
<ul> <li>Attachment No.1: 21 pages of European Group Differences and National Differences (according to EN IEC 62368-1:2020+A11:2020).</li> </ul>				
- Attachment No.2: 11 pages of European Group Differences and National Differences (according to EN 62368-1:2014+A11:2017).				
- Attachment No.3: 1 pages of photograph.				
Summary of testing:				
Tests performed (name of test and test clause):	Testing location:			
The submitted samples were found to comply with the requirements of: - EN IEC 62368-1:2020+A11:2020; - EN 62368-1:2014+A11:2017.	Guangdong Eurber Testing Co., Ltd. Room 401/402, Building A, Tangxi Zhigu, No.21, Xijing Road, Gushu, Xixiang Subdistrict, Bao'an District, Shenzhen, Guangdong, China			
Summary of compliance with National Difference	es (List of countries addressed):			
European Group Differences and National Difference	es.			
<ul> <li>The product fulfils the requirements of EN IEC</li> <li>The product fulfils the requirements of EN 623</li> </ul>				
Use of uncertainty of measurement for decisions	on conformity (decision rule) :			
⊠ No decision rule is specified by the IEC standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method").				
□ Other: (to be specified, for example when required by the standard or client, or if national accreditation requirements apply)				
Information on uncertainty of measurement: The uncertainties of measurement are calculated by the laboratory based on application of criteria given by OD-5014 for test equipment and application of test methods, decision sheets and operational procedures of IECEE. IEC Guide 115 provides guidance on the application of measurement uncertainty principles and applying the decision rule when reporting test results within IECEE scheme, noting that the reporting of the measurement uncertainty for measurements is not necessary unless required by the test standard or customer.				
Calculations leading to the reported values are on fil the testing.	e with the NCB and testing laboratory that conducted			



## Copy of marking plate: The artwork below may be only a draft.

Audio Video cable Model No.: BEB Rating: 300V Max, 1000W Max JIB-Germany Technology GmbH Date Code: YYMM Made in Germany

- The CE marking and WEEE symbol (if any) should be at least 5.0mm and 7.0mm respectively in height. - The above marking are the minimum requirements required by the safety standard. For the final

production sample, the marking which do not give rise to misunderstanding may be add.

- Manufacturers shall indicate on the electrical equipment their name, registered trade name or registered trademark and the postal address at which they can be contacted.

- Importers shall indicate on the electrical equipment their name, registered trade name or registered trademark and the postal address at which they can be contacted.

- Rating labels for both models are in the same design except for type designation. Above label for representing the other model.



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Test item particulars:	
Product group:	☐ end product ☐ built-in component
Classification of use by	□ Ordinary person □ Children likely present
	$\boxtimes$ Instructed person
	Skilled person
Supply connection:	
	$\square$ not mains connected: $\square$ ES1 $\square$ ES2 $\square$ ES3
Supply tolerance:	
	☐ +20%/-15%
	□ + %/- %
	⊠ None
Supply connection – type:	<ul> <li>pluggable equipment type A -</li> <li>non-detachable supply cord</li> </ul>
	appliance coupler
	☐ direct plug-in
	□ pluggable equipment type B -
	non-detachable supply cord
	appliance coupler
	permanent connection
Considered current rating of protective	<ul> <li>☐ mating connector⊠ other: not mains connected</li> <li>☐ 16 A;</li> </ul>
device:	Location: Duilding equipment
	⊠ N/A
Equipment mobility:	$\square$ movable $\square$ hand-held $\square$ transportable
	☐ direct plug-in ☐ stationary ☐ for building-in
	<ul> <li>wall/ceiling-mounted</li> <li>SRME/rack-mounted</li> <li>other: Fixed</li> </ul>
Overvoltage category (OVC):	
	□ OVC IV □ other:
Class of equipment	□ Class I
	□ Not classified □
Special installation location:	
Pollution degree (PD):	<ul> <li>□ outdoor location</li> <li>□ PD 1</li> <li>□ PD 2</li> <li>□ PD 3</li> </ul>
Manufacturer's specified T <sub>ma</sub> :	
IP protection class:	
Power systems:	$\square$ TN $\square$ TT $\square$ IT - V L-L
Altitude during operation (m):	$\boxtimes$ 2000 m or less $\square$ m
Altitude of test laboratory (m)	$\boxtimes$ 2000 m or less $\square$ m
Mass of equipment (kg)	Approx. 0.66 kg



Possible test case verdicts:	
- test case does not apply to the test object :	N/A
- test object does meet the requirement :	P (Pass)
- test object does not meet the requirement :	F (Fail)
Testing:	
Date of receipt of test item	2024-12-10
Date (s) of performance of tests	2024-12-10 to 2025-01-13
General remarks:	
"(See Enclosure #)" refers to additional informatio "(See appended table)" refers to a table appended	
Throughout this report a 🗌 comma / 🖂 point	is used as the decimal separator.
Manufacturer's Declaration per sub-clause 4.2.	5 of IECEE 02:
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided	<ul> <li>☐ Yes</li> <li>☑ Not applicable</li> </ul>
When differences exist; they shall be identified	in the General product information section.
Name and address of factory (ies)::	JIB-Germany Technology GmbH Am Lückefeld 83, 15831 Blankenfelde-Mahlow Germany
General product information and other remark	s:
<ul> <li>technology equipment.</li> <li>2. The maximum operating temperature is 25°C</li> <li>3. The product is designed to Audio and video s</li> <li>4. All models are the same except the appearan was selected as representatives to perform al</li> </ul>	ignal transfer for Audio/video electrical equipment. ce. Due to the similarity of all models, the model BEB



OVERVIEW OF ENERGY SOU	RCES AND SAFEGUARDS			
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
ES3: All circuits	Instructed person	N/A	N/A	Enclosure, See 5.4.2, 5.4.3, 5.5.3 5.5.4
6	Electrically-caused fire			
Class and Energy Source	Material part		Safeguards	
(e.g. PS2: 100 Watt circuit)	(e.g. Printed board)	В	1 <sup>st</sup> S	2 <sup>nd</sup> S
PS3: All internal circuits	Combustible materials within equipment	N/A	N/A	Fire enclosure
7	Injury caused by hazardous substances			
Class and Energy Source	Body Part		Safeguards	
(e.g. Ozone)	(e.g., Skilled)	В	S	R
8	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	Instructed person	N/A	N/A	N/A
MS1: Mass of the unit: less than 7kg	Instructed person	N/A	N/A	N/A
9	Thermal burn			
Class and Energy Source	Body Part		Safeguards	
(e.g. TS1: Keyboard caps)	(e.g., Ordinary)	В	S	R
TS1: Accessible part	Instructed person	N/A	N/A	N/A
TS3: Internal components	Instructed person	N/A	N/A	Enclosure
10	Radiation			
Class and Energy Source	Body Part Safeguards			
(e.g. RS1: PMP sound output)	(e.g., Ordinary)	В	S	R
N/A	N/A	N/A	N/A	N/A



## ENERGY SOURCE DIAGRAM

**Optional**. Manufacturers are to provide the energy sources diagram identify declared energy sources and identifying the demarcations are between power sources. Recommend diagram be provided included in power supply and multipart systems.

Insert diagram below. Example diagram designs are; Block diagrams; image(s) with layered data; mechanical drawings

## See above OVERVIEW OF ENERGY SOURCES AND SAFEGUARDS

 $\boxtimes$  ES  $\boxtimes$  PS  $\boxtimes$  MS  $\boxtimes$  TS  $\square$  RS



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Clause	Requirement + Test	Result - Remark	Verdict

4	GENERAL REQUIREMENTS		
4.1.1	Acceptance of materials, components and subassemblies	Requirements are specified in the relevant clauses and, where referenced in those clauses, in the relevant annexes. Where compliance of materials, components or subassemblies is demonstrated by inspection, such compliance may be by review of published data or previous test results.	Ρ
4.1.2	Use of components	(See appended table 4.1.2)	Р
4.1.3	Equipment design and construction	No accessible part which could cause injury, parts of equipment that could cause injury were not accessible.	Ρ
4.1.4	Specified ambient temperature for outdoor use (°C)	Indoor use.	N/A
4.1.5	Constructions and components not specifically covered		N/A
4.1.8	Liquids and liquid filled components (LFC)	No such device.	N/A
4.1.15	Markings and instructions	(See Annex F)	Р
4.4.3	Safeguard robustness	See the following details.	Р
4.4.3.1	General	See below.	Р
4.4.3.2	Steady force tests	(See Clause T.5)	Р
4.4.3.3	Drop tests		N/A
4.4.3.4	Impact tests	(See Clause T.6)	Р
4.4.3.5	Internal accessible safeguard tests	No such safeguard.	N/A
4.4.3.6	Glass impact tests	No part made of glass.	N/A
4.4.3.7	Glass fixation tests		N/A
	Glass impact test (1J)		N/A
	Push/pull test (10 N)		N/A
4.4.3.8	Thermoplastic material tests	(See Clause T.8)	Р
4.4.3.9	Air comprising a safeguard		Р
4.4.3.10	Accessibility, glass, safeguard effectiveness	During and after above tests, all safeguards shall remain effective.	Р
4.4.4	Displacement of a safeguard by an insulating liquid	No such device.	N/A
4.4.5	Safety interlocks	No such device.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
4.5	Explosion		Р
4.5.1	General		Р
4.5.2	No explosion during normal/abnormal operating condition	(See Clause B.2, B.3)	Р
	No harm by explosion during single fault conditions		N/A
4.6	Fixing of conductors	See the following details.	Р
	Fix conductors not to defeat a safeguard	See below.	P
	Compliance is checked by test:	(See Clause T.2)	Р
4.7	Equipment for direct insertion into mains socket	–outlets	N/A
4.7.2	Mains plug part complies with relevant standard:		N/A
4.7.3	Torque (Nm):		N/A
4.8	Equipment containing coin/button cell batteries		N/A
4.8.1	General	No lithium coin/button cell battery used.	N/A
4.8.2	Instructional safeguard:		N/A
4.8.3	Battery compartment door/cover construction		N/A
	Open torque test		N/A
4.8.4.2	Stress relief test		N/A
4.8.4.3	Battery replacement test		N/A
4.8.4.4	Drop test		N/A
4.8.4.5	Impact test		N/A
4.8.4.6	Crush test		N/A
4.8.5	Compliance		N/A
	30N force test with test probe		N/A
	20N force test with test hook		N/A
4.9	Likelihood of fire or shock due to entry of condu	ctive object	Р
4.10	Component requirements		N/A
4.10.1	Disconnect Device	(See Annex L)	N/A
4.10.2	Switches and relays	(See appended table 4.1.2)	N/A

5	ELECTRICALLY-CAUSED INJURY		Р
5.2	Classification and limits of electrical energy sources		Р
5.2.2	ES1, ES2 and ES3 limits See the following details.		Р
5.2.2.2	Steady-state voltage and current limits:	(See appended table 5.2)	Р
5.2.2.3	Capacitance limits:	No such device.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
5.2.2.4	Single pulse limits	No such single pulses generated in the equipment or applied to it.	N/A
5.2.2.5	Limits for repetitive pulses:	No such repetitive pulses within the equipment.	N/A
5.2.2.6	Ringing signals	No such ringing signals within the equipment.	N/A
5.2.2.7	Audio signals	No such audio signals with the equipment.	N/A
5.3	Protection against electrical energy sources		Р
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons	Only ES1 circuits can be touched with the equipment.	Р
5.3.1 a)	Accessible ES1/ES2 derived from ES2/ES3 circuits	See above.	Р
5.3.1 b)	Skilled persons not unintentional contact ES3 bare conductors		Р
5.3.2.1	Accessibility to electrical energy sources and safeguards	ES3 source are not accessible. Double or reinforced safeguard is provided between ES3 and accessible ES1 part.	Р
		Also, the equipment is a building-in type and evaluation is also to be made during the end system/equipment.	
	Accessibility to outdoor equipment bare parts		N/A
5.3.2.2	Contact requirements	See below.	Р
	Test with test probe from Annex V	No access with test probe to any ES3 circuit or parts.	
5.3.2.2 a)	Air gap – electric strength test potential (V):		N/A
5.3.2.2 b)	Air gap – distance (mm):		N/A
5.3.2.3	Compliance		N/A
5.3.2.4	Terminals for connecting stripped wire		N/A
5.4	Insulation materials and requirements		Р
5.4.1.2	Properties of insulating material	The choice and application have taken into account as specified in this Clause 5 and Annex T except natural rubber, hygroscopic materials or asbestos are not used as insulation.	P
5.4.1.3	Material is non-hygroscopic	See subclause 5.4.8.	Р
5.4.1.4	Maximum operating temperature for insulating materials:	(See appended table 5.4.1.4, 6.3.2, 9.0, B.2.6)	Р
5.4.1.5	Pollution degrees	2	Р



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Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound	Pollution degree 2 is applied. No insulating compound applied.	N/A
5.4.1.5.3	Thermal cycling test	See above	N/A
5.4.1.6	Insulation in transformers with varying dimensions	No such transformer within the equipment.	N/A
5.4.1.7	Insulation in circuits generating starting pulses	No such starting pulses within the equipment.	N/A
5.4.1.8	Determination of working voltage:	(See appended table 5.4.1.8)	N/A
5.4.1.9	Insulating surfaces		Р
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted	Ball pressure test according to subclause 5.4.1.10.3 applied.	Р
5.4.1.10.2	Vicat test:	(See appended table 5.4.1.10.2)	N/A
5.4.1.10.3	Ball pressure test:	(See appended table 5.4.1.10.3)	Р
5.4.2	Clearances	See the following details.	Р
5.4.2.1	General requirements	See below.	Р
	Clearances in circuits connected to AC Mains, Alternative method	(See Annex X)	N/A
5.4.2.2	Procedure 1 for determining clearance		Р
	Temporary overvoltage	425Vpeak	
5.4.2.3	Procedure 2 for determining clearance	Not mains connected	N/A
5.4.2.3.2.2	a.c. mains transient voltage		
5.4.2.3.2.3	d.c. mains transient voltage:		
5.4.2.3.2.4	External circuit transient voltage	No such transient.	
5.4.2.3.2.5	Transient voltage determined by measurement:		
5.4.2.4	Determining the adequacy of a clearance using an electric strength test:		N/A
5.4.2.5	Multiplication factors for clearances and test voltages		N/A
5.4.2.6	Clearance measurement:	(See appended table 5.4.2, 5.4.3)	Р
5.4.3	Creepage distances	See the following details.	Р
5.4.3.1	General	See below.	Р
5.4.3.3	Material group:	IIIb	—
5.4.3.4	Creepage distances measurement:	(See appended table 5.4.2, 5.4.3)	Р
5.4.4	Solid insulation	See the following details.	Р
5.4.4.1	General requirements	See below.	Р



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Clause	Requirement + Test	Result - Remark	Verdict
5.4.4.2	Minimum distance through insulation	(See appended table 5.4.4.2)	Р
5.4.4.3	Insulating compound forming solid insulation		N/A
5.4.4.4	Solid insulation in semiconductor devices		N/A
5.4.4.5	Insulating compound forming cemented joints	Not used cemented joints.	N/A
5.4.4.6	Thin sheet material	No thin sheet material.	N/A
5.4.4.6.1	General requirements		N/A
5.4.4.6.2	Separable thin sheet material		N/A
	Number of layers (pcs):		N/A
5.4.4.6.3	Non-separable thin sheet material	No such material used.	N/A
	Number of layers (pcs):		N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material:	(See appended table 5.4.9)	N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		N/A
5.4.4.9	Solid insulation at frequencies >30 kHz, <i>E</i> <sub>P</sub> , <i>K</i> <sub>R</sub> , <i>d</i> , <i>V</i> <sub>PW</sub> (V):		N/A
	Alternative by electric strength test, tested voltage (V), <i>K</i> <sub>R</sub> :		N/A
5.4.5	Antenna terminal insulation		N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
5.4.5.3	Insulation resistance (MΩ)		N/A
	Electric strength test		N/A
5.4.6	Insulation of internal wire as part of supplementary safeguard	No such insulation of internal wire as part of supplementary safeguard.	N/A
5.4.7	Tests for semiconductor components and for cemented joints		N/A
5.4.8	Humidity conditioning		Р
	Relative humidity (%), temperature (°C), duration (h):	93% R.H., 30°C, 48h	_
5.4.9	Electric strength test	See the following details	Р
5.4.9.1	Test procedure for type test of solid insulation:	(See appended table 5.4.9)	Р
5.4.9.2	Test procedure for routine test	No routine tests under consideration this time.	N/A
5.4.10	Safeguards against transient voltages from external circuits	No such external circuits.	N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A



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Clause			
	Requirement + Test	Result - Remark	Verdict
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test		N/A
5.4.10.2.3	Steady-state test:		N/A
5.4.10.3	Verification for insulation breakdown for impulse test		N/A
5.4.11	Separation between external circuits and earth	No such connections for external circuit applied within the equipment.	N/A
5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements		N/A
	SPDs bridge separation between external circuit and earth		N/A
	Rated operating voltage U <sub>op</sub> (V):		
	Nominal voltage U <sub>peak</sub> (V):		
	Max increase due to variation $\Delta U_{sp}$ :		
	Max increase due to ageing $\Delta U_{sa}$ :		
5.4.11.3	Test method and compliance		N/A
5.4.12	Insulating liquid	No insulating liquid.	N/A
5.4.12.1	General requirements		N/A
5.4.12.2	Electric strength of an insulating liquid		N/A
5.4.12.3	Compatibility of an insulating liquid		N/A
5.4.12.4	Container for insulating liquid		N/A
5.5	Components as safeguards		Р
5.5.1	General	See the following details.	Р
5.5.2	Capacitors and RC units	No such component provided.	N/A
5.5.2.1	General requirement		N/A
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector		N/A
5.5.3	Transformers	No such component provided.	N/A
5.5.4	Optocouplers	No such component provided.	N/A
5.5.5	Relays	No such component provided.	N/A
5.5.6	Resistors	No such component provided.	N/A
5.5.7	SPDs	No such component provided.	N/A
5.5.8	Insulation between the mains and an external circuit consisting of a coaxial cable	No such component provided.	N/A
5.5.9	Safeguards for socket-outlets in outdoor equipment	Indoor used.	N/A
	RCD rated residual operating current (mA):		



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Clause	Requirement + Test	Result - Remark	Verdict
5.6	Protective conductor		N/A
5.6.2	Requirement for protective conductors		N/A
5.6.2.1	General requirements		N/A
5.6.2.2	Colour of insulation	Green-and-yellow	N/A
5.6.3	Requirement for protective earthing conductors		N/A
	Protective earthing conductor size (mm <sup>2</sup> )		
	Protective earthing conductor serving as a reinforced safeguard		N/A
	Protective earthing conductor serving as a double safeguard		N/A
5.6.4	Requirements for protective bonding conductors		N/A
5.6.4.1	Protective bonding conductors		N/A
	Protective bonding conductor size (mm <sup>2</sup> ):		
5.6.4.2	Protective current rating (A):		N/A
5.6.5	Terminals for protective conductors		N/A
5.6.5.1	Terminal size for connecting protective earthing conductors (mm):		N/A
	Terminal size for connecting protective bonding conductors (mm):		N/A
5.6.5.2	Corrosion		N/A
5.6.6	Resistance of the protective bonding system		N/A
5.6.6.1	Requirements		N/A
5.6.6.2	Test Method		N/A
5.6.6.3	Resistance ( $\Omega$ ) or voltage drop:		N/A
5.6.7	Reliable connection of a protective earthing conductor		N/A
5.6.8	Functional earthing		N/A
	Conductor size (mm <sup>2</sup> ):		N/A
	Class II with functional earthing marking		N/A
	Appliance inlet cl & cr (mm)		N/A
5.7	Prospective touch voltage, touch current and pr	otective conductor current	Р
5.7.2	Measuring devices and networks		Р
5.7.2.1	Measurement of touch current	See appended tables 5.2.2.2 and 5.7.2.2, 5.7.4.	Р
5.7.2.2	Measurement of voltage	See appended table 5.2.2.2.	Р
5.7.3	Equipment set-up, supply connections and earth connections	Clause 4, 5.3 and 5.4 of IEC 60990:2016 applied.	Р
5.7.4	Unearthed accessible parts:	(See appended table 5.7.4)	Р



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Clause	Requirement + Test	Result - Remark	Verdict
5.7.5	Earthed accessible conductive parts:	(See appended table 5.7.5)	N/A
5.7.6	Requirements when touch current exceeds ES2 limits	Less than ES2 limits.	N/A
	Protective conductor current (mA):		N/A
	Instructional Safeguard:		N/A
5.7.7	Prospective touch voltage and touch current associated with external circuits		N/A
5.7.7.1	Touch current from coaxial cables		N/A
5.7.7.2	Prospective touch voltage and touch current associated with paired conductor cables		N/A
5.7.8	Summation of touch currents from external circuits		N/A
	a) Equipment connected to earthed external circuits, current (mA):		N/A
	b) Equipment connected to unearthed external circuits, current (mA):		N/A
5.8	Backfeed safeguard in battery backed up supplie	es a la companya de	N/A
	Mains terminal ES		N/A
	Air gap (mm):		N/A



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Report No. EBSZ241225659S-R1

This report cancels and replaces previous report EBSZ241225659S dated on Jan. 10, 2025

IEC 62368-1

Clause	Requirement + Test	Result - Remark	Verdict
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6	ELECTRICALLY- CAUSED FIRE		Р
6.2	Classification of PS and PIS		Р
6.2.2	Power source circuit classifications:	(See appended table 6.2.2)	Р
6.2.3	Classification of potential ignition sources	See the following details.	Р
6.2.3.1	Arcing PIS:	(See appended table 6.2.3.1)	Р
6.2.3.2	Resistive PIS:	(See appended table 6.2.3.2)	Р
6.3	Safeguards against fire under normal operating a conditions	nd 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	(See appended table B.1.5 and B.3)	Р
	Combustible materials outside fire enclosure:		Р
6.4	Safeguards against fire under single fault condition	ons	Р
6.4.1	Safeguard method	Method of "control of fire spread" considered.	Р
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits	See the following details.	N/A
6.4.3.1	Supplementary safeguards		N/A
6.4.3.2	Single Fault Conditions:	(See appended table B.3, B.4)	N/A
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits		N/A
6.4.5	Control of fire spread in PS2 circuits		N/A
6.4.5.2	Supplementary safeguards	(See appended tables 4.1.2 and Annex G)	N/A
6.4.6	Control of fire spread in PS3 circuits	Compliance detailed as follows:	Р
		- Wire insulation and tubing:	
		complying with Clause 6.	
		<ul> <li>All other components: at least V-2 except for mounted on min. V-1 material or small parts of combustible material.</li> </ul>	
		Fire enclosure of clause 6.4.8 provided with the equipment.	
6.4.7	Separation of combustible materials from a PIS	Fire enclosure provided.	Р
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers	See the following details.	Р



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Clause	Requirement + Test	Result - Remark	Verdict
6.4.8.2	Fire enclosure and fire barrier material properties	V-0 material is used for the fire enclosure.	Р
6.4.8.2.1	Requirements for a fire barrier	No fire barrier used.	N/A
6.4.8.2.2	Requirements for a fire enclosure	V-0 material is used for the fire enclosure.	Р
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier	See the following details.	N/A
6.4.8.3.1	Fire enclosure and fire barrier openings	No openings.	N/A
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top openings and properties	No top openings.	N/A
	Openings dimensions (mm):		N/A
6.4.8.3.4	Bottom openings and properties	No bottom openings.	N/A
	Openings dimensions (mm):		N/A
	Flammability tests for the bottom of a fire enclosure		N/A
	Instructional Safeguard:		N/A
6.4.8.3.5	Side openings and properties	No side openings.	N/A
	Openings dimensions (mm):		N/A
6.4.8.3.6	Integrity of a fire enclosure, condition met: a), b) or c):		N/A
6.4.8.4	Separation of a PIS from a fire enclosure and a fire barrier distance (mm) or flammability rating	V-0 plastic enclosure are used for the fire enclosure.	Р
6.4.9	Flammability of insulating liquid	No such insulating liquid provided.	N/A
6.5	Internal and external wiring		Р
6.5.1	General requirements	Approved internal wire used, the details see appended table 4.1.2.	Ρ
6.5.2	Requirements for interconnection to building wiring		N/A
6.5.3	Internal wiring size (mm <sup>2</sup> ) for socket-outlets:		N/A
6.6	Safeguards against fire due to the connection to	additional equipment	N/A

7	INJURY CAUSED BY HAZARDOUS SUBSTANCES	N/A
7.2	Reduction of exposure to hazardous substances	
7.3	Ozone exposure	
7.4	Use of personal safeguards or personal protective equipment (PPE)	
	Personal safeguards and instructions:	
7.5	Use of instructional safeguards and instructions	N/A
	Instructional safeguard (ISO 7010):	



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Clause	Requirement + Test	Result - Remark	Verdict
7.6 Batteries and their protection circuits			N/A

8	MECHANICALLY-CAUSED INJURY		Р
8.2 Mechanical energy source classifications			Р
8.3	Safeguards against mechanical energy sources		Р
8.4	Safeguards against parts with sharp edges and c	orners	Р
8.4.1	Safeguards	Edges and corners of the enclosure are rounded, considered as MS1.	Р
	Instructional Safeguard		N/A
8.4.2	Sharp edges or corners		N/A
8.5	Safeguards against moving parts		N/A
8.5.1	Fingers, jewellery, clothing, hair, etc., contact with MS2 or MS3 parts	No moving parts.	N/A
	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
	Moving MS3 parts only accessible to skilled person		N/A
8.5.2	Instructional safeguard:		N/A
8.5.4	Special categories of equipment containing moving parts		N/A
8.5.4.1	General		N/A
8.5.4.2	Equipment containing work cells with MS3 parts		N/A
8.5.4.2.1	Protection of persons in the work cell		N/A
8.5.4.2.2	Access protection override		N/A
8.5.4.2.2.1	Override system		N/A
8.5.4.2.2.2	Visual indicator		N/A
8.5.4.2.3	Emergency stop system		N/A
	Maximum stopping distance from the point of activation (m):		N/A
	Space between end point and nearest fixed mechanical part (mm):		N/A
8.5.4.2.4	Endurance requirements		N/A
	Mechanical system subjected to 100 000 cycles of operation		N/A
	- Mechanical function check and visual inspection		N/A
	- Cable assembly:		N/A
8.5.4.3	Equipment having electromechanical device for destruction of media		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
8.5.4.3.1	Equipment safeguards		N/A
8.5.4.3.2	Instructional safeguards against moving parts:		N/A
8.5.4.3.3	Disconnection from the supply		N/A
8.5.4.3.4	Cut type and test force (N):		N/A
8.5.4.3.5	Compliance		N/A
8.5.5	High pressure lamps	No high pressure lamps within the equipment.	N/A
	Explosion test		N/A
8.5.5.3	Glass particles dimensions (mm)		N/A
8.6	Stability of equipment		N/A
8.6.1	General	Classification MS1 according to table 35, line 5 and no stability requirements.	N/A
	Instructional safeguard		N/A
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A
8.6.2.3	Downward force test		N/A
8.6.3	Relocation stability		N/A
	Wheels diameter (mm):		—
	Tilt test		N/A
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test		N/A
8.7	Equipment mounted to wall, ceiling or other struc	ture	N/A
8.7.1	Mount means type	Not such equipment.	N/A
8.7.2	Test methods		N/A
	Test 1, additional downwards force (N):		N/A
	Test 2, number of attachment points and test force (N)		N/A
	Test 3 Nominal diameter (mm) and applied torque (Nm)		N/A
8.8	Handles strength		N/A
8.8.1	General	No handles provided.	N/A
8.8.2	Handle strength test		N/A
	Number of handles		
	Force applied (N)		
8.9	Wheels or casters attachment requirements		N/A
8.9.2	Pull test	No wheels or casters.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
8.10	Carts, stands and similar carriers		N/A
8.10.1	General	No carts, stands or similar carriers.	N/A
8.10.2	Marking and instructions		N/A
8.10.3	Cart, stand or carrier loading test		N/A
	Loading force applied (N):		N/A
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Force applied (N):		
8.10.6	Thermoplastic temperature stability		N/A
8.11	Mounting means for slide-rail mounted equipmen	t (SRME)	N/A
8.11.1	General	Not such equipment.	N/A
8.11.2	Requirements for slide rails		N/A
	Instructional Safeguard:		N/A
8.11.3	Mechanical strength test		N/A
8.11.3.1	Downward force test, force (N) applied:		N/A
8.11.3.2	Lateral push force test		N/A
8.11.3.3	Integrity of slide rail end stops		N/A
8.11.4	Compliance		N/A
8.12	Telescoping or rod antennas		N/A
	Button/ball diameter (mm):	No such part.	

9	THERMAL BURN INJURY		Р
9.2	Thermal energy source classifications		Р
9.3	Touch temperature limits		Р
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		Р
9.4	Safeguards against thermal energy sources		Р
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.	Р
9.5.2	Instructional safeguard:		N/A
9.6	Requirements for wireless power transmitters		N/A
9.6.1	General		N/A



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Clause	Requirement + Test	Result - Remark	Verdict	
9.6.2	Specification of the foreign objects		N/A	
9.6.3	Test method and compliance		N/A	

10	RADIATION	N/A
10.2	Radiation energy source classification	
10.2.1	General classification	N/A
	Lasers:	_
	Lamps and lamp systems	
	Image projectors:	
	X-Ray:	
	Personal music player	
10.3	Safeguards against laser radiation	N/A
	The standard(s) equipment containing laser(s) comply:	N/A
10.4	Safeguards against optical radiation from lamps and lamp systems (including LED types)	N/A
10.4.1	General requirements	N/A
	Instructional safeguard provided for accessible radiation level needs to exceed	N/A
	Risk group marking and location:	N/A
	Information for safe operation and installation	N/A
10.4.2	Requirements for enclosures	N/A
	UV radiation exposure:	N/A
10.4.3	Instructional safeguard:	N/A
10.5	Safeguards against X-radiation	N/A
10.5.1	Requirements	N/A
	Instructional safeguard for skilled persons:	—
10.5.3	Maximum radiation (pA/kg)	
10.6	Safeguards against acoustic energy sources	N/A
10.6.1	General	N/A
10.6.2	Classification	N/A
	Acoustic output <i>L</i> <sub>Aeq,T</sub> , dB(A):	N/A
	Unweighted RMS output voltage (mV):	N/A
	Digital output signal (dBFS)	N/A
10.6.3	Requirements for dose-based systems	N/A
10.6.3.1	General requirements	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
10.6.3.2	Dose-based warning and automatic decrease		N/A
10.6.3.3	Exposure-based warning and requirements		N/A
	30 s integrated exposure level (MEL30)		N/A
	Warning for MEL ≥ 100 dB(A)		N/A
10.6.4	Measurement methods		N/A
10.6.5	Protection of persons		N/A
	Instructional safeguards:		N/A
10.6.6	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.6.1	Corded listening devices with analogue input		N/A
	Listening device input voltage (mV):		N/A
10.6.6.2	Corded listening devices with digital input		N/A
	Max. acoustic output <i>L</i> <sub>Aeq,T</sub> , dB(A):		N/A
10.6.6.3	Cordless listening devices		N/A
	Max. acoustic output <i>L</i> <sub>Aeq,T</sub> , dB(A):		N/A

в	NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS		Р
B.1 General			Р
B.1.5	Temperature measurement conditions	(See appended table B.1.5)	Р
B.2	Normal operating conditions		Р
B.2.1	General requirements:	(See Test Item Particulars and appended test tables)	Р
	Audio Amplifiers and equipment with audio amplifiers:		N/A
B.2.3	Supply voltage and tolerances	±10%	N/A
B.2.5	Input test:	(See appended table B.2.5)	Р
B.3	Simulated abnormal operating conditions		Р
B.3.1	General	(See appended table B.3, B.4)	Р
B.3.2	Covering of ventilation openings	No ventilation openings.	N/A
	Instructional safeguard		N/A
B.3.3	DC mains polarity test	The EUT is not connected to a DC mains.	N/A
B.3.4	Setting of voltage selector	No such voltage selector.	N/A
B.3.5	Maximum load at output terminals	(See appended table B.3, B.4)	Р
B.3.6	Reverse battery polarity		N/A
B.3.7	Audio amplifier abnormal operating conditions		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
B.3.8	Safeguards functional during and after abnormal operating conditions	(See appended table B.3, B.4)	Р
B.4	Simulated single fault conditions		N/A
B.4.1	General		N/A
B.4.2	Temperature controlling device		N/A
B.4.3	Blocked motor test		N/A
B.4.4	Functional insulation		N/A
B.4.4.1	Short circuit of clearances for functional insulation		N/A
B.4.4.2	Short circuit of creepage distances for functional insulation		N/A
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short-circuit and interruption of electrodes in tubes and semiconductors		N/A
B.4.6	Short circuit or disconnection of passive components		N/A
B.4.7	Continuous operation of components		N/A
B.4.8	Compliance during and after single fault conditions		N/A
B.4.9	Battery charging and discharging under single fault conditions		N/A
С	UV RADIATION		N/A
C.1	Protection of materials in equipment from UV rac	liation	N/A
C.1.2	Requirements	No such UV generated from the equipment.	N/A
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus:		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure test		N/A
C.2.4	Xenon-arc light-exposure test		N/A
D	TEST GENERATORS		N/A
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		N/A
D.3	Electronic pulse generator		N/A
E	TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS		N/A
E.1	Electrical energy source classification for audio	signals	N/A
	Maximum non-clipped output power (W)	No speaker provided.	



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Clause	Requirement + Test	Result - Remark	Verdict
	Rated load impedance (Ω):		
	Open-circuit output voltage (V):		
	Instructional safeguard		
E.2	Audio amplifier normal operating conditions		N/A
	Audio signal source type:		
	Audio output power (W):		
	Audio output voltage (V):		
	Rated load impedance (Ω):		
	Requirements for temperature measurement		N/A
E.3	Audio amplifier abnormal operating conditions		N/A
F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND I SAFEGUARDS	NSTRUCTIONAL	Р
F.1	General		Р
	Language:	Evaluated the user manual in English version. The manufacturer commits to provide them in the language of the countries where the product will be distributed.	
F.2	Letter symbols and graphical symbols		Р
F.2.1	Letter symbols according to IEC60027-1	Letter symbols for quantities and units are complied with IEC 60027-1.	Ρ
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.	Р
F.3	Equipment markings		Р
F.3.1	Equipment marking locations	The required marking is located on the product is easily visible.	Р
F.3.2	Equipment identification markings	See copy of marking plate.	Р
F.3.2.1	Manufacturer identification:	See copy of marking plate.	Р
F.3.2.2	Model identification	See page 2 for details.	Р
F.3.3	Equipment rating markings	See the following details.	Р
F.3.3.1	Equipment with direct connection to mains	The equipment directly connected to AC mains, see F.3.3.3 to F.3.3.6.	N/A
F.3.3.2	Equipment without direct connection to mains		Р
F.3.3.3	Nature of the supply voltage:	See copy of marking plate.	Р
F.3.3.4	Rated voltage	See copy of marking plate.	Р



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Clause	Requirement + Test	Result - Remark	Verdict
F.3.3.5	Rated frequency	See copy of marking plate.	Р
F.3.3.6	Rated current or rated power:	See copy of marking plate.	Р
F.3.3.7	Equipment with multiple supply connections	Only one mains supply connection provided.	N/A
F.3.4	Voltage setting device	No such device	N/A
F.3.5	Terminals and operating devices	See the following details	Р
F.3.5.1	Mains appliance outlet and socket-outlet markings		N/A
F.3.5.2	Switch position identification marking	Marked on the switch.	N/A
F.3.5.3	Replacement fuse identification and rating markings		N/A
	Instructional safeguards for neutral fuse:		N/A
F.3.5.4	Replacement battery identification marking	No battery used.	N/A
F.3.5.5	Neutral conductor terminal		N/A
F.3.5.6	Terminal marking location	See below.	N/A
F.3.6	Equipment markings related to equipment classification	See the following details.	N/A
F.3.6.1	Class I equipment		N/A
F.3.6.1.1	Protective earthing conductor terminal		N/A
F.3.6.1.2	Protective bonding conductor terminals:		N/A
F.3.6.2	Equipment class marking:	Class I equipment.	N/A
F.3.6.3	Functional earthing terminal marking:		N/A
F.3.7	Equipment IP rating marking:	IP20	N/A
F.3.8	External power supply output marking:		N/A
F.3.9	Durability, legibility and permanence of marking	Marking is considered to be legible and easily discernible. See also the following details.	Ρ
F.3.10	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	Ρ
		fade. There was no curling and lifting of the label edge. After each test, the marking remained legible.	
F.4	Instructions		Р



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01			
Clause	Requirement + Test	Result - Remark	Verdic
	a) Information prior to installation and initial use		Р
	b) Equipment for use in locations where children not likely to be present		N/A
	c) Instructions for installation and interconnection		Р
	d) Equipment intended for use only in restricted access area		N/A
	e) Equipment intended to be fastened in place		N/A
	f) Instructions for audio equipment terminals		N/A
	g) Protective earthing used as a safeguard		N/A
	h) Protective conductor current exceeding ES2 limits		N/A
	i) Graphic symbols used on equipment		N/A
	j) Permanently connected equipment not provided with all-pole mains switch		N/A
	k) Replaceable components or modules providing safeguard function		N/A
	I) Equipment containing insulating liquid		N/A
	m) Installation instructions for outdoor equipment		N/A
F.5	Instructional safeguards		Р
G	COMPONENTS		Р
G.1	Switches		N/A
G.1.1	General	No switch provided.	N/A
G.1.2	Ratings, endurance, spacing, maximum load	See Annex L	N/A
G.1.3	Test method and compliance		N/A
G.2	Relays		N/A
G.2.1	Requirements	No relay provided.	N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supplying power to other equipment		N/A
G.2.4	Test method and compliance		N/A
G.3	Protective devices		N/A
G.3.1	Thermal cut-offs	No such device used.	N/A
	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Test method and compliance		N/A
G.3.2	Thermal links	No such device used.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
G.3.2.1	a) Thermal links tested separately according to IEC 60691 with specifics		N/A
	b) Thermal links tested as part of the equipment		N/A
G.3.2.2	Test method and compliance		N/A
G.3.3	PTC thermistors	No such device used.	N/A
G.3.4	Overcurrent protection devices	See appended table 4.1.2.	Р
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.4	No such device used	N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions:		N/A
G.4	Connectors		Р
G.4.1	Spacings	No such connector with insulated surfaces accessible within the equipment.	N/A
G.4.2	Mains connector configuration:	The AC mains plug complied with standard IEC/EN 60309	N/A
G.4.3	Plug is shaped that insertion into mains socket- outlets or appliance coupler is unlikely		Р
G.5	Wound components		N/A
G.5.1	Wire insulation in wound components		N/A
G.5.1.2	Protection against mechanical stress		N/A
G.5.2	Endurance test		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Test time (days per cycle):		
	Test temperature (°C)		
G.5.2.3	Wound components supplied from the mains		N/A
G.5.2.4	No insulation breakdown		N/A
G.5.3	Transformers	No transformer.	N/A
G.5.3.1	Compliance method:		N/A
	Position:		N/A
	Method of protection:		N/A
G.5.3.2	Insulation		N/A
	Protection from displacement of windings:		
G.5.3.3	Transformer overload tests		N/A
G.5.3.3.1	Test conditions		N/A
G.5.3.3.2	Winding temperatures		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
G.5.3.3.3	Winding temperatures - alternative test method		N/A
G.5.3.4	Transformers using FIW		N/A
G.5.3.4.1	General		N/A
	FIW wire nominal diameter:		_
G.5.3.4.2	Transformers with basic insulation only		N/A
G.5.3.4.3	Transformers with double insulation or reinforced insulation:		N/A
G.5.3.4.4	Transformers with FIW wound on metal or ferrite core		N/A
G.5.3.4.5	Thermal cycling test and compliance		N/A
G.5.3.4.6	Partial discharge test		N/A
G.5.3.4.7	Routine test		N/A
G.5.4	Motors		N/A
G.5.4.1	General requirements		N/A
G.5.4.2	Motor overload test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4.2	Locked-rotor overload test		N/A
	Test duration (days):		
G.5.4.5	Running overload test for DC motors		N/A
G.5.4.5.2	Tested in the unit		N/A
G.5.4.5.3	Alternative method		N/A
G.5.4.6	Locked-rotor overload test for DC motors		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature:		N/A
G.5.4.6.3	Alternative method		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage:		_
G.6	Wire Insulation		N/A
G.6.1	General		N/A
G.6.2	Enamelled winding wire insulation		N/A
G.7	Mains supply cords		N/A
G.7.1	General requirements	Approved mains supply cord provided.	N/A
	Туре:	A123319(RVV)	
G.7.2	Cross sectional area (mm <sup>2</sup> or AWG):	6	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
G.7.3	Cord anchorages and strain relief for non- detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N):	60	N/A
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm) :		N/A
G.7.3.2.4	Strain relief and cord anchorage material		N/A
G.7.4	Cord Entry		N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Test method and compliance		N/A
	Overall diameter or minor overall dimension, <i>D</i> (mm):		
	Radius of curvature after test (mm):		
G.7.6	Supply wiring space		N/A
G.7.6.1	General requirements		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Requirements		N/A
G.7.6.2.2	Test with 8 mm strand		N/A
G.8	Varistors		N/A
G.8.1	General requirements	No such component provided.	N/A
G.8.2	Safeguards against fire		N/A
G.8.2.1	General		N/A
G.8.2.2	Varistor overload test		N/A
G.8.2.3	Temporary overvoltage test		N/A
G.9	Integrated circuit (IC) current limiters		N/A
G.9.1	Requirements	No such component within the equipment.	N/A
	IC limiter output current (max. 5A)		
	Manufacturers' defined drift:		
G.9.2	Test Program		N/A
G.9.3	Compliance		N/A
G.10	Resistors		N/A
G.10.1	General	No such component within the equipment.	N/A
G.10.2	Conditioning		N/A



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Clause	Requirement + Test	Result - Remark	Verdic
G.10.3	Resistor test		N/A
G.10.4	Voltage surge test		N/A
G.10.5	Impulse test		N/A
G.10.6	Overload test		N/A
G.11	Capacitors and RC units		N/A
G.11.1	General requirements		N/A
G.11.2	Conditioning of capacitors and RC units		N/A
G.11.3	Rules for selecting capacitors		N/A
G.12	Optocouplers		N/A
	Optocouplers comply with IEC 60747-5-5 with specifics		N/A
	Type test voltage V <sub>ini,a</sub> :		—
	Routine test voltage, V <sub>ini, b</sub> :		
G.13	Printed boards		N/A
G.13.1	General requirements		N/A
G.13.2	Uncoated printed boards		N/A
G.13.3	Coated printed boards		N/A
G.13.4	Insulation between conductors on the same inner surface		N/A
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs)		
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2	Test method and compliance		N/A
G.14	Coating on components terminals		N/A
G.14.1	Requirements:		N/A
G.15	Pressurized liquid filled components		N/A
G.15.1	Requirements		N/A
G.15.2	Test methods and compliance		N/A
G.15.2.1	Hydrostatic pressure test		N/A
G.15.2.2	Creep resistance test		N/A
G.15.2.3	Tubing and fittings compatibility test		N/A
G.15.2.4	Vibration test		N/A
G.15.2.5	Thermal cycling test		N/A
G.15.2.6	Force test		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
G.15.3	Compliance		N/A
G.16	IC including capacitor discharge function (ICX)		N/A
G.16.1	Condition for fault tested is not required		N/A
	ICX with associated circuitry tested in equipment		N/A
	ICX tested separately		N/A
G.16.2	Tests		N/A
	Smallest capacitance and smallest resistance specified by ICX manufacturer for impulse test:		
	Mains voltage that impulses to be superimposed on		
	Largest capacitance and smallest resistance for ICX tested by itself for 10000 cycles test		
G.16.3	Capacitor discharge test		N/A
н	CRITERIA FOR TELEPHONE RINGING SIGNALS		N/A
H.1	General		N/A
H.2	Method A		N/A
H.3	Method B		N/A
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)		
H.3.1.3	Cadence; time (s) and voltage (V):		
H.3.1.4	Single fault current (mA):		
H.3.2	Tripping device and monitoring voltage		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V)		N/A
J	INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED		N/A
J.1	General		N/A
	Winding wire insulation		
	Solid round winding wire, diameter (mm)		N/A
	Solid square and rectangular (flatwise bending) winding wire, cross-sectional area (mm <sup>2</sup> ):		N/A
J.2/J.3	Tests and Manufacturing		



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0	IEC 62368-1		11
Clause	Requirement + Test	Result - Remark	Verdict
к	SAFETY INTERLOCKS		N/A
K.1	General requirements		
	Instructional safeguard:	No safety interlock provided within the equipment.	N/A
K.2	Components of safety interlock safeguard mech	anism	N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
K.5.1	Under single fault condition		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Test method and compliance		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements		N/A
	In circuit connected to mains, separation distance for contact gaps (mm):		N/A
	In circuit isolated from mains, separation distance for contact gaps (mm):		N/A
	Electric strength test before and after the test of K.7.2		N/A
K.7.2	Overload test, Current (A)		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test		N/A
L	DISCONNECT DEVICES		N/A
L.1	General requirements	AC plug and switch used to disconnect from AC mains.	N/A
L.2	Permanently connected equipment	Not permanently connected equipment.	N/A
L.3	Parts that remain energized	When AC plug is disconnected no hazardous voltage in the equipment.	N/A
L.4	Single-phase equipment	The mains plug disconnects both poles simultaneously.	N/A
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices	Marked on the switch.	N/A
L.7	Plugs as disconnect devices	See the user manual.	N/A
L.8	Multiple power sources		N/A
	Instructional safeguard:		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
М	EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS		N/A
M.1	General requirements		N/A
M.2	Safety of batteries and their cells		N/A
M.2.1	Batteries and their cells comply with relevant IEC standards	No battery used.	N/A
M.3	Protection circuits for batteries provided within the equipment		N/A
M.3.1	Requirements		N/A
M.3.2	Test method		N/A
	Overcharging of a rechargeable battery		N/A
	Excessive discharging		N/A
	Unintentional charging of a non-rechargeable battery		N/A
	Reverse charging of a rechargeable battery		N/A
M.3.3	Compliance		N/A
M.4	Additional safeguards for equipment containing a portable secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Requirements		N/A
M.4.2.2	Compliance		N/A
M.4.3	Fire enclosure		N/A
M.4.4	Drop test of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation and procedure for the drop test		N/A
M.4.4.3	Drop, Voltage on reference and dropped batteries (V); voltage difference during 24 h period (%)::		N/A
M.4.4.4	Check of the charge/discharge function		N/A
M.4.4.5	Charge / discharge cycle test		N/A
M.4.4.6	Compliance		N/A
M.5	Risk of burn due to short-circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Test method and compliance		N/A
M.6	Safeguards against short-circuits		N/A
M.6.1	External and internal faults		N/A
M.6.2	Compliance		N/A
M.7	Risk of explosion from lead acid and NiCd batter	ies	N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A



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Clause	Requirement + Test Res	sult - Remark	Verdict
	Calculated hydrogen generation rate:		N/A
M.7.2	Test method and compliance		N/A
	Minimum air flow rate, Q (m <sup>3</sup> /h)		N/A
M.7.3	Ventilation tests		N/A
M.7.3.1	General		N/A
M.7.3.2	Ventilation test – alternative 1		N/A
	Hydrogen gas concentration (%)		N/A
M.7.3.3	Ventilation test – alternative 2		N/A
	Obtained hydrogen generation rate:		N/A
M.7.3.4	Ventilation test – alternative 3		N/A
	Hydrogen gas concentration (%):		N/A
M.7.4	Marking		N/A
M.8	Protection against internal ignition from external spark sources of batteries with aqueous electrolyte		N/A
M.8.1	General		N/A
M.8.2	Test method		N/A
M.8.2.1	General		N/A
M.8.2.2	Estimation of hypothetical volume V <sub>Z</sub> (m <sup>3</sup> /s):		
M.8.2.3	Correction factors:		
M.8.2.4	Calculation of distance <i>d</i> (mm):		
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse		N/A
	Instructional safeguard:		N/A
N	ELECTROCHEMICAL POTENTIALS		Р
	Material(s) used: Cor	nsidered.	
0	MEASUREMENT OF CREEPAGE DISTANCES AND C	LEARANCES	Р
	Value of X (mm): Cor	nsidered.	
Р	SAFEGUARDS AGAINST CONDUCTIVE OBJECTS		Р
P.1	General No	openings.	Р
P.2	Safeguards against entry or consequences of entry of a foreign object		N/A
P.2.1	General		N/A
P.2.2	exc	e openings that do not ceed 1 mm in width ardless of length.	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Location and Dimensions (mm):	See above.	
P.2.3	Safeguards against the consequences of entry of a foreign object		N/A
P.2.3.1	Safeguard requirements		N/A
	The ES3 and PS3 keep-out volume in Figure P.3 not applicable to transportable equipment		N/A
	Transportable equipment with metalized plastic parts:		N/A
P.2.3.2	Consequence of entry test		N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Compliance		N/A
P.4	Metallized coatings and adhesives securing parts		N/A
P.4.1	General		N/A
P.4.2	Tests		N/A
	Conditioning, T <sub>C</sub> (°C):		
	Duration (weeks):		
Q	CIRCUITS INTENDED FOR INTERCONNECTION		N/A
Q.1	Limited power sources		N/A
Q.1.1	Requirements		N/A
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network limited output		N/A
	d) Overcurrent protective device limited output		N/A
	e) IC current limiter complying with G.9		N/A
Q.1.2	Test method and compliance:		N/A
	Current rating of overcurrent protective device (A)		N/A
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A)		N/A
	Current limiting method		
R	LIMITED SHORT CIRCUIT TEST		N/A
R.1	General		N/A
R.2	Test setup		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Overcurrent protective device for test:		
R.3	Test method		N/A
	Cord/cable used for test:		
R.4	Compliance		N/A
S	TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
S.1	Flammability test for fire enclosures and fire barri where the steady state power does not exceed 4 0		N/A
	Samples, material:		
	Wall thickness (mm):		
	Conditioning (°C):		
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrie	er integrity	N/A
	Samples, material:		
	Wall thickness (mm):		
	Conditioning (°C)		
S.3	Flammability test for the bottom of a fire enclosur	e	N/A
S.3.1	Mounting of samples		N/A
S.3.2	Test method and compliance		N/A
	Mounting of samples:		
	Wall thickness (mm):		
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosure materials of equipment with a steady state power exceeding 4 000 W		N/A
	Samples, material:		
	Wall thickness (mm):		
	Conditioning (°C)		
Т	MECHANICAL STRENGTH TESTS		Р
T.1	General		Р
Т.2	Steady force test, 10 N:	(See appended table T.2)	Р
Т.3	Steady force test, 30 N:	(See appended table T.3)	N/A
T.4	Steady force test, 100 N:	(See appended table T.4)	N/A
T.5	Steady force test, 250 N:	(See appended table T.5)	Р



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Clause	Requirement + Test	Result - Remark	Verdict
Т.6	Enclosure impact test	(See appended table T.6)	Р
	Fall test		Р
	Swing test		N/A
Т.7	Drop test:	(See appended table T.7)	N/A
Т.8	Stress relief test:	(See appended table T.8)	Р
Т.9	Glass Impact Test:	(See appended table T.9)	N/A
T.10	Glass fragmentation test		N/A
	Number of particles counted:		N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm):		N/A
U	MECHANICAL STRENGTH OF CATHODE RAY TU AGAINST THE EFFECTS OF IMPLOSION	BES (CRT) AND PROTECTION	N/A
U.1	General		N/A
	Instructional safeguard :		N/A
U.2	Test method and compliance for non-intrinsically	protected CRTs	N/A
U.3	Protective screen		N/A
v	DETERMINATION OF ACCESSIBLE PARTS		N/A
V.1	Accessible parts of equipment		N/A
V.1.1	General		N/A
V.1.2	Surfaces and openings tested with jointed test probes		N/A
V.1.3	Openings tested with straight unjointed test probes		N/A
V.1.4	Plugs, jacks, connectors tested with blunt probe		N/A
V.1.5	Slot openings tested with wedge probe		N/A
V.1.6	Terminals tested with rigid test wire		N/A
V.2	Accessible part criterion		N/A
X	ALTERNATIVE METHOD FOR DETERMINING CLE IN CIRCUITS CONNECTED TO AN AC MAINS NOT (300 V RMS)		N/A
	Clearance:	(See appended table X)	N/A
Y	CONSTRUCTION REQUIREMENTS FOR OUTDOO	RENCLOSURES	N/A
Y.1	General		N/A
Y.2	Resistance to UV radiation		N/A
Y.3	Resistance to corrosion		N/A
Y.3.1	Metallic parts of outdoor enclosures are resistant to effects of water-borne contaminants by		N/A
Y.3.2	Test apparatus		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
Y.3.3	Water - saturated sulphur dioxide atmosphere		N/A
Y.3.4	Test procedure:		N/A
Y.3.5	Compliance		N/A
Y.4	Gaskets		N/A
Y.4.1	General		N/A
Y.4.2	Gasket tests		N/A
Y.4.3	Tensile strength and elongation tests		N/A
	Alternative test methods		N/A
Y.4.4	Compression test		N/A
Y.4.5	Oil resistance		N/A
Y.4.6	Securing means		N/A
Y.5	Protection of equipment within an outdoor enclos	sure	N/A
Y.5.1	General		N/A
Y.5.2	Protection from moisture		N/A
	Relevant tests of IEC 60529 or Y.5.3		N/A
Y.5.3	Water spray test		N/A
Y.5.4	Protection from plants and vermin		N/A
Y.5.5	Protection from excessive dust		N/A
Y.5.5.1	General		N/A
Y.5.5.2	IP5X equipment		N/A
Y.5.5.3	IP6X equipment		N/A
Y.6	Mechanical strength of enclosures		N/A
Y.6.1	General		N/A
Y.6.2	Impact test:		N/A



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Clause	Requirement + Test Result - Remark								
5.2 TABLE: Classification of electrical energy sources									
Supply Voltage	Location (e.g.	Test conditions			Parameters		ES Class		
voltage	designation) U (V) I (mA) Type <sup>1)</sup> Additional Info <sup>2)</sup>								
300Vac	All circuits	Normal	300 Vr.m.s		SS		ES3		
Supplementary information:									
,	1) Type: Steady state (SS), Capacitance (CP), Single pulse (SP), Repetitive pulses (RP), etc. 2) Additional Info: Frequency, Pulse duration, Pulse off time, Capacitance value, etc.								

5.4.1.8	TABLE: Working voltage measurement						
Location		RMS voltage (V)	Peak voltage (V)	Frequency (Hz)	Comm	ents	
Supplement	ary information:						
Test voltage: 250V, 60Hz							

5.4.1.10.2 TABLE: Vicat softening temperature of thermoplastics							
Method: ISO 306 / B50							
Object/ Part No./Material Manufacturer/trademark Thickness (mm) T softenin				ng (°C)			
Supplementary information:							

5.4.1.10.3	.4.1.10.3 TABLE: Ball pressure test of thermoplastics							
Allowed impression diameter (mm): ≤ 2 mm								
						ression eter (mm)		
Plastic materials See table 24.1			Measu 2.0mi		125		1.1	
Supplementary information:								



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This report cancels and replaces previous report EBSZ241225659S dated on Jan. 10, 2025

IEC 62368-1						
Clause	Requirement + Test	Result - Remark	Verdict			

5.4.2, 5.4.3 TABLE: Minimum Clearances/Creepage distance								Р
Clearance (cl) and creepage distance (cr) at/of/between:	U <sub>p</sub> (V)	U <sub>rms</sub> (V)	Freq <sup>1)</sup> (Hz)	Required cl (mm)	cl (mm)	E.S. <sup>2)</sup> (V)	Required cr (mm)	cr (mm)
Basic/supplementary:								
Between + and -	425	300		0.2	>15		3.2	>15
Reinforce/Double ins	ulation:				·	·		
Live parts to outside enclosure	425	300		0.4	>15		6.4	>15
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 the (DTI) at/of	rough insulation	Peak voltage (V)	Insulation	Required DTI (mm)	Mea	sured DTI (mm)			
Plastic enclosure		420	Reinforce insulation	0.4	Ν	1in. 2.0			
Supplementary information:									

5.4.4.9	5.4.4.9 TABLE: Solid insulation at frequencies >30 kHz						N/A
Insulation n	naterial	E <sub>P</sub>	Frequency (kHz)	K <sub>R</sub>	Thickness d (mm)	Insulation	V <sub>PW</sub> (Vpk)
Supplemen	Supplementary information:						

5.4.9	TABLE: Electric strength tests							
Test voltage applied between:		Voltage shape (Surge, Impulse, AC, DC, etc.)	Test voltage (V)		reakdown Yes / No			
Between + a	and -	DC	2500		No			
Live parts to	plastic enclosure with foil	DC	4000		No			
Supplement	ary information:							

TABLE: Stored discharge on capacitors 5.5.2.2



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			IEC 62368-1							
Clause	Requiren	nent + Test		Result - Rema	ark		Verdict			
Location		Supply voltage (V)	Operating and fault condition <sup>1)</sup>	Switch position	Measured voltage (Vpk)	E	S Class			
Supplement	ary inform	nation:								
X-capacitors	s installed	for testing:								
[] bleeding	[] bleeding resistor rating:									
[] ICX:	[] ICX:									
1) Normal o	perating c	ondition (e.g., norma	l operation, or open fu	ise), SC= short	circuit, OC= op	ben	circuit			

5.6.6	TABLE: Resistance of	protective condu	ctors and terminati	ons		N/A		
Location		Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)			
Supplementary information:								

5.7.4	TABLE	E: Unearthed acces	ssible parts				Р		
Location	1	Operating and	Supply	F	ES				
		fault conditions	Voltage (V)	Voltage (V <sub>rms</sub> or V <sub>pk</sub> )	Current (A <sub>rms</sub> or A <sub>pk</sub> )	Freq. (Hz)	class		
Plastic enclosure to earthing		Normal	300V	0.02Apk		60	ES1		
Supplementary information:									
Abbreviation: SC= short circuit; OC= open circuit									

5.7.5	TABLE: Earthed access	ible conductive part			N/A		
Supply volta	age (V):						
Phase(s)	······:	[X] Single Phase; [] Thre	a []Wye				
Power Distr	ibution System:	[X]TN []TT []IT					
Location		Fault Condition No in IEC 60990 clause 6.2.2	Touch current Comm (mA)		ent		
Supplementary Information:							
Supplement	ary Information:						

5.8	TABLE:	BLE: Backfeed safeguard in battery backed up supplies								
Location		Supply voltage (V)	Operating and fault condition	Time (s)	Open-circuit voltage (V)	Touch current (A)	ES Class			



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Clause	Requiren	nent + Test			Re	esult - Remark		Verdict		
Supplementary information:										
Abbreviation: SC= short circuit, OC= open circuit										

6.2.2	ΤА	BLE: Power source	circuit classificat	tions			Р
Location		Operating and fault condition	Voltage (V) Current (A)		Max. Power <sup>1)</sup> (W)	Time (S)	PS class
All circuits		Normal	300	00		5	PS3
Supplementa	ary	information:					
Abbreviation: SC= short circuit; OC= open circuit							
1) Measured	l aft	ter 3 s for PS1 and m	easured after 5 s fo	or PS2 and PS	S3.		

6.2.3.1	TABLE: Determi	nation of Arcing PIS			Р				
Location		Open circuit voltage after 3 s (Vpk)	Measured r.m.s current (A)	Calculated value	Arcing PIS? Yes / No				
All circuits					Yes				
Supplementary information:									

6.2.3.2	TABLE: Determi	nation of resistive PIS		Р				
Location		Operating and fault condition	Dissipate power (W)	Resistive PIS? Yes / No				
All internal circuits /components				Yes				
Supplementa	Supplementary information:							
Abbreviation: SC= short circuit; OC= open circuit								

8.5.5	TABLE: High pre	essure lamp				N/A			
Lamp manufacturer		Lamp type	Explosion method	glass particle b		ticle found yond 1 m ⁄es / No			
Supplementary information:									



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					EC 62	2368-1							
Clause	Requiren	nent + Tes	st					Result ·	Rem	nark			Verdict
9.6	TABLE:	Tempera	ture mea	surem	ents f	or wire	less	power	trans	mitter	s		N/A
Supply volta	age (V)			:									
Max. transn	nit power o	of transmi	tter (W)	:									
			eiver and contact			eiver ar contact		with rec distan					iver and at e of 5 mm
Foreign o	objects	Object (°C)	Ambier (°C)		oject °C)	Ambie (°C)				mbient (°C)		bject ⁰C)	Ambient (°C)
Supplementary information:													
	1												
5.4.1.4, 9.3, B.1.5, B.2.6	9.3, B.1.5,									Р			
Supply voltage (V):         300V								—					
Ambient temperature during test <i>T</i> <sub>amb</sub> (°C):						See See							
Maximum m	easured t	emperatu	re <i>T</i> of pa	nrt/at:		·		T (°0	C)				Allowed T <sub>max</sub> (°C)
Line wire					3	9.0							70
Plastic enclo	osure, insi	de			3	6.8				•		-	80
Plastic enclo	osure, out	side			3	0.6							77
Ambient					2	5.0				.		-	
Temperatur	e T of win	ding:	t <sub>1</sub> (°C)	R1 (9	2)	t <sub>2</sub> (°C)		R2 (Ω)	T (	(°C)	Allo T <sub>max</sub>	wed (°C)	Insulation class
											-	-	
Supplement	ary inform	ation:											
B.2.5 TABLE: Input test									Р				
U (V) Hz		•	ted (A)	P (W	()	P rated	(W)	Fuse	e No	I fuse	e (A)	Cond	ition/status
230	4.3			1000		100	. ,	-		. ,			num load
300	3.33	3		1000	)	100	0	-	-			condi	tion.

Supplementary information:

Not exceed the rated current by more than 10%.

B.3, B.4 TABLE: Abnormal operating and fault condition tests	P
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	IEC 62368-1								
Clause	Req	uirement + Test				Result - R	emark	Verdict	
Ambient tem	npera	ture T <sub>amb</sub> (°C)			:				
Power source	Power source for EUT: Manufacturer, model/type, outputrating :								
Component	No.	Condition	Supply voltage (V)	Test time	Fuse no.	Fuse current (A)	Observatio	n	
Between + a	and -	SC	300	10min			Unit shutdown, no d hazard.	amage, no	
Supplementa	Supplementary information:								
Abbreviation	: SC	= short circuit; O	C= open ci	rcuit					

M.3	TABLE: Pr	otection circu	its fo	or batterie	es provid	ed v	vithin	the equ	uipment	N/A
Is it possible	to install the	battery in a rev	verse	polarity p	osition?	:				
					Cł	nargi	ng			
Equipment S	pecification		Vol	tage (V)			Current (A)			
					Battery	spec	cificati	on		
		Non-rechargeable batteries			Rech	argeab	e batteries			
		Discharging		tentional					Discharging	Reverse
Manufacturer/type		current (A)	charging current (A) Voltage (V) C		Curr	rent (A) current (A)		charging current (A)		
Note: The tes	ts of M.3.2 a	re applicable o	nly w	hen above	e appropri	ate c	lata is	not ava	ilable.	
Specified bat	tery tempera	ture (°C)				:				
Component No.	Fault condition	Charge/ discharge mo	ode	Test time	Temp. (°C)		rrent A)	Voltag (V)	e Obse	rvation
								-		
Supplementa	ry informatio	n:								
		ircuit; OC= op ssion of flame						e; <mark>NS=</mark> r	no spillage of	liquid; NE=

M.4.2	TABLE: Charging safeguards for equipment containing a secondary lithium	N/A
	battery	



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This report cancels and replaces previous report EBSZ241225659S dated on Jan. 10, 2025

#### IEC 62368-1

	IEC 02308-1									
Clause	Requiren	nent + Test			Result - Re	mark	Verdict			
Maximum sp	pecified c	harging voltage	e (V)		.:		_			
Maximum sp	pecified c	harging curren	t (A)		.:		_			
Highest spe	Highest specified charging temperature (°C)									
Lowest specified charging temperature (°C)										
Battery	"	Operating		Measurement		Observatio				
manufacture	er/type	and fault condition	Charging voltage (V)	Charging current (A)	Temp. (°C)					
Supplement	Supplementary information:									

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

Q.1	TABLE: Circuits inter	nded for inte	rconnectior	n with build	ling wiring	(LPS)	N/A		
Output	Condition	U <sub>oc</sub> (V)	Time (s)	I <sub>sc</sub>	(A)	S (\	VA)		
Circuit	Condition	$O_{oc}(V)$	Time (S)	Meas.	Limit	Meas.	Limit		
Supplement	ary Information:								
SC=Short c	SC=Short circuits;								
*indicated th	*indicated the unit shut down immediately.								
**indicated f	the maximum current of	the fuse in ou	utput wire is	2A.					

T.2, T.3, T.4, T.5	TABLE	E: Steady force test						Р
Location/Pa	rt	Material	Thickness (mm)	Probe	Force (N)	Test Duration (s)	Obse	rvation
Internal components Charger)	(Li-ion				10	5	clearar cree	uction the nces and epage ances
Top plastic enclosure		Plastic	Measured 2.0 mm		250	5		1)
Bottom plast enclosure	tic	Plastic	Measured 2.0 mm		250	5		1)
Side metal enclosure		Plastic	Measured 2.0 mm		250	5		1)
Supplementary information:								



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This report cancels and replaces previous report EBSZ241225659S dated on Jan. 10, 2025

	IEC 6236	8-1	
Clause	Requirement + Test	Result - Remark	Verdict

1) No cracking, class 3 energy sources did not become accessible and all safeguards remain effective. No indication of dielectric breakdown

Т.6, Т.9	TABLE: Imp	act test				Р
Location/Par	t	Material	Thickness (mm)	Height (mm)	Observatio	'n
Top plastic e	nclosure	Plastic	2.0	1300	1)	
Bottom plasti	c enclosure	Plastic	2.0	1300	1)	
Side metal er	nclosure	Plastic	2.0	1300	1)	
<b>a</b> 1 <i>i</i>			1			

Supplementary information:

1) No cracking, class 3 energy sources did not become accessible and all safeguards remain effective. No indication of dielectric breakdown

T.7	TABLE: Droj	o test				N/A
Location/Pa	rt	Material	Thickness (mm)	Height (mm)	Observatio	n
Supplementary information:						
1) No cracking, class 3 energy sources did not become accessible and all safeguards remain effective. No indication of dielectric breakdown						

Т.8	TABLE	: Stress relief te	est				Р
Location/Pa	rt	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Obser	vation
The equipm	ent	Plastic	Min. 2.0mm	70	7	Enclosure intact, no cracking/op developed enclosure j Internal ES were not a after test. N insulation breakdown	oening in the oint. 33, TS3 ccessible No
Supplement	ary infor	mation:					

x	TABLE: Alternati	ve method for determin	ing minimum clearances	s distances	N/A	
Clearance di	istanced between:	Peak of working voltage	Required cl	Measure	ed cl	



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	IEC 62368-1								
Clause	Requirement + Tes	t	Result - Remark	Result - Remark					
(V) (mm) (mm)									
Suppleme	Supplementary information:								



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			IEC 62	2368-1				
Clause	Req	quirement + Test Result - Remark		Verdict				
4.1.2	TAB	BLE: Critical components information P			Р			
Object / part	No.	Manufacturer/ trademark	Type / model	Technical d	lata	Standard		<(s) of ormity <sup>1)</sup>
Plastic mate	rial	Interchangeable	Interchangeabl e	V-0, min. 80 measured min.2.0mm thickness	·	UL 94	UL	
Supply cord		Ningbo Chengken Electric Appliance	H07RN-F	2×2.5mm <sup>2</sup>		EN 50525-2- 21:2011	VDE	
Supplementary information:								
1) Provided	evide	nce ensures the agr	eed level of com	pliance. See	OD-CB2	2039.		



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Report No. EBSZ241225659S-R1

	IEC62368_1E ATTACHMENT	
Clause	Requirement + Test Result - Remark	Verdic
ttachmen	it No.1	
	ATTACHMENT TO TEST REPORT	
(Aud	EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES io/video, Information and communication technology equipment - Part 1: Safety requirement	ents)
	es according to: EN IEC 62368-1:2020+A11:2020	,
Difference		
Attachme	nt Form No: EU_GD_IEC62368_1E	
Attachme	nt Originator: UL(Demko)	
Mastar At	tachment: 2021-02-04	
WIDSLEI AL		
	t © 2021 IEC System for Conformity Testing and Certification of Electrical Equipm	ent
	Geneva, Switzerland. All rights reserved.	1
	CENELEC COMMON MODIFICATIONS (EN)	
	Clause numbers in the cells that are shaded light grey are clause references in EN IEC 62368-1:2020+A11:2020. All other clause numbers in that column, except for those in the paragraph below, refers to IEC 62368-1:2018.	Р
	Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62368-1:2018 are prefixed "Z".	
	Add the following annexes:	Р
	Annex ZA (normative) Normative references to international publications with their corresponding European publications	
	Annex ZB (normative) Special national conditions	
	Annex ZC (informative) A-deviations	
	Annex ZD (informative) IEC and CENELEC code designations for flexible cords	
1	Modification to Clause 3 .	N/A
3.3.19	Sound exposure	N/A
	Replace 3.3.19 of IEC 62368-1 with the following definitions:	
3.3.19.1	momentary exposure level, MEL	N/A
	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.
Note 2 to entry: See B.3 of EN 50332-3:2017 for additional information.



	IEC62368_1E ATTACHME	ENT	
Clause	Requirement + Test	Result - Remark	Verdict
3.3.19.3	sound exposure, <i>E</i>		N/A
	A-weighted sound pressure ( $p$ ) squared and integrated over a stated period of time, $T$		
	Note 1 to entry: The SI unit is $Pa^2 s.$		
	$E = \int_{0}^{0} p(t)^2 \mathrm{d}t$		
3.3.19.4	sound exposure level, <i>SEL</i>		N/A
	logarithmic measure of sound exposure relative to a reference value, <i>Eo</i> , typically the 1 kHz threshold of hearing in humans.		
	Note 1 to entry: <i>SEL</i> is measured as A-weighted levels in dB.		
	$SEL = 10 \lg \left(\frac{E}{E_0}\right) dB$		
	Note 2 to entry: See B.4 of EN 50332-3:2017 for additional information.		
3.3.19.5	digital signal level relative to full scale, dBFS		N/A
	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 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.		
2	Modification to Clause 10		N/A
10.6	<b>Safeguards against acoustic energy sources</b> Replace 10.6 of IEC 62368-1 with the following:		N/A
10.6.1.1	Introduction		N/A
	<b>Safeguard</b> 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 <b>ordinary person</b> , that:		
	<ul> <li>is designed to allow the user to listen to audio or audiovisual content / material; and</li> <li>uses a listening device, such as headphones or earphones that can be worn in or on or</li> </ul>		



0			
Clause	Requirement + Test	Result - Remark	Verdict
	around the ears; and – 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.).		
	EXAMPLES Portable CD players, MP3 audio players, mobile phones with MP3 type features, PDAs or similar equipment.		
	Personal music players shall comply with the requirements of either 10.6.2 or 10.6.3.		
	NOTE 1 Protection against acoustic energy sources from telecom applications is referenced to ITU-T P.360.		
	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.		
	Listening devices sold separately shall comply with the requirements of 10.6.6. These requirements are valid for music or video mode only.		
	The requirements do not apply to: – professional equipment;		
	NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.		
	<ul> <li>hearing aid equipment and other devices for assistive listening;</li> <li>the following type of analogue personal music</li> </ul>		
	<ul> <li>players:</li> <li>long distance radio receiver (for example, a multiband radio receiver or world band radio receiver, an AM radio receiver), and</li> <li>cassette player/recorder;</li> </ul>		
	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.		
	<ul> <li>a player while connected to an external amplifier that does not allow the user to walk around while in use.</li> </ul>		
	For equipment that is clearly designed or intended primarily for use by children, the limits of the relevant toy standards may apply.		
	The relevant requirements are given in EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.		
10.6.1.2	Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz		N/A



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IEC62368_1E ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	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	<b>General</b> 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. For classifying the acoustic output $L_{Aeq, T}$ , measurements are based on the A-weighted equivalent sound pressure level over a 30 s period. 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. NOTE Classical music, acoustic music and broadcast typically has an average sound pressure (long term $LAeq, \tau$ ) which is much lower than the average sound pressure of the song it he 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 level of the song does not exceed the required limit.		N/A
10.6.2.2	song is not above the basic limit of 85 dB. RS1 limits (to be superseded, see 10.6.3.2)		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 $\leq$ 85 dB when playing the fixed "programme simulation noise" described in EN 50332-1.		



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IEC62368_1E ATTACHMENT				
Clause	Requirement + Test	Result - Remark	Verdict	
	<ul> <li>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.</li> <li>The RS1 limits will be updated for all devices as per 10.6.3.2.</li> </ul>			
10.6.2.3	RS2 limits (to be superseded, see 10.6.3.3)		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 $LAeq,\tau$ acoustic output shall be $\leq$ 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 $\leq$ 150 mV (analogue interface) or -10 dBFS (digital interface) when playing the fixed "programme simulation noise" as described in EN 50332-1.			
10.6.2.4	RS3 limits		N/A	
	RS3 is a class 3 acoustic energy source that exceeds RS2 limits.			
10.6.3	Classification of devices (new)		N/A	
10.6.3.1	<b>General</b> 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.		N/A	
10.6.3.2	RS1 limits (new)		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.			



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	IEC62368_1E ATTACHMENT				
Clause	Requirement + Test	Result - Remark	Verdict		
	<ul> <li>– 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 ≤ 15 mV (analogue interface) or -30 dBFS (digital interface) when playing the fixed "programme simulation noise" described in EN 50332-1.</li> </ul>				
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 $\leq$ 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 $\leq$ 15 mV (analogue interface) or -30 dBFS (digital interface) when playing the fixed "programme simulation noise" described in EN 50332-1.				
10.6.4	Requirements for maximum sound exposure		N/A		
10.6.4.1	Measurement methodsAll volume controls shall be turned to maximum during tests.Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable.		N/A		
10.6.4.2	Protection of persons		N/A		
	Except as given below, protection requirements for parts <b>accessible</b> to <b>ordinary persons</b> , <b>instructed persons</b> and <b>skilled persons</b> are given in 4.3. NOTE 1 Volume control is not considered a <b>safeguard</b> .				
	Between RS2 and an <b>ordinary person</b> , the <b>basic</b> <b>safeguard</b> may be replaced by an <b>instructional</b> <b>safeguard</b> in accordance with Clause F.5, except that the <b>instructional safeguard</b> shall be placed on the equipment, or on the packaging, or in the instruction manual. Alternatively, the <b>instructional safeguard</b> may be given through the equipment display during use. The elements of the <b>instructional safeguard</b> shall be as follows:				



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	IEC62368_1E ATTACHMENT				
Clause	Requirement + Test	Result - Remark	Verdict		
	<ul> <li>element 1a: the symbol (2011-01)</li> <li>element 2: "High sound pressure" or equivalent wording</li> <li>element 3: "Hearing damage risk" or equivalent wording</li> <li>element 3: "Do not listen at high volume levels for long periods." or equivalent wording</li> <li>An equipment safeguard shall prevent exposure of an ordinary person to an RS2 source without intentional physical action from the ordinary person and shall automatically return to an output level not exceeding what is specified for an RS1 source when the power is switched off.</li> <li>The equipment shall provide a means to actively inform the user of the increased sound level when the equipment is operated with an output exceeding RS1. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an output exceeding RS1. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time.</li> <li>NOTE 2 Examples of means include visual or audible signals. Action from the user is always needed.</li> <li>NOTE 3 The 20 h listening time is the accumulative listening time, independent of how often and how long the personal music player has been switched off.</li> <li>A skilled person shall not be unintentionally exposed to RS3.</li> </ul>				
10.6.5	Requirements for dose-based systems		N/A		
10.6.5.1	General requirementsPersonal music players shall give the warnings as provided below when tested according to EN 50332-3, using the limits from this clause.The manufacturer may offer optional settings to allow the users to modify when and how they wish to receive the notifications and warnings to promote a better user experience without defeating the safeguards. This allows the users to be informed in a method that best meets their physical capabilities and device usage needs. If such optional settings are offered, an administrator (for example, parental restrictions, business/educational administrators, etc.) shall be able to lock any optional settings into a specific configuration.The personal music player shall be supplied with		N/A		



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IEC62368_1E ATTACHMENT				
Clause	Requirement + Test	Result - Remark	Verdict	
	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 races, etc.			
10.6.5.2	Dose-based warning and requirements		N/A	
	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.			
	The warning shall at least clearly indicate that listening above 100 % <i>CSD</i> leads to the risk of hearing damage or loss.			
10.6.5.3	Exposure-based requirements		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.			
	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.			
	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.			
	NOTE In case the source is known not to be music (or test signal), the EL may be disabled.			



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This report cancels and replaces previous report EBSZ241225659S dated on Jan. 10, 2025

### IEC62368\_1E ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict

10.6.6	Requirements for listening devices (headphones,	, earphones, etc.)	N/A
10.6.6.1	Corded listening devices with analogue input		N/A
	With 04 dB / Acc acquetic prossure output of the		
	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		
	output, the input voltage of the listening device		
	when playing the fixed "programme simulation		
	noise" as described in EN 50332-1 shall be $\geq$ 75		
	mV.		
	NOTE The values of 94 dB and 75 mV correspond with 85 dB and 27 mV or 100 dB and 150 mV.		
10.6.6.2	Corded listening devices with digital input		N/A
	With any playing daying playing the fixed		
	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 $\leq$ 100 dB with an input signal of -10		
	dBFS.		
10.6.6.3	Cordless listening devices		N/A
	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		
	<ul> <li>– with volume and sound settings in the receiving</li> </ul>		
	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 $\leq 100 \text{ dB}$ with		
10664	an input signal of -10 dBFS. Measurement method		
10.6.6.4			N/A
	Measurements shall be made in accordance with		
	EN 50332-2 as applicable.		
3	Modification to the whole document	1	Р



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	IEC62368_1E ATTACHMENT						
Clause	Requirement +	- Test			Result - Rema	ark	Verdict
	<b>Delete</b> all the "country" notes in the reference document according to the following list:					Р	
	0.2.1	Note 1 and 2	1	Note 4 and 5	3.3.8.1	Note 2	
	3.3.8.3	Note 1	4.1.15	Note	4.7.3	Note 1 and 2	
	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	
	5.4.2.3.2.4 Table 13	Note 2	5.4.2.5	Note 2	5.4.5.1	Note	
	5.4.10.2.1	Note	5.4.10.2.2	Note	5.4.10.2.3	Note	
	5.5.2.1	Note	5.5.6	Note	5.6.4.2.1	Note 2 and 3 and 4	
	5.6.8	Note 2	5.7.6	Note	5.7.7.1	Note 1 and Note 2	
	8.5.4.2.3	Note	10.2.1 Table 39	Note 3 and 4 and 5	10.5.3	Note 2	
	<del>10.6.1</del>	Note 3	F.3.3.6	Note 3	Y.4.1	Note	
	Y.4.5	Note					
4	Modification	to Clause 1					P
1	Add the follow NOTE Z1 The use electronic equipm 2011/65/EU.	e of certain substa					Р



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This report cancels and replaces previous report EBSZ241225659S dated on Jan. 10, 2025

## IEC62368\_1E ATTACHMENT

5	Modification to 4.Z1	N/A
4.Z1	Add the following new subclause after 4.9: 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, 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 instructions shall so state, except that for <b>pluggable equipment type A</b> the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.	N/A
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:The requirement for interconnection with externalcircuit is in addition given in EN 50491-3:2009.	N/A
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.	N/A



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This report cancels and replaces previous report EBSZ241225659S dated on Jan. 10, 2025

## IEC62368\_1E ATTACHMENT

Clause	Requirement + Test	Result - Remark	Verdict
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8	Modification to 10.5.1	N/A
10.5.1	Add the following after the first paragraph:	N/A
	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.	
	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 cm <sup>2</sup> , 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.	
	For RS1, the dose-rate shall not exceed 1 $\mu$ Sv/h taking account of the background level.	
	NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.	
9	Modification to G.7.1	Р
G.7.1	Add the following note:	Р
	NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.	



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This report cancels and replaces previous report EBSZ241225659S dated on Jan. 10, 2025

### IEC62368\_1E ATTACHMENT

Clause Requirement + Test

Result - Remark

Verdict

10	Modification to Bib	liography	Р
	Add the following no	otes for the standards indicated:	P
	IEC 60130-9	NOTE Harmonized as EN 60130-9.	
	IEC 60269-2	NOTE Harmonized as HD 60269-2.	
	IEC 60309-1	NOTE Harmonized as EN 60309-1.	
	IEC 60364	NOTE some parts harmonized in HD 384/HD 60364 series.	
	IEC 60601-2-4	NOTE Harmonized as EN 60601-2-4.	
	IEC 60664-5	NOTE Harmonized as EN 60664-5.	
	IEC 61032: 1997	NOTE Harmonized as EN 61032:1998 (not modified).	
	IEC 61508-1	NOTE Harmonized as EN 61508-1.	
	IEC 61558-2-1	NOTE Harmonized as EN 61558-2-1.	
	IEC 61558-2-4	NOTE Harmonized as EN 61558-2-4.	
	IEC 61558-2-6	NOTE Harmonized as EN 61558-2-6.	
	IEC 61643-1	NOTE Harmonized as EN 61643-1.	
	IEC 61643-21	NOTE Harmonized as EN 61643-21.	
	IEC 61643-311	NOTE Harmonized as EN 61643-311.	
	IEC 61643-321	NOTE Harmonized as EN 61643-321.	
	IEC 61643-331	NOTE Harmonized as EN 61643-331.	
11	ADDITION OF ANN	IEXES	N/A
ZB	ANNEX ZB, SPECI	AL NATIONAL CONDITIONS (EN)	P
4.1.15	Denmark, Finland,	Norway and Sweden	P
	To the end of the su	bclause the following is	
	added:		
		equipment type A intended	
	for connection to oth		
		ety relies on connection to	
	reliable earthing or i	f surge suppressors	
		een the network terminals	
		ts, have a marking stating	
		shall be connected to an	
	earthed <b>mains</b> sock	et-outlet.	
	The marking text in	the applicable countries shall	
	be as follows:		
	In <b>Denmark</b> : "Appar	ratets stikprop skal tilsluttes	
	en stikkontakt med j	ord som giver forbindelse til	
	stikproppens jord."		
		n liitettävä suojakoskettimilla	
	varustettuun pistora		
	In <b>Norway</b> : "Appara stikkontakt"	tet må tilkoples jordet	
	In Sweden: "Appara	aten skall anslutas till jordat	



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	IEC62368_1E ATTACHME	NT	
Clause	Requirement + Test	Result - Remark	Verdict
4.7.3	United Kingdom		N/A
	To the end of the subclause the following is added:		
	The torque test is performed using a socket-outlet complying with BS 1363, and the plug part shall be assessed to the relevant clauses of BS 1363. Also see Annex G.4.2 of this annex		
5.2.2.2	Denmark		N/A
	After the 2nd paragraph add the following:		
	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.		
5.4.11.1	Finland and Sweden		N/A
and Annex G	To the end of the subclause the following is added:		
	For separation of the telecommunication network from earth the following is applicable:		
	If this insulation is solid, including insulation forming part of a component, it shall at least consist of either		
	• two layers of thin sheet material, each of which shall pass the electric strength test below, or		
	• one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below.		
	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		
	• 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),		
	and		
	<ul> <li>is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5 kV.</li> </ul>		
	It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2.		



	IEC62368_1E ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict	
	A capacitor classified Y3 according to EN 60384- 14:2005, may bridge this insulation under the following conditions:			
	<ul> <li>the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in 5.4.11;</li> </ul>			
	<ul> <li>the additional testing shall be performed on all the test specimens as described in EN 60384- 14;</li> </ul>			
	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.			
5.5.2.1	Norway		N/A	
	After the 3rd paragraph the following is added:			
	Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).			
5.5.6	Finland, Norway and Sweden		N/A	
	To the end of the subclause the following is added:			
	Resistors used as <b>basic safeguard</b> or bridging <b>basic insulation</b> in <b>class I pluggable equipment type A</b> shall comply with G.10.1 and the test of G.10.2.			
5.6.1	Denmark		Р	
	<b>Add</b> 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>			
	In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.			
5.6.4.2.1	Ireland and United Kingdom		Р	
	After the indent for <b>pluggable equipment type A</b> , the following is added: - the <b>protective current rating</b> is taken to be 13 A, this being the largest rating of fuse used in the <b>mains</b> plug.			



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Clause	Requirement + Test	Result - Remark	Verdic
5.6.4.2.1	France		Р
	After the indent for <b>pluggable equipment type A</b> , the following is added:		
	- in certain cases, the <b>protective current rating</b> of		
	the circuit supplied from the mains is taken as 20 A instead of 16 A.		
5.6.5.1	To the second paragraph the following is added:		P
	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 <sup>2</sup> to 1,5 mm <sup>2</sup> in cross-sectional area.		
5.6.8	Norway		N/A
	To the end of the subclause the following is added: Equipment connected with an earthed mains plug is classified as <b>class I equipment</b> . See the Norway marking requirement in 4.1.15. The symbol IEC 60417-6092, as specified in F.3.6.2, is accepted.		
5.7.6	Denmark		N/A
	To the end of the subclause the following is added:		
	The installation instruction shall be affixed to the equipment if the <b>protective conductor current</b> exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		
5.7.6.2	Denmark		N/A
	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.		
5.7.7.1	Norway and Sweden		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		



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	IEC62368_1E ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict	
	the building installation through the mains connection or through other apparatus with a 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 distribution system therefore has to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728- 11)"			
	NOTE In Norway, due to regulation for CATV-installations, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.			
	Translation to Norwegian (the Swedish text will also be accepted in Norway):			
	<ul> <li>"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.</li> <li>For å unngå dette skal det ved tilkopling av apparater til kabel-TV nett installeres en galvanisk isolator mellom apparatet og kabel-TV nettet."</li> </ul>			
	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.".			
8.5.4.2.3	United Kingdom		N/A	
	Add the following after the 2 <sup>nd</sup> dash bullet in 3 <sup>rd</sup> 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.			



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	IEC62368_1E ATTACHME	NT	
Clause	Requirement + Test	Result - Remark	Verdict
3.3.1 and 3.4	Ireland and United KingdomThe following is applicable: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 		P
3.4.2	<ul> <li>Denmark</li> <li>To the end of the subclause the following is added:</li> <li>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.</li> <li>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.</li> <li>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.</li> <li>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.</li> <li>Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c.</li> <li>Mains socket-outlets with earth shall be in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-</li> </ul>		P



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This report cancels and replaces previous report EBSZ241225659S dated on Jan. 10, 2025

	IEC62368_1E ATTACHME	INT	
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	United Kingdom		Р
	To the end of the subclause the following is 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.		
G.7.1	United Kingdom		Р
	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 an approved conversion plug.		
G.7.1	Ireland		Р
	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		
G.7.2	Ireland and United Kingdom		P
	To the first paragraph the following is added:		
	A power supply cord with a conductor of 1,25 mm <sup>2</sup>		
	is allowed for equipment which is rated over 10 A		
	and up to and including 13 A.	<u> </u>	<u> </u>
70	ANNEY 70 NATIONAL DEVIATIONS (EN)		NI/A

ZC ANNEX ZC, NATIONAL DEVIATIONS (EN) N/A



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Clause	Requirement + Test	Result - Remark	Verdict
10.5.2	Germany		N/A
	The 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.		
	<i>Justification</i> : German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM.		
	<b>NOTE</b> Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D- 38116 Braunschweig, Tel.: Int+49-531-592-6320, Internet: http://www.ptb.de		



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# IEC62368\_1E ATTACHMENT

ause	Requirement + Test	Result - Re	emark	Ver
	Type of flexible cord	Code designations		F
		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	6	<u>.</u>	
	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-F	
	Ordinary halogen-free thermoplastic insulated and sheathed flexible cords		H05Z1Z1-F H05Z1Z1H2-F	



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Clause	Requirement ·	+ Test		Re	esult - Remarl	K	Verdic
Attachment	No.2						
		ΑΤΤΑ		TO TEST REPO 62368-1	RT		
(Audic			IFFERENC	CES AND NATIO		-	ents)
Differences	s according to	: EN	62368-1:20	014+A11:2017			
Attachmen	t Form No	: EU	_GD_IEC62	2368_1D_II			
Attachmen	t Originator	: Nei	mko AS				
Master Atta	achment	: Dat	te 2021-02-	04			
	© 2021 IEC Sy eneva, Switzeı			sting and Certifi I.	ication of Ele	ectrical Equipm	ient
	CENELEC C		DIFICATION	NS (EN)			
		oclauses, notes 62368-1:2014		ures and annexe I "Z".	s which are a	dditional to	Р
CONTENTS	S Add the follo Annex ZA (n Annex ZB (n Annex ZC (ir Annex ZD (ir	with the ormative) nformative)	Normativ ir correspor Special n A-deviatio IEC and 0	e references to in nding European p ational condition ons CENELEC code	oublications s		Р
	<b>Delete</b> all the "country" notes in the reference document (IEC 62368-1:2014) according to the following list:					Р	
	0.2.1	Note	1	Note 3	4.1.15	Note	
	4.7.3	Note 1 and 2	5.2.2.2	Note	5.4.2.3.2.2 Table 13	Note c	
	5.4.2.3.2.4	Note 1 and 3	5.4.2.5	Note 2	5.4.5.1	Note	
	5.5.2.1	Note	5.5.6	Note	5.6.4.2.1	Note 2 and 3	
	5.7.5	Note	5.7.6.1	Note 1 and 2	10.2.1 Table 39	Note 2, 3 and 4	
	10.5.3	Note 2	10.6.2.1	Note 3	F.3.3.6	Note 3	
	For special r	national condition	ons, see Ar	inex ZB.			Р
1		wing note: use of certain subst ment is restricted w					Р



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IEC62368_1D ATTACHMENT					
Clause	Requirement + Test	Result - Remark	Verdict		
4.Z1	Add the following new subclause after 4.9: To protect against excessive current, short-circuits and earth faults in circuits connected to an a.c. <b>mains</b> , 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):		N/A		
	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 <b>pluggable equipment type B</b> or <b>permanently connected equipment</b> , 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 instructions shall so state, except that for <b>pluggable equipment type</b> <b>A</b> the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.				
5.4.2.3.2.4	Add the following to the end of this subclause:		N/A		
	The requirement for interconnection with <b>external circuit</b> is in addition given in EN 50491-3:2009.				
10.2.1	Add the following to <sup>c)</sup> and <sup>d)</sup> in table 39: For additional requirements, see 10.5.1.		N/A		



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	IEC62368_1D ATTACHMENT				
Clause	Requirement + Test	Result - Remark	Verdict		
10.5.1	Add the following after the first paragraph: For RS 1 compliance is checked by measurement under the following conditions:		N/A		
	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 presets 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.				
	<ul> <li>NOTE Z1 Soldered joints and paint lockings are examples of adequate locking.</li> <li>The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm<sup>2</sup>, at any point 10 cm from the outer surface of the apparatus.</li> </ul>				
	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.				
	For RS1, the dose-rate shall not exceed 1 $\mu$ Sv/h taking account of the background level. NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.				
10.6.1	Add the following paragraph to the end of the subclause:		N/A		
	EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.				
10.Z1	Add the following new subclause after 10.6.5. 10.Z1 Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz		N/A		
	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				
G.7.1	Add the following note: NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.		Р		



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IEC62368_1D ATTACHMENT				
Clause	Requirement + Tes	st	Result - Remark	Verdict
Bibliography	Add the following	standards:		Р
	Add the following	notes for the standards indicated:		
	IEC 60130-9	NOTE Harmonized as EN 6013	0-9.	
	IEC 60269-2	NOTE Harmonized as HD 6026	9-2.	
	IEC 60309-1	NOTE Harmonized as EN 6030	9-1.	
	IEC 60364	NOTE some parts harmonized i	n HD 384/HD 60364 series.	
	IEC 60601-2-4	NOTE Harmonized as EN 6060 <sup>2</sup>	1-2-4.	
	IEC 60664-5	NOTE Harmonized as EN 60664	4-5.	
	IEC 61032:1997	NOTE Harmonized as EN 61032	2:1998 (not modified).	
	IEC 61508-1	NOTE Harmonized as EN 61508	3-1.	
	IEC 61558-2-1	NOTE Harmonized as EN 61558	8-2-1.	
	IEC 61558-2-4	NOTE Harmonized as EN 61558	8-2-4.	
	IEC 61558-2-6	NOTE Harmonized as EN 61558	8-2-6.	
	IEC 61643-1	NOTE Harmonized as EN 61643	3-1.	
	IEC 61643-21	NOTE Harmonized as EN 61643	3-21.	
	IEC 61643-311	NOTE Harmonized as EN 61643	3-311.	
	IEC 61643-321	NOTE Harmonized as EN 61643	3-321.	
	IEC 61643-331	NOTE Harmonized as EN 61643	3-331.	
ZB	ANNEX ZB, SPE	CIAL NATIONAL CONDITIONS	(EN)	Р
4.1.15	Denmark, Finlan	d, Norway and Sweden		Р
	To the end of the	subclause the following is added:		
	connection to othe safety relies on co surge suppressor network terminals marking stating th	e equipment type A intended for er equipment or a network shall, if onnection to reliable earthing or if s are connected between the and accessible parts, have a at the equipment shall be earthed mains socket-outlet.		
	The marking text be as follows:	in the applicable countries shall		
		paratets stikprop skal tilsluttes en ord som giver forbindelse til "		
	In <b>Finland</b> : "Laite varustettuun pisto	on liitettävä suojakoskettimilla rasiaan"		
	In <b>Norway</b> : "Appa stikkontakt"	ratet må tilkoples jordet		
	In <b>Sweden</b> : "Appa uttag"	araten skall anslutas till jordat		
4.7.3	United Kingdom			N/A
	To the end of the	subclause the following is added:		
	The torque test is complying with BS	performed using a socket-outlet S 1363, and the plug part shall be elevant clauses of BS 1363. Also		



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	IEC62368_1D ATTACHMI		
Clause	Requirement + Test	Result - Remark	Verdic
5.2.2.2	Denmark		Р
	After the 2nd paragraph add the following:		
	A warning (marking <b>safeguard</b> ) for high <b>touch</b> <b>current</b> is required if the <b>touch current</b> exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		
5.4.11.1 and	Finland and Sweden		N/A
Annex G	To the end of the subclause the following is added:		
	For separation of the telecommunication network from earth the following is applicable:		
	If this insulation is solid, including insulation forming part of a component, it shall at least consist of either		
	<ul> <li>two layers of thin sheet material, each of which shall pass the electric strength test below, or</li> </ul>		
	• one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below.		
	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		
	• 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), and		
	<ul> <li>is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5kV.</li> </ul>		
	It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2.		
	A capacitor classified Y3 according to EN 60384- 14:2005, may bridge this insulation under the following conditions:		
	• the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in 5.4.11;		
	• the additional testing shall be performed on all the test specimens as described in EN 60384-14;		
	the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		



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IEC62368_1D ATTACHMENT				
Clause	Requirement + Test	Result - Remark	Verdict	
5.5.2.1	<b>Norway</b> After the 3rd paragraph the following is added: Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A	
5.5.6	Finland, Norway and Sweden To the end of the subclause the following is added: Resistors used as <b>basic safeguard</b> or bridging <b>basic insulation</b> in <b>class I pluggable equipment</b> <b>type A</b> shall comply with G.10.1 and the test of G.10.2.		N/A	
5.6.1	DenmarkAdd to the end of the subclauseDue 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.Justification: In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.		Ρ	
5.6.4.2.1	Ireland and United KingdomAfter 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.		Ρ	
5.6.5.1	To the second paragraph the following is added: 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 <sup>2</sup> to 1,5 mm <sup>2</sup> in cross-sectional area.		Ρ	
5.7.5	<b>Denmark</b> To the end of the subclause the following is added: The installation instruction shall be affixed to the equipment if the <b>protective conductor current</b> exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		Ρ	



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IEC62368_1D ATTACHMENT					
Clause	Requirement + Test	Result - Remark	Verdict		
5.7.6.1	Requirement + Test         Norway and Sweden         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 distribution system therefore has to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)"         NOTE In Norway, due to regulation for CATV-installations, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min.         Translation to Norwegian (the Swedish text will also be accepted in Norway):       "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 à unngå dette skal	Result - Remark	N/A		



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IEC62368_1D ATTACHMENT					
Clause	Requirement + Test	Result - Remark	Verdict		
5.7.6.2	Denmark 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 .		N/A		
B.3.1 and B.4	Ireland and United Kingdom The following is applicable: 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		Ρ		
G.4.2	DenmarkTo the end of the subclause the following is added: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.CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2.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 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a Justification: Heavy Current Regulations, Section 6c		P		



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IEC62368_1D ATTACHMENT				
Clause	Requirement + Test	Result - Remark	Verdict	
G.4.2	United Kingdom To the end of the subclause the following is 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.		Ρ	
G.7.1	United KingdomTo 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 an approved conversion plug.		Ρ	
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		Ρ	
G.7.2	<b>Ireland and United Kingdom</b> To the first paragraph the following is added: A power supply cord with a conductor of 1,25 mm <sup>2</sup> is allowed for equipment which is rated over 10 A and up to and including 13 A.		Ρ	



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IEC62368_1D ATTACHMENT				
Clause	Requirement + Test	Result - Remark	Verdict	
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		N/A	
10.5.2	GermanyThe following requirement applies:For the operation of any cathode ray tube intendedfor the display of visual images operating at anacceleration voltage exceeding 40 kV,authorization is required, or application of typeapproval (Bauartzulassung) and marking.Justification:German ministerial decree against ionizingradiation (Röntgenverordnung), in force since2002-07-01, implementing the European Directive96/29/EURATOM.NOTE Contact address:Physikalisch-Technische Bundesanstalt, Bundesallee 100,D-38116 Braunschweig,Tel.: Int +49-531-592-6320,Internet: http://www.ptb.de		N/A	



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This report cancels and replaces previous report EBSZ241225659S dated on Jan. 10, 2025

Attachment No.3: Photo Document



---End of report---