



CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME ANONİM ŞİRKETİ

Kayışdağı Mah. Gülçin Sok. No:2/2 Ataşehir
İstanbul/TURKİYE
Deney Raporu
Test Report



Test
TS EN ISO/IEC 17025
AB-1316-T

AB-1316-T

LVD-183-62

11-20

Müşterinin adı /adresini: Customer name /address	MUTLUSAN PLASTİK ELEKTRİK SAN. VE TIC. A.Ş. / İkitelli O.S.B. Mah. Enkoop cad. No:7 Başakşehir / İstanbul /TURKEY
İstek Numarası : Order no.	29052020nkk1R1.0
Numunenin Adı ve Tanımı : Name and identity of test item	Ri-tech Socket Outlet with USB port, Switch and Surge Protection (6 Socket Outlets)
Numunenin Kabul tarihi : The date of receipt of test item	12.08.2020
Açıklamalar : Remarks	Ürün uygulanan testlerden geçmiştir, lütfen raporu inceleyiniz. / The product passes applied tests, see report below.
Deneyin yapıldığı tarih : Date of Test	20-09-2020 to 19-10-2020
Raporun Sayfa Sayısı: Number of pages of the Report	51 sayfa / pages
Deney laboratuvarı olarak faaliyet gösteren CGS TEST HİZMETLERİ A.Ş., TÜRKAK'tan AB-1316-T ile TS EN ISO/IEC 17025 Aralık 2017 standardına göre akredite edilmiştir.	

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The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.

Mühür/Kaşe
Seal

Tarih
Date

Deney Sorumlusu
Person in charge of test

Laboratuvar Müdürü
Head of Testing Laboratory



11.11.2020

Anıl EKER

Timur GÜSER

Bu rapor laboratuvarın izni olmadan kısmen kopyalanıp çoğaltılamaz.

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

Test specification:

Report Number: LVD-183-62
Date of Issue: 11.11.2020
Total Number of Pages: 51

Manufacturer: MUTLUSAN PLASTIK ELEKTRİK SAN. VE TİC. A.Ş.
Address: İkitelli O.S.B. Mah. Enkoop cad. No:7 Başakşehir İstanbul/TURKEY

Test specification:

Standard: EN 62368-1:2020/A11:2020
Test procedure: Standard methods used
Non-standard test method: N/A

Test Report Form No.: F510_49_R2.0
Test Report Form(s) Originator: UL(US) (Modified by CGS)
Master TRF: 2014-03

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Test Item Description.....: Socket Outlet with USB port, Switch and Surge Protection (6 Socket Outlets)

Trade Mark:



Manufacturer: MUTLUSAN PLASTIK ELEKTRİK SAN. VE TİC. A.Ş.

Model/Type reference: 001 175 660002 15 00

Ratings: 250 VAC, 16A, USB Port: 5VDC 2,4A
Max. Energy: 1425 joules
Max Open circuit voltage: 6kV
Voltage protection level: 1,6kV
With thermal fuse



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

Attachment 1 – Equipment of measurement (1 page)

Attachment 2 – Photo Documentation (2 pages)

Summary of testing: The EUT passes the applied tests below.**Tests performed:**

5.2 Classification and limits of electrical energy sources
5.4.1.4 Maximum operating temperature for insulating materials
5.4.1.8 Determination of working voltage
5.4.2 Clearance
5.4.3 Creepage
5.4.8 Humidity conditioning
5.4.9.1 Electric strength
6.2 Power source circuit classifications
8.2 Mechanical energy source classification
9.2.5 Thermal burn injury
B.2.5 Input test
B.3 Abnormal operating conditions
B.4 Single faults
G.5.3.2 Transformers
T.2 Steady force test, 10 N
T.3 Steady force test, 30 N
T.4 Steady force test, 100 N
T.7 Drop test
T.8 Stress relief test

Testing Laboratory and Address:

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Kayışdağı Mah. Gülçin Sok. No:2/2 Ataşehir
İstanbul/TÜRKİYE**Copy of marking plate:**

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TEST ITEM PARTICULARS:	
Classification of use by	<input checked="" type="checkbox"/> Ordinary person <input type="checkbox"/> Instructed person <input type="checkbox"/> Skilled person <input type="checkbox"/> Children likely to be present
Supply Connection	<input checked="" type="checkbox"/> AC Mains <input type="checkbox"/> DC Mains <input type="checkbox"/> External Circuit - not Mains connected - <input type="checkbox"/> ES1 <input type="checkbox"/> ES2 <input type="checkbox"/> ES3
Supply % Tolerance	<input checked="" type="checkbox"/> +10%/-10% <input type="checkbox"/> +20%/-15% <input type="checkbox"/> + ___ % / - ___ % <input type="checkbox"/> None
Supply Connection – Type	<input checked="" type="checkbox"/> pluggable equipment type A - <input checked="" type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input type="checkbox"/> direct plug-in <input type="checkbox"/> mating connector <input type="checkbox"/> pluggable equipment type B - <input type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input type="checkbox"/> permanent connection <input type="checkbox"/> mating connector <input type="checkbox"/> other: _____
Considered current rating of protective device as part of building or equipment installation.....	16 A; Installation location: <input checked="" type="checkbox"/> building; <input type="checkbox"/> equipment
Equipment mobility	<input checked="" type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in <input type="checkbox"/> rack-mounting <input type="checkbox"/> wall-mounted
Over voltage category (OVC)	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other: _____
Class of equipment	<input checked="" type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III
Access location	<input type="checkbox"/> restricted access location <input checked="" type="checkbox"/> N/A
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
Manufacturer's specified maximum operating ambient:	25°C
IP protection class	<input type="checkbox"/> IPX0 <input checked="" type="checkbox"/> IP20
Power Systems	<input checked="" type="checkbox"/> TN <input checked="" type="checkbox"/> TT <input type="checkbox"/> IT - ___ V _{L-L}
Altitude during operation (m)	<input checked="" type="checkbox"/> 2000 m or less <input type="checkbox"/> ___ m
Altitude of test laboratory (m)	<input type="checkbox"/> 2000 m or less <input checked="" type="checkbox"/> 150 m
Mass of equipment (kg)	<input checked="" type="checkbox"/> 0,6 kg
POSSIBLE TEST CASE VERDICTS:	
- test case does not apply to the test object	N/A
- test object does meet the requirement	P (Pass)



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- test object does not meet the requirement.....:	F (Fail)
- test cannot be applied in this laboratory	LNA
TESTING:	
Date of receipt of test item	12.08.2020
Date (s) of performance of tests	20.09.2020 to 19.10.2020
GENERAL REMARKS:	
<p>The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. It is prohibited to change any and all versions of this document in any manner whatsoever. In case of a conflict between the electronic version (e.g. PDF file) and the original paper version provided by CGS TEST, the latter will prevail.</p> <p>CGS TEST HİZMETLERİ TEKNİK KONTROL VE BELGELENDİRME A.Ş. disclaim liability for any direct, indirect, consequential or incidental damages that may result from the use of the information or data, or from the inability to use the information or data contained in this document.</p> <p>The contents of this report may only be transmitted to third parties in its entirety and provided with the copyright notice, prohibition to change, electronic versions' validity notice and disclaimer.</p> <p>"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.</p> <p>The manufacturer/client may declare submodels with similar design with the tested product. The submodels shall have identical components, circuit designs and mechanical construction with the tested model to be categorized as submodel. Submodels may have less power consumption and/or number of functions. However, safety functions cannot be reduced. The manufacturer/client is fully responsible to check if submodels have compliance as the tested model.</p> <p>Throughout this report a <input checked="" type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.</p>	
GENERAL PRODUCT INFORMATION:	
Product Description :	
Portable socket outlets to be used in house or similar places with USB outputs to charge phone, tablet, notebook etc.	
Model Differences –	
001 175 660002 15 00: model has 6 socket outlets	
Additional application considerations – (Considerations used to test a component or sub-assembly) –	
N/A	



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ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:

(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.)

(Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared Class 3 as a worse case classification e.g. PS3, ES3.)

Electrically-caused injury (Clause 5):

(Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification)

Example: +5 V dc input

ES1

Source of electrical energy**Corresponding classification (ES)**

USB output 5VDC – safeguarded by separation from ES3

ES1

Socket outlets – not accessible / safeguarded

ES3

Electrically-caused fire (Clause 6):

(Note: List sub-assembly or circuit designation and corresponding energy source classification)

Example: Battery pack (maximum 85 watts):

PS2

Source of power or PIS**Corresponding classification (PS)**

Primary socket outlets

PS3

Power consumed in primary side of PCB, measured from supply terminal

PS2

Output port / Load circuit

PS1

Injury caused by hazardous substances (Clause 7)

(Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.)

Example: Liquid in filled component

Glycol

Source of hazardous substances**Corresponding chemical**

N/A

N/A

Mechanically-caused injury (Clause 8)

(Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.)

Example: Wall mount unit

MS2

Source of kinetic/mechanical energy**Corresponding classification (MS)**

Mass of the product

MS1

Sharp Edges

MS1

Thermal burn injury (Clause 9)

(Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.)

Example: Hand-held scanner – thermoplastic enclosure

TS1

Source of thermal energy**Corresponding classification (TS)**

Accesible plastic parts

TS1

Radiation (Clause 10)

(Note: List the types of radiation present in the product and the corresponding energy source classification.)

Example: DVD – Class 1 Laser Product

RS1

Type of radiation**Corresponding classification (RS)**

INDICATOR LEDS

RS1



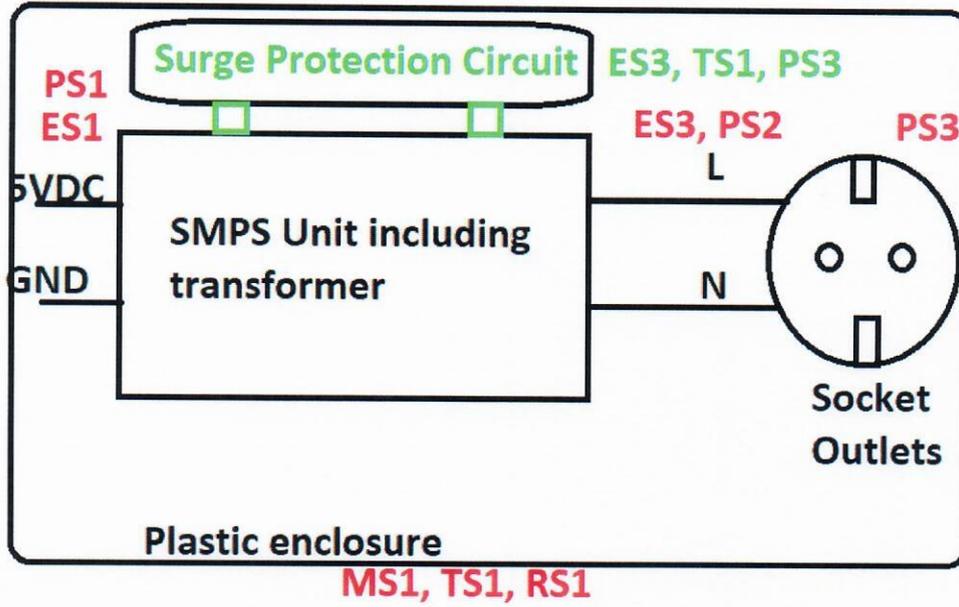
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ENERGY SOURCE DIAGRAM

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



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OVERVIEW OF EMPLOYED SAFEGUARDS				
Clause	Possible Hazard			
5.1	Electrically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (ES3: Primary Filter circuit)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary person protected from ES3 circuit by barriers and separation.	ES3	---	---	Enclosure, SMPS circuit to isolate ES3 from ES1
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
Plastic enclosure	PS3	No igniton in normal operation	-Fire enclosure -Approved V-0 PCB	---
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
---	---	---	---	---
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
---	MS1	---	---	---
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
Accessible parts	TS1	---	---	---
10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
---	RS1	---	---	---
Supplementary Information:				
(1) See attached energy source diagram for additional details.				
(2) "N" – Normal Condition; "A" – Abnormal Condition; "S" Single Fault				



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Clause	Requirement + Test	Result - Remark	Verdict
4	GENERAL REQUIREMENTS		P
4.1.1	Acceptance of materials, components and subassemblies		P
4.1.2	Use of components	<p>Certified components are used in accordance with their ratings, certifications and they comply with applicable parts of the standard.</p> <p>Components which are not certified are used in accordance with their ratings, and they comply with applicable parts of IEC 62368-1.</p> <p>Components, for which no relevant IEC- standard exists, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 62368-1.</p>	P
4.1.3	Equipment design and construction	Appropriate safeguards are inspected. Hazardous parts are not accessible.	P
4.1.15	Markings and instructions	(See Annex F)	P
4.4.3	Safeguard robustness		P
4.4.3.2	Steady force tests	(See Annex T.3, T.4, T.5)	P
4.4.3.3	Drop tests	(See Annex T.7)	P
4.4.3.4	Impact tests	(See Annex T.6)	N/A
4.4.3.5	Internal accessible safeguard enclosure and barrier tests	(See Annex T.3)	N/A
4.4.3.6	Glass Impact tests	(See Annex T.9, Annex U)	N/A
4.4.3.7	Glass Fixation test		N/A
4.4.3.8	Thermoplastic material tests	(See Annex T.8)	P
4.4.3.9	Air comprising a safeguard	(See Annex T)	N/A
4.4.3.10	Accessibility and safeguard effectiveness	Inspected	P
4.5	Explosion	No explosion	N/A
4.6	Fixing of conductors		P
4.6.1	Fix conductors not to defeat a safeguard		P
4.6.2	10 N force test applied to	Supply conductors in terminal	P
4.7	Equipment for direct insertion into mains socket - outlets	Insertion by separate plug	N/A
4.7.2	Mains plug part complies with the relevant standard		N/A



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4.7.3	Torque (Nm)		N/A
4.8	Products containing coin/button cell batteries	No batteries	N/A
4.8.2	Instructional safeguard		N/A
4.8.3	Battery Compartment Construction		N/A
	Means to reduce the possibility of children removing the battery		—
4.8.4	Battery Compartment Mechanical Tests	(See Table 4.8.4)	N/A
4.8.5	Battery Accessibility		N/A
4.9	Likelihood of fire or shock due to entry of conductive object	Opening is a part of socket outlet No internal liquid.	P



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5	ELECTRICALLY-CAUSED INJURY		P
5.2.1	Electrical energy source classifications	(See appended table 5.2)	P
5.2.2	ES1, ES2 and ES3 limits		P
5.2.2.2	Steady-state voltage and current	See appended table 5.2)	P
5.2.2.3	Capacitance limits.....	(See appended table 5.2) No accessible capacitor	N/A
5.2.2.4	Single pulse limits	(See appended table 5.2)	N/A
5.2.2.5	Limits for repetitive pulses	(See appended table 5.2)	N/A
5.2.2.6	Ringing signals	(See Annex H)	N/A
5.2.2.7	Audio signals	(See Clause E.1)	N/A
5.3	Protection against electrical energy sources		P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons		P
5.3.2.1	Accessibility to electrical energy sources and safeguards		P
5.3.2.2	Contact requirements		P
	a) Test with test probe from Annex V.....	Figure V.1 and V.2	P
	b) Electric strength test potential (V)	No potential above 420Vp	N/A
	c) Air gap (mm)	---	N/A
5.3.2.4	Terminals for connecting stripped wire	No such terminal for ordinary person	N/A
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material	Inspected	P
5.4.1.3	Humidity conditioning	(See sub-clause 5.4.8)	P
5.4.1.4	Maximum operating temperature for insulating materials	(See appended table 5.4.1.4) Class 130 (B) insulation in transformer declared.	P
5.4.1.5	Pollution degree	II	—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N/A
5.4.1.5.3	Thermal cycling		N/A
5.4.1.6	Insulation in transformers with varying dimensions		N/A
5.4.1.7	Insulation in circuits generating starting pulses	No starting pulse circuit	N/A
5.4.1.8	Determination of working voltage	250VAC in primary	P
5.4.1.9	Insulating surfaces		P
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted		N/A
5.4.1.10.2	Vicat softening temperature	(See appended table 5.4.1.10.2)	N/A
5.4.1.10.3	Ball pressure	(See appended table 5.4.1.10.3)	N/A
5.4.2	Clearances		P



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5.4.2.2	Determining clearance using peak working voltage	(See appended table 5.4.2.2)	N/A
5.4.2.3	Determining clearance using required withstand voltage	(See appended table 5.4.2.3)	P
	a) a.c. mains transient voltage.....	2500V	—
	b) d.c. mains transient voltage	---	—
	c) external circuit transient voltage.....	---	—
	d) transient voltage determined by measurement ... :	---	—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test	(See appended table 5.4.2.4)	N/A
5.4.2.5	Multiplication factors for clearances and test voltages	---	N/A
5.4.3	Creepage distances.....	(See appended table 5.4.3)	P
5.4.3.1	General		P
5.4.3.3	Material Group	Assumed to be IIIb	—
5.4.4	Solid insulation	Reinforced insulation	P
5.4.4.2	Minimum distance through insulation	(See appended table 5.4.4.2)	N/A
5.4.4.3	Insulation compound forming solid insulation		P
5.4.4.4	Solid insulation in semiconductor devices		N/A
5.4.4.5	Cemented joints		N/A
5.4.4.6	Thin sheet material	Insulating tape in transformer	P
5.4.4.6.1	General requirements		P
5.4.4.6.2	Separable thin sheet material		P
	Number of layers (pcs)	2 layers available. Single layer conforms reinforced insulation	P
5.4.4.6.3	Non-separable thin sheet material		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	See 5.4.4.6	P
5.4.4.9	Solid insulation at frequencies >30 kHz	(See appended Table 5.4.4.9)	N/A
5.4.5	Antenna terminal insulation	No antenna	N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
	Insulation resistance (M Ω)	---	—
5.4.6	Insulation of internal wire as part of supplementary safeguard.....	(See appended table 5.4.4.2)	N/A
5.4.7	Tests for semiconductor components and for cemented joints		N/A
5.4.8	Humidity conditioning		P



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	Relative humidity (%)	%93	—
	Temperature (°C)	25 °C	—
	Duration (h)	48	—
5.4.9	Electric strength test.....	(See appended table 5.4.9)	P
5.4.9.1	Test procedure for a solid insulation type test		P
5.4.9.2	Test procedure for routine tests		N/A
5.4.10	Protection against transient voltages between external circuit		N/A
5.4.10.1	Parts and circuits separated from external circuits	(See appended table 5.4.9)	N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test	(See appended table 5.4.9)	N/A
5.4.10.2.3	Steady-state test	(See appended table 5.4.9)	N/A
5.4.11	Insulation between external circuits and earthed circuitry	(See appended table 5.4.9) Equipotential bonding is connected to external circuits through socket outlets.	N/A
5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements		N/A
	Rated operating voltage U_{op} (V)	---	—
	Nominal voltage U_{peak} (V)	---	—
	Max increase due to variation U_{sp}	---	—
	Max increase due to ageing ΔU_{sa}	---	—
	$U_{op} = U_{peak} + \Delta U_{sp} + \Delta U_{sa}$	---	—
5.5	Components as safeguards		
5.5.1	General		P
5.5.2	Capacitors and RC units	Y1 Capacitor complying with IEC 60384-14 and table G.12	P
5.5.2.1	General requirement		P
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector	(See appended table 5.5.2.2)	P
5.5.3	Transformers	(See Annex G.5.3)	P
5.5.4	Optocouplers	(See sub-clause 5.4 or Annex G.12)	N/A
5.5.5	Relays	(See Annex G.2)	N/A
5.5.6	Resistors	(See Annex G.10)	N/A



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5.5.7	SPD's	(See Annex G.8) Separately approved SPDs. Surge protective circuit is not tested in the scope of this report. See separate test report for SPD circuits.	N/A
5.5.7.1	Use of an SPD connected to reliable earthing		N/A
5.5.7.2	Use of an SPD between mains and protective earth		N/A
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable	(See Annex G.10.3)	N/A
5.6	Protective conductor		P
5.6.2	Requirement for protective conductors		P
5.6.2.1	General requirements		P
5.6.2.2	Colour of insulation		P
5.6.3	Requirement for protective earthing conductors		P
	Protective earthing conductor size (mm ²)	1,5	—
5.6.4	Requirement for protective bonding conductors		P
5.6.4.1	Protective bonding conductors		P
	Protective bonding conductor size (mm ²).....	1,5	—
	Protective current rating (A)	16	—
5.6.4.3	Current limiting and overcurrent protective devices		N/A
5.6.5	Terminals for protective conductors		P
5.6.5.1	Requirement		P
	Conductor size (mm ²), nominal thread diameter (mm).....		P
5.6.5.2	Corrosion		P
5.6.6	Resistance of the protective system		P
5.6.6.1	Requirements		P
5.6.6.2	Test Method Resistance (Ω)	(See appended table 5.6.6.2)	P
5.6.7	Reliable earthing		P
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks		P
5.7.2.1	Measurement of touch current	(See appended table 5.7.4)	P
5.7.2.2	Measurement of prospective touch voltage		P
5.7.3	Equipment set-up, supply connections and earth connections		P
	System of interconnected equipment (separate connections/single connection)		—



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	Multiple connections to mains (one connection at a time/simultaneous connections)..... :		—
5.7.4	Earthed conductive accessible parts	(See appended Table 5.7.4)	P
5.7.5	Protective conductor current		P
	Supply Voltage (V)	275VAC	—
	Measured current (mA)	0,48mA	—
	Instructional Safeguard	(See F.4 and F.5)	N/A
5.7.6	Prospective touch voltage and touch current due to external circuits		N/A
5.7.6.1	Touch current from coaxial cables		N/A
5.7.6.2	Prospective touch voltage and touch current from external circuits		N/A
5.7.7	Summation of touch currents from external circuits		N/A
	a) Equipment with earthed external circuits Measured current (mA)		N/A
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA)..... :		N/A

6	ELECTRICALLY- CAUSED FIRE		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications		P
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault..... :	(See appended table 6.2.2)	P
6.2.2.3	Power measurement for worst-case power source fault..... :	(See appended table 6.2.2)	P
6.2.2.4	PS1	(See appended table 6.2.2)	P
6.2.2.5	PS2	(See appended table 6.2.2)	P
6.2.2.6	PS3	(See appended table 6.2.2)	P
6.2.3	Classification of potential ignition sources		P
6.2.3.1	Arcing PIS	(See appended table 6.2.3.1)	P
6.2.3.2	Resistive PIS	(See appended table 6.2.3.2)	P
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1 (a)	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials..... :	(See appended table 5.4.1.5, 6.3.2, 9.0, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure		N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method	Control of fire spread	P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N/A



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6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits		N/A
6.4.3.1	General		N/A
6.4.3.2	Supplementary Safeguards		N/A
	Special conditions if conductors on printed boards are opened or peeled		N/A
6.4.3.3	Single Fault Conditions :	(See appended table 6.4.3)	N/A
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits		P
6.4.5	Control of fire spread in PS2 circuits		P
6.4.5.2	Supplementary safeguards :	(See appended tables 4.1.2 and Annex G)	P
6.4.6	Control of fire spread in PS3 circuit		N/A
6.4.7	Separation of combustible materials from a PIS		N/A
6.4.7.1	General :	(See tables 6.2.3.1 and 6.2.3.2)	N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		P
6.4.8	Fire enclosures and fire barriers		P
6.4.8.1	Fire enclosure and fire barrier material properties		P
6.4.8.2.1	Requirements for a fire barrier	S.1 applied	P
6.4.8.2.2	Requirements for a fire enclosure	≤4000W S.1 applied	P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		P
6.4.8.3.1	Fire enclosure and fire barrier openings	No opening	N/A
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm) :		N/A
	Needle Flame test		N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm) :		N/A
	Flammability tests for the bottom of a fire enclosure :		N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c) :		N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating :		N/A
6.5	Internal and external wiring		P
6.5.1	Requirements		P
6.5.2	Cross-sectional area (mm ²) :	1,5	—



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6.5.3	Requirements for interconnection to building wiring..... :	(See Annex Q.)	N/A
6.6	Safeguards against fire due to connection to additional equipment		N/A
	External port limited to PS2 or complies with Clause Q.1	USB connector is PS1.	N/A



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7	INJURY CAUSED BY HAZARDOUS SUBSTANCES		N/A
7.2	Reduction of exposure to hazardous substances	No hazardous substances	N/A
7.3	Ozone exposure		N/A
7.4	Use of personal safeguards (PPE)		N/A
	Personal safeguards and instructions		—
7.5	Use of instructional safeguards and instructions		N/A
	Instructional safeguard (ISO 7010)		—
7.6	Batteries	(See Annex M)	N/A

8	MECHANICALLY-CAUSED INJURY		P
8.1	General		P
8.2	Mechanical energy source classifications	MS1 No sharp edges Mass < 1 kg Mounted ≤ 2m	P
8.3	Safeguards against mechanical energy sources		N/A
8.4	Safeguards against parts with sharp edges and corners		N/A
8.4.1	Safeguards		N/A
8.5	Safeguards against moving parts		N/A
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard		—
8.5.4	Special categories of equipment comprising moving parts		N/A
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Safeguards and Safety Interlocks	(See Annex F.4 and Annex K)	N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard		—
8.5.4.2.3	Disconnection from the supply		N/A
8.5.4.2.4	Probe type and force (N)		N/A
8.5.5	High Pressure Lamps		N/A
8.5.5.1	Energy Source Classification		N/A
8.5.5.2	High Pressure Lamp Explosion Test	(See appended table 8.5.5.2)	N/A
8.6	Stability	MS1	N/A
8.6.1	Product classification		N/A
	Instructional Safeguard	---	—



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8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A
	Applied Force..... :		—
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10° tilt..... :		—
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force)..... :		N/A
	Position of feet or movable parts..... :		—
8.7	Equipment mounted to wall or ceiling	MS1	N/A
8.7.1	Mounting Means (Length of screws (mm) and mounting surface)..... :		N/A
8.7.2	Direction and applied force..... :		N/A
8.8	Handles strength	No handles	N/A
8.8.1	Classification		N/A
8.8.2	Applied Force..... :		N/A
8.9	Wheels or casters attachment requirements	No wheels or casters	N/A
8.9.1	Classification		N/A
8.9.2	Applied force..... :		—
8.10	Carts, stands and similar carriers	No carriers	N/A
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard..... :		—
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force..... :		—
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N)..... :		—
8.10.6	Thermoplastic temperature stability (°C)..... :		N/A
8.11	Mounting means for rack mounted equipment		N/A
8.11.1	General		N/A
8.11.2	Product Classification		N/A
8.11.3	Mechanical strength test, variable <i>N</i> :		N/A
8.11.4	Mechanical strength test 250N, including end stops		N/A
8.12	Telescoping or rod antennas.....	(See Annex T)	N/A
	Button/Ball diameter (mm)..... :		—



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9	THERMAL BURN INJURY		P
9.2	Thermal energy source classifications	TS1	P
9.3	Safeguard against thermal energy sources		N/A
9.4	Requirements for safeguards		N/A
9.4.1	Equipment safeguard		N/A
9.4.2	Instructional safeguard		N/A

10	RADIATION		P
10.2	Radiation energy source classification	Only radiation energy source is indicator LEDs	P
10.2.1	General classification	RS1	P
10.3	Protection against laser radiation	No laser	N/A
	Laser radiation that exists equipment:		—
	Normal, abnormal, single-fault	(See attached laser test report)	N/A
	Instructional safeguard		—
	Tool		—
10.4	Protection against visible, infrared, and UV radiation		N/A
10.4.1	General		N/A
10.4.1.a)	RS3 for Ordinary and instructed persons		N/A
10.4.1.b)	RS3 accessible to a skilled person		N/A
	Personal safeguard (PPE) instructional safeguard		—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1		N/A
10.4.1.d)	Normal, abnormal, single-fault conditions	(See appended table B.3 & B.4)	N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque		N/A
10.4.1.f)	UV attenuation		N/A
10.4.1.g)	Materials resistant to degradation UV		N/A
10.4.1.h)	Enclosure containment of optical radiation		N/A
10.4.1.i)	Exempt Group under normal operating conditions		N/A
10.4.2	Instructional safeguard		N/A
10.5	Protection against x-radiation		N/A
10.5.1	X- radiation energy source that exists equipment	(See appended table B.3 & B.4)	N/A
	Normal, abnormal, single fault conditions		N/A
	Equipment safeguards		N/A



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	Instructional safeguard for skilled person		N/A
10.5.3	Most unfavourable supply voltage to give maximum radiation		—
	Abnormal and single-fault condition	(See appended table B.3 & B.4)	N/A
	Maximum radiation (pA/kg)		N/A
10.6	Protection against acoustic energy sources	No acoustic energy source	N/A
10.6.1	General		N/A
10.6.2	Classification		N/A
	Acoustic output, dB(A)	---	N/A
	Output voltage, unweighted r.m.s.	---	N/A
10.6.4	Protection of persons		N/A
	Instructional safeguards	---	N/A
	Equipment safeguard prevent ordinary person to RS2	---	—
	Means to actively inform user of increase sound pressure	---	—
	Equipment safeguard prevent ordinary person to RS2		—
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.5.1	Corded passive listening devices with analog input		N/A
	Input voltage with 94 dB(A) L_{Aeq} acoustic pressure output	---	—
10.6.5.2	Corded listening devices with digital input		N/A
	Maximum dB(A)	---	—
10.6.5.3	Cordless listening device		N/A
	Maximum dB(A)	---	—

B	NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS		P
B.2	Normal Operating Conditions		P
B.2.1	General requirements	(See Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers	(See Annex E)	N/A
B.2.3	Supply voltage and tolerances		P
B.2.5	Input test	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements	(See appended table B.3)	P
B.3.2	Covering of ventilation openings		N/A

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B.3.3	D.C. mains polarity test		N/A
B.3.4	Setting of voltage selector.....:		N/A
B.3.5	Maximum load at output terminals.....:		P
B.3.6	Reverse battery polarity	No battery	N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.		N/A
B.3.8	Safeguards functional during and after abnormal operating conditions		P
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited.....:	(See appended table B.4) No such device	N/A
B.4.3	Motor tests	No motor	N/A
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature.....:	(See Clause G.5)	N/A
B.4.4	Short circuit of functional insulation		P
B.4.4.1	Short circuit of clearances for functional insulation		P
B.4.4.2	Short circuit of creepage distances for functional insulation		P
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 disconnect of passive components		P
B.4.7	Continuous operation of components		P
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions		P
B.4.9	Battery charging under single fault conditions.....:	(See Annex M)	N/A
C	UV RADIATION		N/A
C.1	Protection of materials in equipment from UV radiation		N/A
C.1.2	Requirements		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 apparatus		N/A
C.2.4	Xenon-arc light exposure apparatus		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



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E	TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS		N/A
E.1	Audio amplifier normal operating conditions		N/A
	Audio signal voltage (V)		—
	Rated load impedance (Ω)		
E.2	Audio amplifier abnormal operating conditions		N/A
F	EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS		P
F.1	General requirements		P
	Instructions – Language	English / Turkish	—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1		P
F.2.2	Graphic symbols IEC, ISO or manufacturer specific		P
F.3	Equipment markings		P
F.3.1	Equipment marking locations		P
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification	Mutlusan	—
F.3.2.2	Model identification	Inspected	—
F.3.3	Equipment rating markings		P
F.3.3.1	Equipment with direct connection to mains		P
F.3.3.2	Equipment without direct connection to mains		N/A
F.3.3.3	Nature of supply voltage	AC	—
F.3.3.4	Rated voltage	250	—
F.3.3.4	Rated frequency	50Hz (Will be added to the label)	—
F.3.3.6	Rated current or rated power	3500W	—
F.3.3.7	Equipment with multiple supply connections		N/A
F.3.4	Voltage setting device		N/A
F.3.5	Terminals and operating devices		P
F.3.5.1	Mains appliance outlet and socket-outlet markings		P
F.3.5.2	Switch position identification marking	With LED light	P
F.3.5.3	Replacement fuse identification and rating markings	No replaceable fuse	N/A
F.3.5.4	Replacement battery identification marking		N/A
F.3.5.5	Terminal marking location		P
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I Equipment		P
F.3.6.1.1	Protective earthing conductor terminal		P
F.3.6.1.2	Neutral conductor terminal		N/A



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F.3.6.1.3	Protective bonding conductor terminals		P
F.3.6.2	Class II equipment (IEC60417-5172)	Class I equipment provided with class II construction	N/A
F.3.6.2.1	Class II equipment with or without functional earth		N/A
F.3.6.2.2	Class II equipment with functional earth terminal marking		N/A
F.3.7	Equipment IP rating marking	---	—
F.3.8	External power supply output marking		N/A
F.3.9	Durability, legibility and permanence of marking	Markings are moulded.	P
F.3.10	Test for permanence of markings		N/A
F.4	Instructions		P
	a) Equipment for use in locations where children not likely to be present - marking		N/A
	b) Instructions given for installation or initial use		N/A
	c) Equipment intended to be fastened in place		N/A
	d) Equipment intended for use only in restricted access area		N/A
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N/A
	f) Protective earthing employed as safeguard		P
	g) Protective earthing conductor current exceeding ES 2 limits		N/A
	h) Symbols used on equipment		P
	i) Permanently connected equipment not provided with all-pole mains switch		N/A
	j) Replaceable components or modules providing safeguard function		N/A
F.5	Instructional safeguards		N/A
	Where "instructional safeguard" is referenced in the test report it specifies the required elements, location of marking and/or instruction		N/A
G	COMPONENTS		P
G.1	Switches		N/A
G.1.1	General requirements	Separately approved switches	N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.2	Relays		N/A
G.2.1	General requirements		N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supply power		N/A
G.2.4	Mains relay, modified as stated in G.2		N/A



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G.3	Protection Devices		N/A
G.3.1	Thermal cut-offs		N/A
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Thermal cut-off connections maintained and secure		N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691		N/A
G.3.2.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H)		—
	Single Fault Condition		—
	Test Voltage (V) and Insulation Resistance (Ω) ..		—
G.3.3	PTC Thermistors		N/A
G.3.4	Overcurrent protection devices		N/A
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions	(See appended Table B.4)	N/A
G.4	Connectors		N/A
G.4.1	Spacings		N/A
G.4.2	Mains connector configuration		N/A
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		N/A
G.5	Wound Components		P
G.5.1	Wire insulation in wound components	Reinforced insulation in transformer	P
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°		N/A
G.5.1.2 b)	Construction subject to routine testing		N/A
G.5.2	Endurance test on wound components		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Time (s)		—
	Temperature (°C)		—
G.5.2.3	Wound Components supplied by mains		LNA
G.5.3	Transformers		P
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2 and/or IEC62368-1)	G.5.3.2 and G.5.3.3	P



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	Position		—
	Method of protection		—
G.5.3.2	Insulation		P
	Protection from displacement of windings		—
G.5.3.3	Overload test.....	(See appended table B.3)	P
G.5.3.3.1	Test conditions		P
G.5.3.3.2	Winding Temperatures testing in the unit		P
G.5.3.3.3	Winding Temperatures - Alternative test method		N/A
G.5.4	Motors		N/A
G.5.4.1	General requirements	No motor	N/A
	Position		—
G.5.4.2	Test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4	Locked-rotor overload test		N/A
	Test duration (days)		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V).....		—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h)		N/A
	Electric strength test (V).....		—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature		N/A
	Electric strength test (V)		N/A
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h)		N/A
	Electric strength test (V).....		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	Solvent-based enamel wiring insulation		N/A
G.7	Mains supply cords		P
G.7.1	General requirements	Separately approved supply cord	P



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	Type	H05VV-F	—
	Rated current (A)	16A	—
	Cross-sectional area (mm ²), (AWG)	3x1,5 mm ²	—
G.7.2	Compliance and test method		N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords	See LVD-183-59	N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N)		—
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm) ... :		—
G.7.3.2.4	Strain relief comprised of polymeric material		N/A
G.7.4	Cord Entry	(See appended table 5.4.11.1)	N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Mass (g)		—
	Diameter (m)		—
	Temperature (°C)		—
G.7.6	Supply wiring space		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Test with 8 mm strand		N/A
G.8	Varistors		N/A
G.8.1	General requirements	Separately tested SPD circuit	N/A
G.8.2	Safeguard against shock		N/A
G.8.3	Safeguard against fire		N/A
G.8.3.2	Varistor overload test	(See appended table B.3)	N/A
G.8.3.3	Temporary overvoltage	(See appended table B.3)	N/A
G.9	Integrated Circuit (IC) Current Limiters		N/A
G.9.1 a)	Manufacturer defines limit at max. 5A.		N/A
G.9.1 b)	Limiters do not have manual operator or reset		N/A
G.9.1 c)	Supply source does not exceed 250 VA		—
G.9.1 d)	IC limiter output current (max. 5A)		—
G.9.1 e)	Manufacturers' defined drift		—
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
G.10	Resistors		N/A



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G.10.1	General requirements		N/A
G.10.2	Resistor test		N/A
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N/A
G.10.3.1	General requirements		N/A
G.10.3.2	Voltage surge test		N/A
G.10.3.3	Impulse test		N/A
G.11	Capacitor and RC units		P
G.11.1	General requirements	Separately approved Y1 capacitor	P
G.11.2	Conditioning of capacitors and RC units		LNA
G.11.3	Rules for selecting capacitors		P
G.12	Optocouplers		N/A
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results)	No optocoupler	N/A
	Type test voltage V_{ini}		—
	Routine test voltage, $V_{ini,b}$		—
G.13	Printed boards		N/A
G.13.1	General requirements	Separately approved PCB	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
	Compliance with cemented joint requirements (Specify construction)		—
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation.....	(See appended table 5.4.4.5)	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.13.6.2a)	Thermal conditioning		N/A
G.13.6.2b)	Electric strength test		N/A
G.13.6.2c)	Abrasion resistance test		N/A
G.14	Coating on components terminals		N/A
G.14.1	Requirements	(See G-13)	N/A
G.15	Liquid filled components		N/A
G.15.1	General requirements	No liquid filled component	N/A
G.15.2	Requirements		N/A



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G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
G.16	IC including capacitor discharge function (ICX)		
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours		N/A
b)	Impulse test using circuit 2 with $U_c =$ to transient voltage		N/A
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N/A
C2)	Test voltage		—
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N/A
D2)	Capacitance		—
D3)	Resistance		—
H	CRITERIA FOR TELEPHONE RINGING SIGNALS		N/A
H.1	General	No ringing signal	N/A
H.2	Method A		N/A
H.3	Method B		N/A
H.3.1	Ringling signal		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 complied with		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V)		—
J	INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION		N/A
	General requirements		N/A
K	SAFETY INTERLOCKS		N/A
	General requirements	No interlock	N/A



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K.2	Components of safety interlock safeguard mechanism	(See Annex G)	N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance	(See appended table B.4)	N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method.....		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location)		N/A
K.7.2	Overload test, Current (A).....		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test	(See appended table 5.4.11)	N/A
L	DISCONNECT DEVICES		P
L.1	General requirements		P
L.2	Permanently connected equipment	Not permanently connected	N/A
L.3	Parts that remain energized	Safeguarded	P
L.4	Single phase equipment		P
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices	Indicating LED for energy	P
L.7	Plugs as disconnect devices		P
L.8	Multiple power sources		N/A
M	EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS		N/A
M.1	General requirements	No battery	N/A
M.2	Safety of batteries and their cells		N/A
M.2.1	Requirements		N/A
M.2.2	Compliance and test method (identify method) ...:		N/A
M.3	Protection circuits		N/A
M.3.1	Requirements		N/A
M.3.2	Tests		N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
M.3.3	Compliance	(See appended Tables and Annex M and M.4)	N/A



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M.4	Additional safeguards for equipment containing secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Charging operating limits		N/A
M.4.2.2a)	Charging voltage, current and temperature..... :	(See Table M.4)	—
M.4.2.2 b)	Single faults in charging circuitry	(See Annex B.4)	—
M.4.3	Fire Enclosure		N/A
M.4.4	Endurance of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation		N/A
M.4.4.3	Drop and charge/discharge function tests		N/A
	Drop		N/A
	Charge		N/A
	Discharge		N/A
M.4.4.4	Charge-discharge cycle test		N/A
M.4.4.5	Result of charge-discharge cycle test		N/A
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A
M.6	Prevention of short circuits and protection from other effects of electric current		N/A
M.6.1	Short circuits		N/A
M.6.1.1	General requirements		N/A
M.6.1.2	Test method to simulate an internal fault		N/A
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method)		N/A
M.6.2	Leakage current (mA)		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
M.7.2	Compliance and test method		N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A
M.8.1	General requirements		N/A
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume V_z (m ³ /s)		—
M.8.2.3	Correction factors		—



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M.8.2.4	Calculation of distance d (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 (Determination of compliance: inspection, data review; or abnormal testing)		N/A
N	ELECTROCHEMICAL POTENTIALS		N/A
	Metal(s) used	Pollution degree considered	—
O	MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES		P
	Figures O.1 to O.20 of this Annex applied.....		—
P	SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS		P
P.1	General requirements		P
P.2.2	Safeguards against entry of foreign object		P
	Location and Dimensions (mm)		—
P.2.3	Safeguard against the consequences of entry of foreign object		P
P.2.3.1	Safeguards against the entry of a foreign object		P
	Openings in transportable equipment		P
	Transportable equipment with metalized plastic parts		N/A
P.2.3.2	Openings in transportable equipment in relation to metalized parts of a barrier or enclosure (identification of supplementary safeguard)		N/A
P.3	Safeguards against spillage of internal liquids	No internal liquid	N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts		N/A
P.4.2 a)	Conditioning testing		N/A
	Tc (°C)		—
	Tr (°C)		—
	Ta (°C)		—
P.4.2 b)	Abrasion testing	(See G.13.6.2)	N/A
P.4.2 c)	Mechanical strength testing	(See Annex T)	N/A
Q	CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING		N/A
Q.1	Limited power sources		N/A
Q.1.1 a)	Inherently limited output		N/A



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Q.1.1 b)	Impedance limited output		N/A
	- Regulating network limited output under normal operating and simulated single fault condition		N/A
Q.1.1 c)	Overcurrent protective device limited output		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method		N/A
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A)		—
	Current limiting method.....		—
R	LIMITED SHORT CIRCUIT TEST		N/A
R.1	General requirements		N/A
R.2	Determination of the overcurrent protective device and circuit		N/A
R.3	Test method Supply voltage (V) and short-circuit current (A)).		N/A
S	TESTS FOR RESISTANCE TO HEAT AND FIRE		P
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		P
	Samples, material	Plastic enclosure	—
	Wall thickness (mm)	1,8	—
	Conditioning (°C)	70°C	—
	Test flame according to IEC 60695-11-5 with conditions as set out		P
	- Material not consumed completely		P
	- Material extinguishes within 30s		P
	- No burning of layer or wrapping tissue		P
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material		—
	Wall thickness (mm)		—
	Conditioning (°C)		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material		—
	Wall thickness (mm)		—
	Cheesecloth did not ignite		N/A



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S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material		—
	Wall thickness (mm)		—
	Conditioning (test condition), (°C).....		—
	Test flame according to IEC 60695-11-20 with conditions as set out		N/A
	After every test specimen was not consumed completely		N/A
	After fifth flame application, flame extinguished within 1 min		N/A
T	MECHANICAL STRENGTH TESTS		P
T.1	General requirements		P
T.2	Steady force test, 10 N	(See appended table T.2)	P
T.3	Steady force test, 30 N	(See appended table T3)	P
T.4	Steady force test, 100 N	(See appended table T4)	P
T.5	Steady force test, 250 N	(See appended table T5)	N/A
T.6	Enclosure impact test	(See appended table T6)	N/A
	Fall test		N/A
	Swing test		N/A
T.7	Drop test	(See appended table T7)	P
T.8	Stress relief test	(See appended table T8)	P
T.9	Impact Test (glass)		N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		N/A
	Impact energy (J)		—
	Height (m)		—
T.10	Glass fragmentation test	(See sub-clause 4.4.4.9)	N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm)	---	—
U	MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION		N/A
U.1	General requirements		N/A
U.2	Compliance and test method for non-intrinsically protected CRTs		N/A
U.3	Protective Screen	(See Annex T)	N/A



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V	DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)		P
V.1	Accessible parts of equipment		P
V.2	Accessible part criterion		P

4.1.2	TABLE: List of critical components					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹	
PCB	SHANDONG JINBAO ELECTRONICS CO LTD	ZD-16F	V-0, 130°C	UL796	UL (E141940)	
All appliance as a socket outlet	Mutlusan	Same as in the label	Same as in the label	IEC 60884-1	Tested by CGS (LVD- 183-59)	
Transformer insulation system	SHAN JING POWER SUPPLY CO LTD	EF1608	Class 130 (B)	UL1310	UL (E321863)	
Fusing resistor	Shenzhen Yuzhouxin Electronic Co Ltd	3,3 ohm	3,3 ohm	UL 1412	UL (E488162)	
Y1 capacitor	JYH CHUNG ELECTRONICS CO LTD	JD	85°C	UL 1414	UL (E187963)	
X2 capacitor	JYH CHUNG ELECTRONICS CO LTD	JY	---	DIN EN 60384-14	VDE (40038643)	
Varistor	Cerglass MFG	07D series	10A Nominal	EN 61051-1	VDE (Cert No: 40028836)	
Varistor	Cerglass MFG	20D471K	20A Nominal	EN 61051-1	VDE (Cert No: 40028836)	
Supply cord	Ünal Kablo	H05VV-F	3G1,5mm ²	TS EN 50525-2- 11	TSE HAR (316745)	
Plug	Ünal Kablo	UK.04	250VAC, 16A, DIN 49441-R2	DIN VDE 0620-2- 1/A1 (VDE 0620- 2-1/A1):2017-09	VDE (40039513)	
Switch	Nova Electronics Co., Ltd.	KAN-L6	250V, T105/55	EN 61058- 1:2002+A2	TUV (AN 50232874)	

Supplementary information:

1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.

2) Description line content is optional. Main line description needs to clearly detail the component used for testing

Model No of Surge Protection Circuit: MUT07-X0524-2UT-FB-V01

Model No of USB circuit: MUT07-X0524-2UT-CE-ZB-V-01



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4.8.4, 4.8.5	TABLE: Lithium coin/button cell batteries mechanical tests			N/A
(The following mechanical tests are conducted in the sequence noted.)				
4.8.4.2	TABLE: Stress Relief test			---
	Part	Material	Oven Temperature (°C)	Comments
	---	---	---	---
4.8.4.3	TABLE: Battery replacement test			---
	Battery part no.....	---		---
	Battery Installation/withdrawal	Battery Installation/Removal Cycle		Comments
	---	1		---
	---	2		---
	---	3		---
	---	4		---
	---	5		---
	---	6		---
	---	8		---
	---	9		---
	---	10		---
4.8.4.4	TABLE: Drop test			---
	Impact Area	Drop Distance	Drop No.	Observations
	---	---	1	---
	---	---	2	---
	---	---	3	---
4.8.4.5	TABLE: Impact			---
	Impacts per surface	Surface tested	Impact energy (Nm)	Comments
	---	---	---	---
	---	---	---	---
	---	---	---	---
4.8.4.6	TABLE: Crush test			---
	Test position	Surface tested	Crushing Force (N)	Duration force applied (s)
	---	---	---	---
	---	---	---	---
Supplementary information: ---				



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4.8.5	TABLE: Lithium coin/button cell batteries mechanical test result			N/A
Test position	Surface tested	Force (N)	Duration force applied (s)	
---	---	---	---	
---	---	---	---	

Supplementary information:

5.2	Table: Classification of electrical energy sources						P
5.2.2.2 – Steady State Voltage and Current conditions							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				U (Vrms or Vpk)	I (Apk or Arms)	Hz	
1	250	Supply terminal	Normal	250 Vrms	0,1A	50 Hz	ES3
			Abnormal	250 Vrms	0,11A	50 Hz	
			Single fault – SC/OC	250 Vrms	0,11A	50 Hz	
2	250	USB output ports	Normal	5,1 VDC	2,4A	DC	ES1
			Abnormal	5,1 VDC	2,4A	DC	
			Single fault – SC/OC	≤5,1 VDC	---	DC	

5.2.2.3 - Capacitance Limits							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class	
				Capacitance, nF	Upk (V)		
1	250V	USB output pins	Normal	1000 uF + 470 uF	5V	ES1	
			Abnormal	---	---		
			Single fault – SC/OC	---	---		

5.2.2.4 - Single Pulses							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Duration (ms)	Upk (V)	l _{pk} (mA)	
---	---	---	Normal	---	---	---	---
			Abnormal	---	---	---	
			Single fault – SC/OC	---	---	---	

5.2.2.5 - Repetitive Pulses							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Off time (ms)	Upk (V)	l _{pk} (mA)	
---	---	---	Normal	---	---	---	---



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		Abnormal	---	---	---
		Single fault – SC/OC	---	---	---
Test Conditions:					
Normal –					
Abnormal -					
Supplementary information: SC=Short Circuit, OC=Short Circuit					

5.4.1.4, 6.3.2, 9.0, B.2.6	TABLE: Temperature measurements					P	
	Supply voltage (V)	275	---	---	---	—	
	Ambient T _{min} (°C)	31,2	---	---	---	—	
	Ambient T _{max} (°C)	33,9	---	---	---	—	
	T _{ma} (°C)	25	---	---	---	—	
Maximum measured temperature T of part/at:		T (°C)				Allowed T _{max} (°C)	
Transformer		105,9	---	---	---	110**	
PCB of SPD		79,7	---	---	---	130*	
PCB of USB		91	---	---	---	130*	
Outer surface		57,8	---	---	---	77	
Supplementary information:							
1) * indicates that the value is taken from component datasheet.							
2) ** indicates that transformer insulation class declared as Class 130 (B). Thermocouple method is used.							
Temperature T of winding:	t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class
---	---	---	---	---	---	---	---
Supplementary information:							
Note 1: T _{ma} should be considered as directed by applicable requirement							
Note 2: T _{ma} is not included in assessment of Touch Temperatures (Clause 9)							

5.4.1.10.2	TABLE: Vicat softening temperature of thermoplastics			N/A
Penetration (mm)	---			—
Object/ Part No./Material	Manufacturer/t rademark	T softening (°C)		
---	---	---		
supplementary information:---				



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5.4.1.10.3	TABLE: Ball pressure test of thermoplastics			N/A
Allowed impression diameter (mm): ≤ 2 mm				---
Object/Part No./Material	Manufacturer/trademark	Test temperature (°C)	Impression diameter (mm)	
---	---	---	---	
Supplementary information:---				

5.4.2.2, 5.4.2.4 and 5.4.3	TABLE: Minimum Clearances/Creepage distance						P
Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz) ¹	Required cl (mm)	cl (mm) ²	Required ³ cr (mm)	cr (mm)
Between primary and secondary side	353	250V	50Hz	3	3,08	5	5,99
Supplementary information: Note 1: Only for frequency above 30 kHz Note 2: See table 5.4.2.4 if this is based on electric strength test Note 3: Provide Material Group							

5.4.2.3	TABLE: Minimum Clearances distances using required withstand voltage			P
Overvoltage Category (OV):			II	
Pollution Degree:			II	
Clearance distanced between:	Required withstand voltage	Required cl (mm)	Measured cl (mm)	
Between primary and secondary side	2500	3	3,08	
Supplementary information: ---				

5.4.2.4	TABLE: Clearances based on electric strength test			N/A
Test voltage applied between:	Required cl (mm)	Test voltage (kV) peak/ r.m.s. / d.c.	Breakdown Yes / No	
---	---	---	---	
Supplementary information: ---				

5.4.4.2, 5.4.4.5 c) 5.4.4.9	TABLE: Distance through insulation measurements					N/A
Distance through insulation di at/of:	Peak voltage (V)	Frequency (kHz)	Material	Required DTI (mm)	DTI (mm)	
---	---	---	---	---	---	
Supplementary information: ---						



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5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:	Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No	
Basic/supplementary:				
LN to PE	AC	2000 Vrms	No	
Reinforced:				
LN to Secondary circuit (USB port)	AC	3000 Vrms	No	
LN to Plastic body covered with metal foil	AC	3000 Vrms	No	
Supplementary information:				

5.5.2.2	TABLE: Stored discharge on capacitors					P
Supply Voltage (V), Hz	Test Location	Operating Condition (N, S)	Switch position On or off	Measured Voltage (after 2 seconds)	ES Classification	
250V, 50 Hz	Phase to Neutral	N	On	<60V after 1 s	ES1	
Supplementary information:						
X-capacitors installed for testing are:						
<input type="checkbox"/> bleeding resistor rating:						
<input type="checkbox"/> ICX:						
Notes:						
A. Test Location:						
Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth						
B. Operating condition abbreviations:						
N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition						

5.6.6.2	TABLE: Resistance of protective conductors and terminations				P
Accessible part	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)	
PE in plug to PE in socket outlets	32	2	1,21	0,038	
Supplementary information: The longest model is provided with 6 outlets.					

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part		P
Supply voltage	225V		—
Location	Test conditions specified in 6.1 of IEC 60990 or Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7		Touch current (mA)
	1		0,01 mA



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Phase conductors to accessible surfaces (covered with metal foil for plastic cover)	2*	N/A
	3	N/A
	4	N/A
	5	N/A
	6	N/A
	8	N/A
Supplementary Information:		
Notes:		
[1] Supply voltage is the anticipated maximum Touch Voltage		
[2] Earthed neutral conductor [Voltage differences less than 1% or more]		
[3] Specify method used for measurement as described in IEC 60990 sub-clause 4.3		
[4] IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable.		
[5] (*) IEC60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided.		

6.2.2	Table: Electrical power sources (PS) measurements for classification				P
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s [*]	PS Classification
A	Measured from supply terminal	Power (W) :	15,33	15,33	PS2
		V _A (V) :	225	225	
		I _A (A) :	0,12	0,12	
B	Rated values considering socket outlets	Power (W) :	3500	3500	PS3
		V _A (V) :	250	250	
		I _A (A) :	16	16	
C	---	Power (W) :	11	11	PS1
		V _A (V) :	4,9	4,9	
		I _A (A) :	2,4	2,4	
D	---	Power (W) :	---	---	---
		V _A (V) :	---	---	
		I _A (A) :	---	---	
Supplementary Information:					
(*) Measurement taken only when limits at 3 seconds exceed PS1 limits					

6.2.3.1	Table: Determination of Potential Ignition Sources (Arcing PIS)			P
Location	Open circuit voltage After 3 s (V _p)	Measured r.m.s current (I _{rms})	Calculated value (V _p x I _{rms})	Arcing PIS? Yes / No
Supply terminal/connector	353	0,1	35,3	Yes



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Supplementary information:

An Arcing PIS requires a minimum of 50 V (peak) a.c. or d.c. An Arcing PIS is established when the product of the open circuit voltage (V_p) and normal operating condition rms current (I_{rms}) is greater than 15.

6.2.3.2	Table: Determination of Potential Ignition Sources (Resistive PIS)				P
Circuit Location (x-y)	Operating Condition (Normal / Describe Single Fault)	Measured wattage or VA During first 30 s (W / VA)	Measured wattage or VA After 30 s (W / VA)	Protective Circuit, Regulator, or PTC Operated? Yes / No (Comment)	Resistive PIS? Yes/No
Supply terminal	Normal (2,4A)	17,88W / 38,55 VA	17,88W / 38,55 VA	No	Yes

Supplementary Information:

A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter.

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

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

8.5.5	TABLE: High Pressure Lamp		N/A
Description	Values	Energy Source Classification	
Lamp type	---	---	
Manufacturer	---	---	
Cat no.....	---	---	
Pressure (cold) (MPa)	---	MS_	
Pressure (operating) (MPa).....	---	MS_	
Operating time (minutes).....	---	---	
Explosion method	---	---	
Max particle length escaping enclosure (mm) .:	---	MS_	
Max particle length beyond 1 m (mm)	---	MS_	
Overall result	---	---	

Supplementary information:



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B.2.5							TABLE: Input test		P
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status		
225	0,15	16A	16,14	3500W	FR1	0,15	Normal operating / Abnormal operation (overload at USB output)		
250	0,15	16A	17,40	3500W	FR1	0,15	Normal operating / Abnormal operation (overload at USB output)		
275	0,14	16A	17,88	3500W	F1	0,14	Normal operating / Abnormal operation (overload at USB output)		

Supplementary information:
Equipment may be have rated current or rated power or both. Both should be measured.

The rated power and current indicates total values including socket outlets. In the scope of this report, only the USB part is inspected.

B.3								TABLE: Abnormal operating condition tests		P
Ambient temperature (°C)					27			—		
Power source for EUT: Manufacturer, model/type, output rating ..					See Attachment 1			—		
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation		
USB output port	Short Circuit	275	15	FR1	---	---	---	No power consumption, short circuit protection is active. No temp rise.		
USB output port	Overload	275	---	---	---	---	---	No overload test is applicable. The output power in normal operation is the maximum power provided.		

Supplementary information:
Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column "Abnormal/Fault." Specify if test condition by indicating "Abnormal" then the condition for a Clause B.3 test or "Single Fault" then the condition for Clause B.4.



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B.4			TABLE: Fault condition tests					P
Ambient temperature (°C) :			25					—
Power source for EUT: Manufacturer, model/type, output rating :			See Attachment 1					—
Component No.	Fault Condition	Supply voltage, (V)	Test time (min)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
R9	S.C	275	10	FR1	---			No output, no power consumption. No temperature rise.
R9	O.C	275	30	FR1	0,1			Normal operation. No excessive temperature rise.
R10	S.C	275	10	FR1	---			No output, no power consumption. No temperature rise.
R10	O.C	275	30	FR1	0,1			Normal operation. No excessive temperature rise.
C5	S.C	275	10	FR1	---			No output, no power consumption. No temperature rise.
C4	S.C	275	10	FR1	---			No output, no power consumption. No temperature rise.
R3	S.C	275	10	FR1	---			No output, no power consumption. No temperature rise.



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B.4			TABLE: Fault condition tests					P
Ambient temperature (°C) :			25					—
Power source for EUT: Manufacturer, model/type, output rating :			See Attachment 1					—
R4	S.C	275	10	FR1	---		No output, no power consumption. No temperature rise. Permanently broken after test.	
C6	S.C	275	10	FR1	---		No output, no power consumption. No temperature rise. Permanently broken after test.	
R8	S.C	275	30	FR1	0,1		Normal operation. No excessive temperature rise.	
C3	S.C	275	10	FR1	---		No output, no power consumption. No temperature rise.	
R2	S.C	275	10	FR1	---		No output, no power consumption. No temperature rise. Permanently broken after test.	
R5	S.C	275	10	FR1	---		No output, no power consumption. No temperature rise. Permanently broken after test.	



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B.4			TABLE: Fault condition tests					P
Ambient temperature (°C) :			25					—
Power source for EUT: Manufacturer, model/type, output rating :			See Attachment 1					—
C7	S.C	275	10	FR1	---		No output, no power consumption. No temperature rise.	
R17	S.C	275	30	FR1	0,1		Normal operation. No excessive temperature rise.	
C2	S.C	275	10	FR1	---		No output, no power consumption. No temperature rise. Permanently broken after test.	
Supplementary information:---								

Annex M.4	Table: Additional safeguards for equipment containing secondary lithium batteries				N/A
Battery/Cell No.	Test conditions	Measurements			Observation
		U	I (A)	Temp (C)	
---	Normal	---	---	---	---
---	Abnormal	---	---	---	---
---	Single fault –SC/OC	---	---	---	---
---	Normal	---	---	---	---
---	Abnormal	---	---	---	---
---	Single fault – SC/OC	---	---	---	---
Supplementary Information:---					



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Annex Q.1	TABLE: Circuits intended for interconnection with building wiring (LPS)	N/A				
Note: Measured UOC (V) with all load circuits disconnected:						
Output Circuit	Components	U _{oc} (V)	I _{sc} (A)		S (VA)	
			Meas.	Limit	Meas.	Limit
---	---	---	---	---	---	---
Supplementary Information: SC=Short circuit, OC=Open circuit						

T.2, T.3, T.4, T.5	TABLE: Steady force test	P			
Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation
Top	Thermoplastic cover (Material unknown)	0,8	30N	5s	No damage
Side	Thermoplastic cover (Material unknown)	0,8	30N	5s	No damage
Bottom	Thermoplastic cover (Material unknown)	0,8	30N	5s	No damage
Top	Thermoplastic cover (Material unknown)	0,8	100N	5s	No damage
Side	Thermoplastic cover (Material unknown)	0,8	100N	5s	No damage
Bottom	Thermoplastic cover (Material unknown)	0,8	100N	5s	No damage
Supplementary information: T.3 and T.4 applied.					

T.6, T.9	TABLE: Impact tests	N/A		
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation
---	---	---	---	---
Supplementary information:				

T.7	TABLE: Drop tests	P		
Part/Location	Material	Thickness (mm)	Drop Height (mm)	Observation



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Top, Side and Bottom	Thermoplastic cover (Material unknown)	0,8	750	No damage
Supplementary information: ---				

T.8	TABLE: Stress relief test				P
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation
Complete Enclosure	Thermoplastic cover (Material unknown)	0,8	70	7	No damage
Supplementary information: ---					



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ATTACHMENT 1

Equipment of measurements

Equipment No	Kind of equipment	Model Type	Manufacturer	Last Cal Date	Next Cal Date	Last Ver Date	Next Ver Date	Test Clause
E-054	CE COMPACT TESTER	C.A 6160	CHAUVIN ARNOUX	14.12.2019	14.12.2020	---	---	---
E-039	AC Supply	---	VARSAN	---	---	---	---	---
E-008	Oscilloscope	UTD2012CEX	UNI-T	10.10.2020	10.10.2021	---	---	---
E-009	Oscilloscope Probe	UT-P04	UNI-T	10.10.2020	10.10.2021	---	---	---
E-011	Multimeter	UT61B	UNI-T	10.10.2020	10.10.2021	---	---	---
E-004	Climatic Chamber	---	ULMEKA Mekatronik Sistemler	15.10.2020	15.10.2021	---	---	---
E-095	Tested Box (EN 60990)	MTFIG4	MULTITECH	01.04.2020	01.04.2021	---	---	---
E-033	Temperature-Humidity Meter	30.3166.02.S2	TFA	20.10.2020	20.10.2021	---	---	---
E-003	Datalogger	DL40	CSK elektronik	01.04.2020	01.04.2021	---	---	---
E-034	Etuv Oven	T12	HERAEUS	15.10.2020	15.10.2021	---	---	---
E-024	Prob 13	TS015/1000-13	CSK Elektrik Elektronik San. ve Tic. Ltd. Şti	---	---	05.05.2020	05.10.2021	---
E-031	Test Finger	---	CSK Elektrik Elektronik San. ve Tic. Ltd. Şti	---	---	05.05.2020	05.10.2021	---
E-021	Prob B	TS015/1000-B	CSK Elektrik Elektronik San. ve Tic. Ltd. Şti	---	---	05.05.2020	05.10.2021	---
E-007	Needle flame	---	ULMEKA MEKATRONİK SİSTEMLER	---	---	05.05.2020	05.05.2021	---
E-080	DC Load	Rigol	DL3021A	07.04.2020	07.04.2021	---	---	---
E-081	Regulator	Delta Elektrik Elektronik İmalat San.	---	---	---	---	---	---



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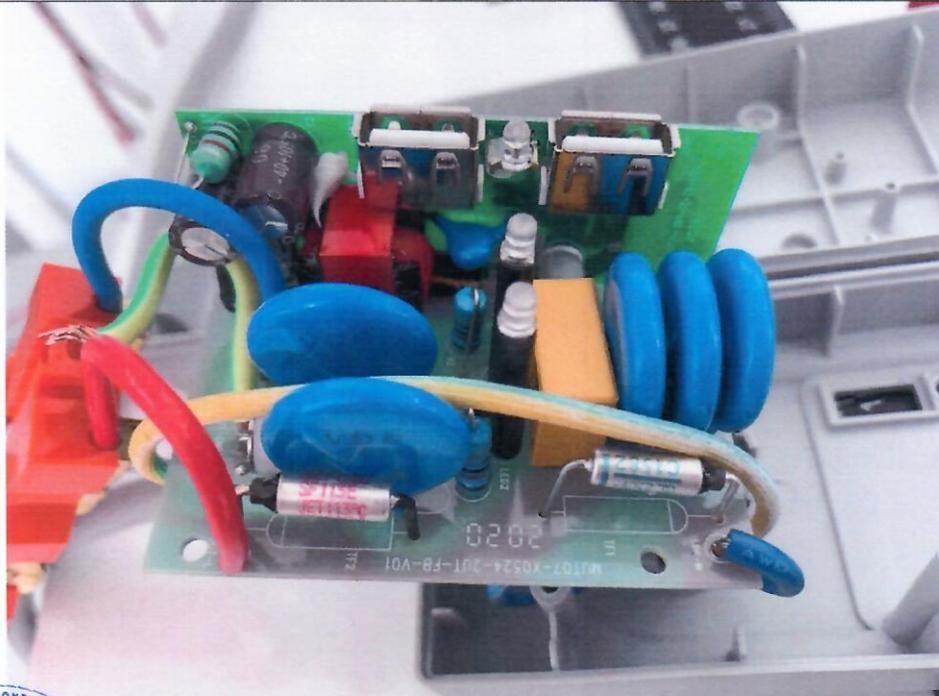
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ATTACHMENT 2**Photos Documentation**

Photo documentation



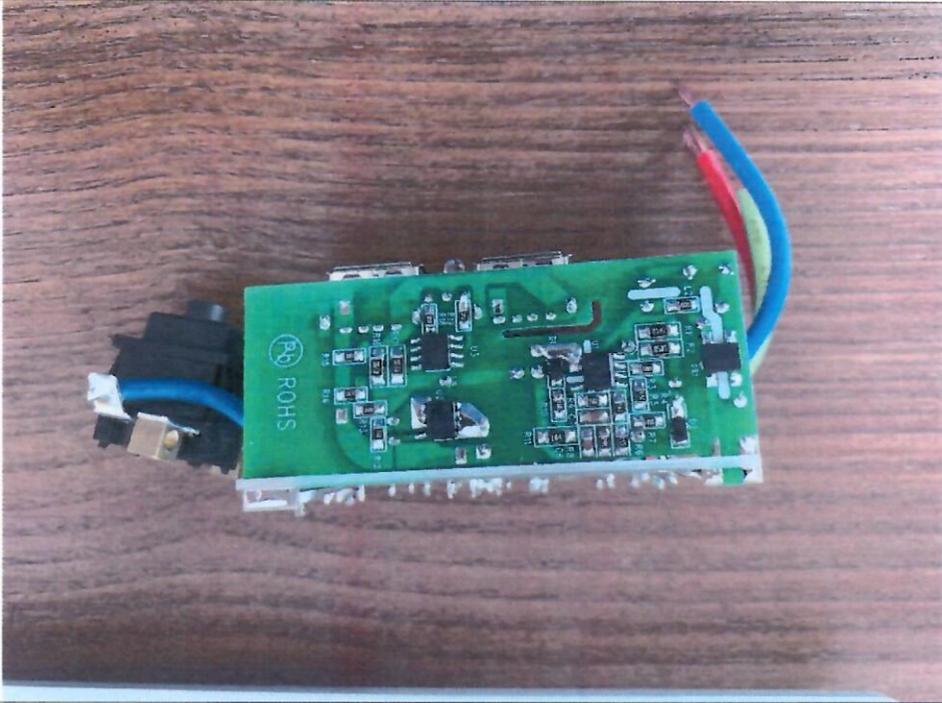
Top View



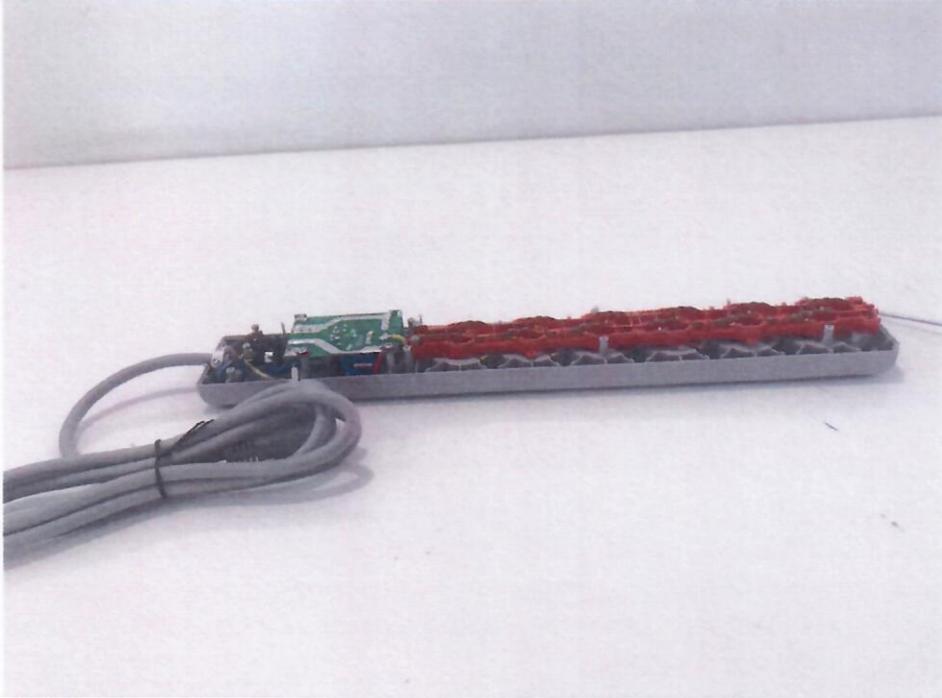
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Inside View



Inside View

