SWASTIK ELECTRONICS TESTING CENTRE

ULR No. : TC757523000001738F

DOC No.	:	SETC23199002	Plot No-16, Mainapur Industrial Area, Ghaziabad, Uttar Pradesh 201003, Ghaziabad, Ghaziabad, Uttar Pradesh, India - 201003
Telephone	:	+91 9311299492	
FAX	:	-	
E-Mail	:	swastikelektroniks@gmail.com	
BO Code	:	NA	

Test REPORT AS PER : IS 13252 : Part 1 (2010)

QR Code/Barcode : 155722CRS

REPORT NO : SC23EPF11931_1 DATE : 12 Aug, 2023

PART A. PARTICULARS OF SAMPLE SUBMITTED

a) Customer Name & Address	:	Globtek (Suzhou) Co.,Ltd NO.76 JINLING EAST ROAD, SUZHOU INDISTRIAL PARK, CHINA, NA, China - 0
b) Nature of sample	:	-
c) Grade/Variety/Type/Class Size etc	:	NA
d) Declare values, if any	:	-
e) Batch No. & Date of Manufacture	:	/
f) Quantity	:	4
g) Date of Receipt	:	18 Jul, 2023
h) BIS Seal	:	Verified by Sample Cell
i) IO's Signature	:	Verified by Sample Cell
j) Any other Information / Expiry Date, If any	:	/
k) Date of Commencement of Testing	:	18 Jul, 2023
l) Date of Completion of Testing	:	12 Aug, 2023
m) Section Code	:	23E1D58N
n) Section Report No.	:	23E1D58N_1
o) Report Type	:	New
p) Reference Report No.	:	
q) Remarks	:	-

ASHISH Kumar
OIC SAMPLE CELL
(Authorized Signatory)
Authorized on: 12 Aug, 2023 18:28 PM

1. SWASTIK ELECTRONICS TESTING CENTRE

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PART B. SUPPLEMENTARY INFORMATION

1.	Reference to sampling procedure, wherever applicable.	Not Applicable
2.	Supporting documents for the measurements taken and results derived like graphs, table sketches and or photographs as appropriate to test report, if any.	Yes
3.	Deviation from the test methods as prescribed in relevant ISS/Work instruction, if any.	Not Applicable
3.	NABL Report required ?	Yes

Nitin Tyagi
OIC Electrical
(Authorized Signatory)
Authorized on: 12 Aug, 2023 18:17 PM

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PART C. TEST RESULT

S.No.	Clause No Table No. Sl. No	Parameter - Method of test	Test Description	Min Limit	Max Limit	Unit	Result/ Observation
1	7.4	Insulation between primary circuits and cable distribution systems	Insulation between primary circuits and cable distribution systems	-	-	-	Equipment is not for connection to cable distribution system
2	7.3	Protection of equipment users from overvoltages on the cable distribution system	Protection of equipment users from overvoltages on the cable distribution system	-	-	-	Equipment is not for connection to cable distribution system
3	7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment	-	-	-	Equipment is not for connection to cable distribution system
4	7.1	General	Connection to cable distribution systems	-	-	-	Equipment is not for connection to cable distribution system
5	6.3	Protection of the telecommunication wiring system from overheating	Protection of the telecommunication wiring system from overheating	-	-	-	Equipment is not for connection to telecommunication wiring system
6	6.2	Protection of equipment users from overvoltages on networks telecommunication	Protection of equipment users from overvoltages on networks telecommunication	-	-	-	Equipment is not for connection to telecommunication network
7	6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment	-	-	-	Equipment is not for connection to telecommunication network
8	5.3	Abnormal operating and fault conditions	Abnormal operating and fault conditions test	-	-	-	See Table no. 5.3 in Attachment
9	5.2	Electric strength	To Check Insulation as per Clause 5.2,5.2.1,5.2.2	-	-	-	See Table no. 5.2 in Attachment
10	5.1	Touch current and protective conductor curren	Cl. 5.1	-	-	-	See Table no. 5.1.6 in Attachment
11	4.7	Resistance to fire	Clause 4.7, 4.7.1, 4.7.2, 4.7.2.1, 4.7.2.2, 4.7.3, 4.7.3.1	-	-	-	See Clause 4.7 in attachment
12	4.6	Openings in enclosures	Openings in enclosures	-	-	-	No Openings
13	4.5	Thermal requirements	Temperature rise measurement Test	-	-	-	See Clause 4.5 in attachment
14	4.4	Protection against hazardous moving parts	Protection against hazardous moving parts	-	-	-	No hazardous moving parts
15	4.3	Design and construction	Design and construction	-	-	-	See Clause 4.3 in attachment

16	4.2	Mechanical strength	Mechanical Strength Test	-	-	-	See Clause 4.2 in attachment
17	4.1	Stability	Clause 4.1 Stability	-	-	-	Mass<7Kg.
18	3.5	Interconnection of equipment	Clause 3.5, 3.5.1, 3.5.2, 3.5.4	-	-	-	See Clause 3.5 in attachment
19	3.4	Disconnection from the mains supply	Appliance inlet is considered as disconnect device	-	-	-	See Clause 3.4 in attachment
20	3.3	Wiring terminals for connection of external conductors	Wiring terminals for connection of external conductors	-	-	-	No wiring terminals
21	3.2	Connection to a mains supply	Clause 3.2: Connection to a mains supply	-	-	-	See Clause 3.2 in attachment
22	3.1	General	Clause 3.0, 3.1.1, 3.1.2, 3.1.3	-	-	-	See Clause 3.0 in attachment
23	2.10	Clearances, creepage distances and distances through insulation	Clause 2.10, 2.10.1.2, 2.10.1.3, 2.10.3, 2.10.3.4	-	-	-	See Clause No. 2.10 in Attachment
24	2.9	Electrical insulation	Clause 2.9 Electrical insulation	-	-	-	See Clause No. 2.9 in Attachment
25	2.8	Safety interlocks	Clause 2.8 Safety Interlocks-	-	-	-	No safety interlocks
26	2.7	Overcurrent and earth fault protection in primary circuits	Certified Fuse is provided for protection against short – circuits and overcurrent. The building installation consider as short-circuit backup protection.	-	-	-	See Table no. 2.7 in Attachment
27	2.6	Provisions for earthing and bonding	Clause 2.6 Provisions for earthing and bonding	-	-	-	Class ll equipment
28	2.5	Limited power sources .	Limited power sources test perform on Secondary Li-ion battery pack	-	-	-	Satisfactory (See table no. 2.5 in Attachment)
29	2.4	Limited current circuits	Limited current circuits	-	-	-	See table 2.4.2 in Attachment
30	2.3	TNV circuits	TNV circuits	-	-	-	No TNV circuits
31	2.2	SELV circuits	Clause 2.2: SELV circuits	-	-	-	See table 2.2.2 & 2.2.3 in attachment
32	2.1	Protection from electric shock and energy hazards	Clause 2.1: Protection from electric shock and energy hazards	-	-	-	See Clause 2.1 in attachment
33	1.7	Markings and instructions	Clause: 1.7.11 (Durability) Rubbing the marking by hand for 15s with a piece of cloth soaked with water and again for 15 s with a piece of cloth soaked with petroleum spirit.	-	-	-	Marking is legible and durable after the test
34	1.6	Power interface .	Input current Measurement	-	-	-	See table 1.6.2 in attachment
35	1.5	Components	Addition of alternate certified switching power supply based on relevant documents provided by manufacturer	-	-	-	Verification of approvals with due correlation between the components used and the approval certificates submitted (See table 1.5.1)

Nitin Tyagi
OIC Electrical
(Authorized Signatory)
Authorized on: 12 Aug, 2023 18:17 PM

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PART D. REMARKS

Nitin Tyagi
OIC Electrical
(Authorized Signatory)
Authorized on: 12 Aug, 2023 18:17 PM

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SWASTIK Electronics Testing Centre	**SUMMARY OF TEST REPORT NO:** **SC23EPF11931_1**	TC-7575
ULR: TC757523000001738F		**Date: 12/08/2023**

(Number of Pages in Test Report: Page No. 1 to 110)

TEST FORMAT AS PER IS 13252 (Part 1): 2010 + A1: 2013 + A2: 2015/ IEC 60950-1: 2005 + A1:2009 + A2: 2013

1. **Name of the Manufacturer**: Globtek (Suzhou) Co.,Ltd
2. **Product:** ITE Power Supply (Power Adaptors for IT Equipment)
3. **Lead Model:** GTM46161-165.0-USB2A Series Models: GTM46161-165.0-USB, GTM46161-165.0-USB1A, GTM46161-155.2-USB1A, GTM46161-155.0-USBC, GTM46161-165.5-USBC, GTM46161-155.0-USB1A1C, GTM46161-165.5-USB1A1C, GTM46161-155.0-USB2C, GTM46161-165.5-USB2C
4. **Model differences provided (if applicable): Yes**
5. **Model differences verified as per MEITY Guidelines for series formulation: Yes**
6. **Test Results:** Refer below

PART A: GENERAL

SL. NO.	TEST REQUIREMENT	TEST CODE	CLAUSE	VERDICT
1.	Components	EL 2100	1.5	P
2.	Power interface	EL 2101	1.6	P
3.	Markings and instructions	EL 2102	1.7	P

PART B: PROTECTION FROM HAZARDS

SL. NO.	TEST REQUIREMENT	TEST CODE	CLAUSE	VERDICT
1.	Protection from electric shock and energy hazards	EL 2103	2.1	P
2.	SELV circuits	EL 2104	2.2	P
3.	TNV circuits	EL 2105	2.3	N/A
4.	Limited current circuits	EL 2106	2.4	P
5.	Limited power source	EL 2107	2.5	P
6.	Provisions for earthing and bonding	EL 2108	2.6	N/A
7.	Overcurrent and earth fault protection in primary circuits	EL 2109	2.7	P
8.	Safety interlocks	EL 2110	2.8	N/A
9.	Electrical insulation	EL 2111	2.9	P
10.	Clearances, creepage distance and distances through insulation	EL 2112	2.10	P

SWASTIK ELECTRONICS TESTING CENTRE

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Email: info@swastiktestingcentre.com I Web: www.swastiktestingcentre.com

PART C: WIRING, CONNECTIONS AND PHYSICAL REQUIREMENTS

SL. NO	TEST REQUIREMENT	TEST CODE	CLAUSE	VERDICT
1.	Wiring, connections and supply	EL 2113	3	P
2.	Connection to a mains supply	EL 2114	3.2	P
3.	Wiring terminals for connection of external conductors	EL 2115	3.3	N/A
4.	Disconnections from the main supply	EL 2116	3.4	P
5.	Interconnection of equipment	EL 2117	3.5	P
6.	Stability	EL 2118	4.1	N/A
7.	Mechanical strength	EL 2119	4.2	P
8.	Design and construction	EL 2120	4.3	P
9.	Protection against hazardous moving parts	EL 2121	4.4	N/A
10.	Thermal requirements	EL 2122	4.5	P
11.	Openings in enclosures	EL 2123	4.6	N/A
12.	Resistance to fire	EL 2124	4.7	P

PART D: ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS

SL. NO.	TEST REQUIREMENT	TEST CODE	CLAUSE	VERDICT
1.	Touch current and protective conductor current	EL 2125	5.1	P
2.	Electric strength	EL 2126	5.2	P
3.	Abnormal operating and fault conditions	EL 2127	5.3	P

PART E: CONNECTION TO TELECOMMUNICATION NETWORK AND CABLE DISTRIBUTION SYSTEM

SL. NO.	TEST REQUIREMENT	TEST CODE	CLAUSE	VERDICT
1.	Protection of telecommunication network service persons and users of other equipment connected to the network, from hazards in the equipment	EL 2128	6.1	N/A
2.	Protection of equipment users from overvoltages on telecommunication networks	EL 2129	6.2	N/A
3.	Protection of the telecommunication wiring system from overheating	EL 2130	6.3	N/A
4.	Connection to cable distribution systems	EL 2131	7	N/A

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GENERAL INFORMATION:

1. The conformity certificates of critical components are verified to ensure complete testing of apparatus under test and details regarding harmonized IEC standards (where IEC standards are not available) are also provided in the list of critical components.

2. All test Have been Performed on Model: GTM46161-165.0-USB2A only

CONCLUSION:

1. Sample meets all relevant requirements of IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015/ IEC 60950-1: 2005 + A1:2009 + A2 : 2013
2. ~~Sample fails to meet the following test requirements.~~

I, hereby undertake that the verdict stated in the test reports for all the test matches with the test results. The sample meets all relevant requirements of IS 13252 (Part 1): 2010 + A1: 2013 + A2: 2015/ IEC 60950-1: 2005 + A1:2009 + A2 : 2013/ ~~does not meet the requirements~~. If any deviation found, suitable punitive action may be taken by BIS

Date: 12/08/2023 **(Signature of Authorized person with Stamp)**

SWASTIK ELECTRONICS TESTING CENTRE

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Email: info@swastiktestingcentre.com I Web: www.swastiktestingcentre.com

Manufacturer:	**Globtek (Suzhou) Co.,Ltd,** NO.76 JINLING EAST ROAD, SUZHOU INDISTRIAL PARK, CHINA
Test Item :	**ITE Power Supply (Power Adaptors for IT Equipment)**
Identification:	**Lead Model:** GTM46161-165.0-USB2A **Serial No.:** Nil **Series Models:** GTM46161-165.0-USB, GTM46161-165.0-USB1A, GTM46161-155.2-USB1A, GTM46161-155.0-USBC, GTM46161-165.5-USBC, GTM46161-155.0-USB1A1C, GTM46161-165.5-USB1A1C, GTM46161-155.0-USB2C, GTM46161-165.5-USB2C
Receipt No:	956525 **Date of Receipt**: 18/07/2023
Testing Laboratory :	**SWASTIK ELECTRONICS TESTING CENTRE** Plot No-16, Mainapur Industrial Area, Ghaziabad Uttar Pradesh 201003
Test Specifications:	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 + A1: 2009 + A2 : 2013
Test Result :	The test item passed the test specification(s).
Other Aspects :	1) This report consists of 110 pages. 2) Lab Doc. No.: SETC23199002 3) LIMS Encoded Code: 23E1D58N

Tested By:	**Approved By/Authorized Signatory:**	**Issued by:**
SR.TESTING ENGINEER: **Mr. VINIT KUMAR**	**TECHNICAL MANAGER :** **Mr. NITIN TYAGI**	**IA : Mr. ASHISH KUMAR**
Date: 12/08/2023	**Date: 12/08/2023**	**Date: 12/08/2023**

TEST REPORT IS 13252 (Part 1): 2010 + A1: 2013+ A2: 2015 / IEC 60950-1: 2005 + A1: 2009 + A2: 2013 Information technology equipment – Safety – Part 1: General requirements "Power Adaptor for IT Equipment"	
Report Number: **Date of Issue :** **Total Pages :**	SC23EPF11931_1 12/08/2023 110
Testing Laboratory :	**SWASTIK ELECTRONICS TESTING CENTRE** Plot No-16, Mainapur Industrial Area, Ghaziabad Uttar Pradesh 201003
Manufacturer : **Address :**	**Globtek (Suzhou) Co.,Ltd,** NO.76 JINLING EAST ROAD, SUZHOU INDISTRIAL PARK, CHINA
Test Specification : **Standard :** **Test Procedure :** **Non Standard test method :**	 IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 + A1: 2009 + A2 : 2013 Compliance Report N/A
Test Report Form No : **Test Report Form(s) Originator :** **Master TRF :**	BIS_IT/PA_IS13252_V1.3 Bureau of Indian Standards 03/06/2016
Test Item description : **Trade Mark :** **Model/Type reference :** **Ratings :**	**ITE Power Supply (Power Adaptors for IT Equipment)** GlobTek, Inc. **Lead Model:** GTM46161-165.0-USB2A **Series Models:** GTM46161-165.0-USB, GTM46161-165.0-USB1A, GTM46161-155.2-USB1A, GTM46161-155.0-USBC, GTM46161-165.5-USBC, GTM46161-155.0-USB1A1C, GTM46161-165.5-USB1A1C, GTM46161-155.0-USB2C, GTM46161-165.5-USB2C **AC Input:** 100-240V~, 50/60Hz, 0.45A **DC Output:** 5.0V ⎓ 3.2A 16.0W
Other Documents submitted:	Please refer to Table-List of Attachment at Page No. 10

Tested By:	Approved By/Authorized Signatory:	Issued by:
SR.TESTING ENGINEER: **Mr. VINIT KUMAR**	**TECHNICAL MANAGER :** **Mr. NITIN TYAGI**	**IA : Mr. ASHISH KUMAR**
Date: 12/08/2023	**Date: 12/08/2023**	**Date: 12/08/2023**

Test Code	Description	Measurement/ testing	Total No. of tests	Total no. of applicable tests/ Req.	No. of tests/ Req. passed	Page No.
EL 2100	General Requirements	Components (Cl.1.5)	18	10	10	13-14
EL 2101	General Requirements	Power interface (Cl.1.6)	05	03	03	15
EL 2102	Marking Requirements	Marking & instructions(Cl.1.7)	39	16	16	16-18
EL 2103	Electrical safety	Protection from electric shock and energy hazards (Cl.2.1)	14	05	05	19-20
EL 2104	Electrical safety	SELV Circuits (Cl.2.2)	04	04	04	21
EL 2105	Electrical safety	TNV Circuits (Cl.2.3)	12	00	N/A	22
EL 2106	Electrical safety	Limited current circuits (Cl.2.4)	04	04	04	23
EL 2107	Electrical safety	Limited Power sources (Cl.2.5)	07	03	03	24
EL 2108	Electrical safety	Provisions for earthing and bonding (Cl.2.6)	19	00	N/A	25-26
EL 2109	Electrical safety	Overcurrent and earth fault protection in primary circuits (Cl.2.7)	07	05	05	27
EL 2110	Electrical safety	Safety Interlocks (Cl.2.8)	13	00	N/A	28
EL 2111	Electrical safety	Electrical Insulation (Cl.2.9)	05	05	05	29
EL 2112	Electrical safety	Clearances, Creepage distances and distances through insulation (Cl.2.10)	63	28	28	30-31
EL 2113	Wiring	Wiring, connections and supply (Cl.3)	11	06	06	32
EL 2114	Wiring	Connection to a main supply (Cl.3.2)	14	02	02	33-34
EL 2115	Wiring	Wiring terminals for connection of external conductors (Cl.3.3)	09	00	N/A	35
EL 2116	Wiring	Disconnection for the main supply (Cl.3.4)	12	05	05	36
EL 2117	Wiring	Interconnection of equipment (Cl.3.5)	05	03	03	37
EL 2118	Mechanical properties	Stability (Cl.4.1)	05	00	N/A	38
EL 2119	Mechanical properties	Mechanical strength (Cl.4.2)	13	06	06	39
EL 2120	Mechanical properties	Design and construction (Cl.4.3)	25	07	07	40-41

EL 2121	Mechanical properties	Protection against hazardous moving parts (Cl.4.4)	14	00	N/A	42
EL 2122	Thermal Properties	Thermal requirements (Cl.4.5)	06	06	06	43
EL 2123	Mechanical properties	Openings in Enclosures (Cl.4.6)	18	00	N/A	44-45
EL 2124	Fire Safety	Resistance to fire (Cl.4.7)	25	10	10	46-49
EL 2125	Insulating properties	Electrical requirements and simulated abnormal conditions(Cl.5),5.1	20	10	10	50-51
EL 2126	Insulating properties	Electric Strength (Cl.5.2)	03	03	03	52
EL 2127	Insulating properties	Abnormal operating and fault conditions (Cl.5.3)	11	07	07	53
EL 2128	Communicating connection	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment(Cl.6.1)	04	00	N/A	54-55
EL 2129	Communicating connection	Protection of equipment users from overvoltages on telecommunication networks (Cl.6.2)	06	00	N/A	56
EL 2130	Communicating connection	Protection of the telecommunication wiring system from overheating (Cl.6.3)	05	00	N/A	57-58
EL 2131	Connection to cable distribution systems	Connection to cable distribution systems (Cl.7)	08	00	N/A	59
EL 2132	Fire safety	Tests for resistance to heat and fire (Annex A)	20	02	02	60-61
EL 2133	Insulating properties	Motor tests under abnormal conditions (Annex B)	19	00	N/A	62-63
EL 2134	Electrical Safety	Transformers (Annex C)	03	03	03	64
EL 2135	Insulating properties	Measuring Instruments For Touch-Current Tests (Annex D)	03	02	02	65
EL 2136	Thermal Properties	Temperature Rise Of A Winding(Annex E)	01	00	N/A	66
EL 2137	Electrical safety	Measurement Of Clearances And Creepage Distances	01	01	01	67

		(Annex F)				
EL 2138	Electrical safety	Alternative Method For Determining Minimum Clearances(Annex G)	17	00	N/A	68-69
EL 2139	Radiation Safety	Ionizing Radiation (Annex H)	01	00	N/A	70
EL 2140	Electrical Safety	Table of electrochemical potentials (Annex J)	01	00	N/A	71
EL 2141	General Requirements	Thermal controls (Annex K)	07	00	N/A	72
EL 2142	General Requirements	Normal load conditions for some types of electrical business equipment (Annex L)	08	02	02	73
EL 2143	Electrical Safety	Criteria for telephone ringing signals(Annex M)	13	00	N/A	74
EL 2144	Electrical safety	Impulse Test Generators(Annex N)	03	00	N/A	75
EL 2145	General Requirements	Normative References (Annex P)	01	00	N/A	76
EL 2146	General Requirements	Voltage dependent resistors (VDRs) (Annex Q)	03	03	03	77
EL 2147	General Requirements	Examples Of Requirements For Quality Control Programmes(Annex R)	03	00	N/A	78
EL 2148	General Requirements	Procedure For Impulse Testing (Annex S)	04	00	N/A	79
EL 2149	Protection against Ingress of water	Guidance On Protection Against Ingress Of Water (Annex T)	01	00	N/A	80
EL 2150	Wiring	Insulated Winding Wires For Use Without Interleaved Insulation (Annex U)	17	00	N/A	81
EL 2151	Electrical Safety	Ac Power Distribution Systems(Annex V)	05	03	03	82
EL 2152	Electrical Safety	Summation Of Touch Currents (Annex W)	08	00	N/A	83
EL 2153	Electrical Safety	Maximum Heating Effect In Transformer Tests(Annex X)	03	03	03	84
EL 2154	Radiation safety	Ultraviolet light conditioning test (Annex Y)	05	00	N/A	85
EL 2155	Electrical Safety	Overvoltage Categories (Annex Z)	01	01	01	86
EL 2156	Mechanical properties	Mandrel Test (Annex AA)	01	00	N/A	87

EL 2158	Electrical Safety	Evaluation Of Integrated Circuit (IC) Current Limiters (Annex CC)	06	00	N/A	88
EL 2159	Mechanical properties	Requirements For The Mounting Means Of Rack-Mounted Equipment (Annex DD)	04	00	N/A	89
EL 2160	Electrical Safety	Household And Home/Office Document/Media Shredders (Annex EE)	06	00	N/A	90

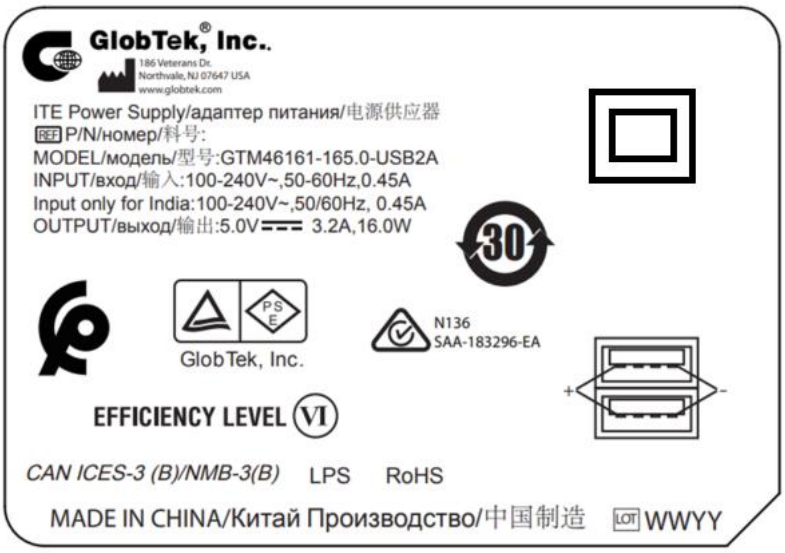
Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested.

.....
(Approving Authority)

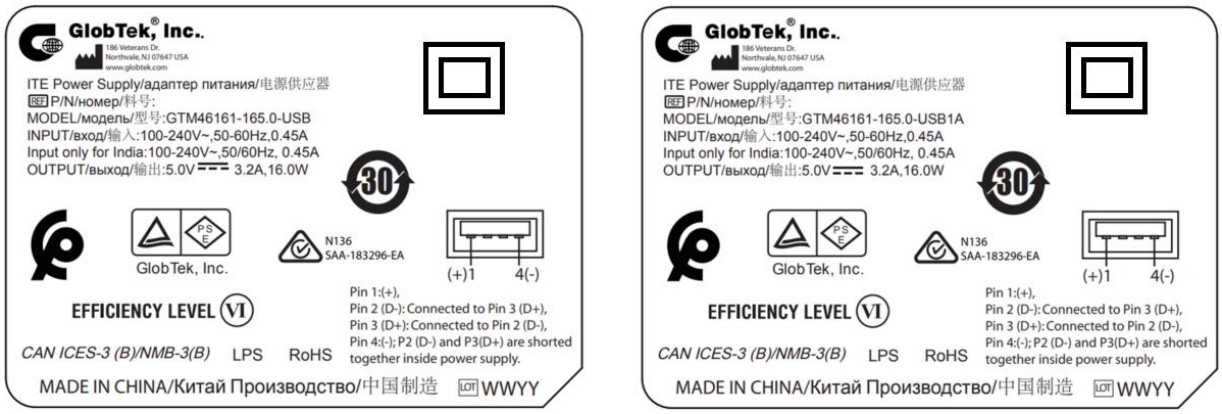
Copy of marking plate:

GlobTek, Inc.

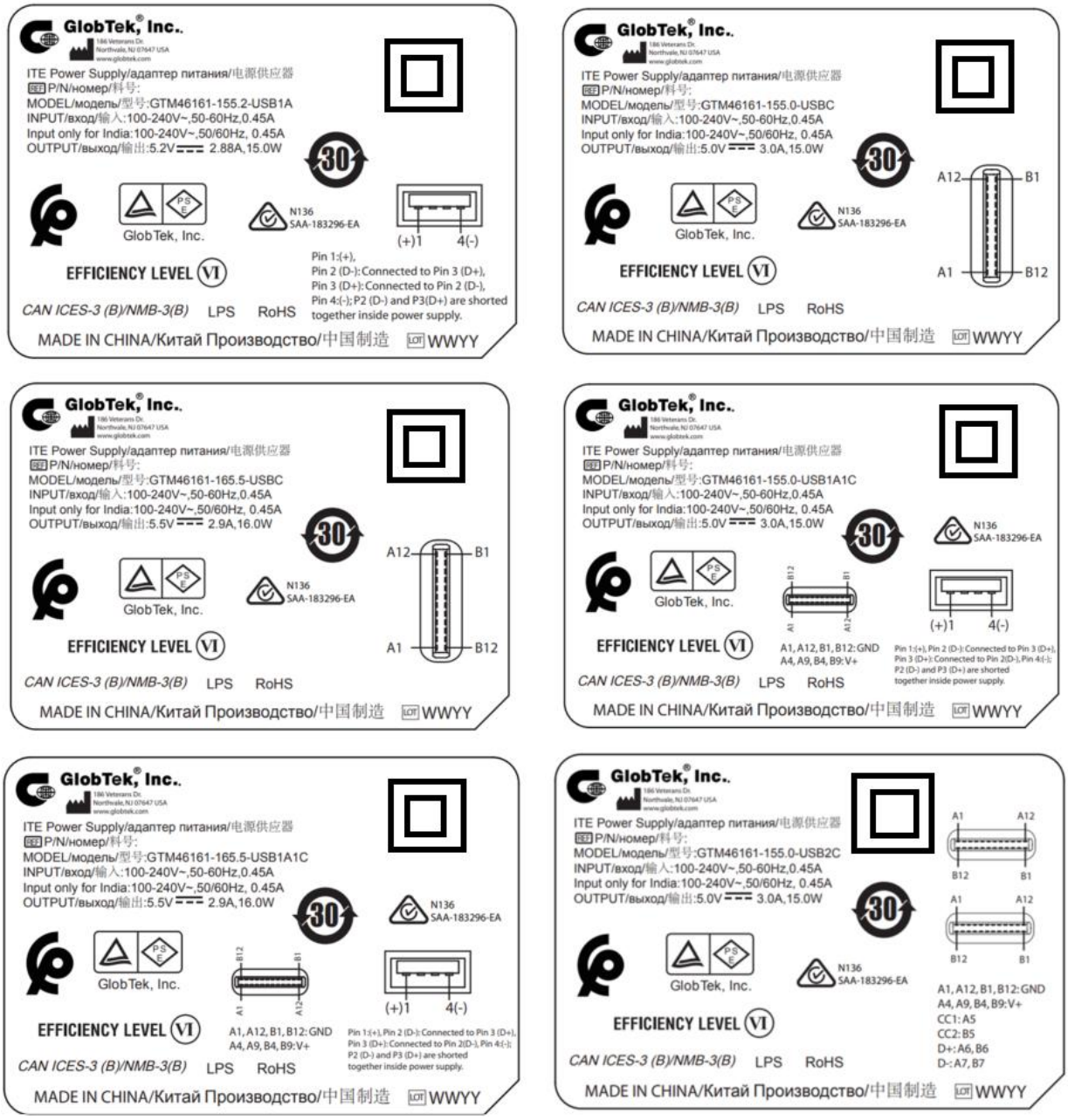
TRADE MARK



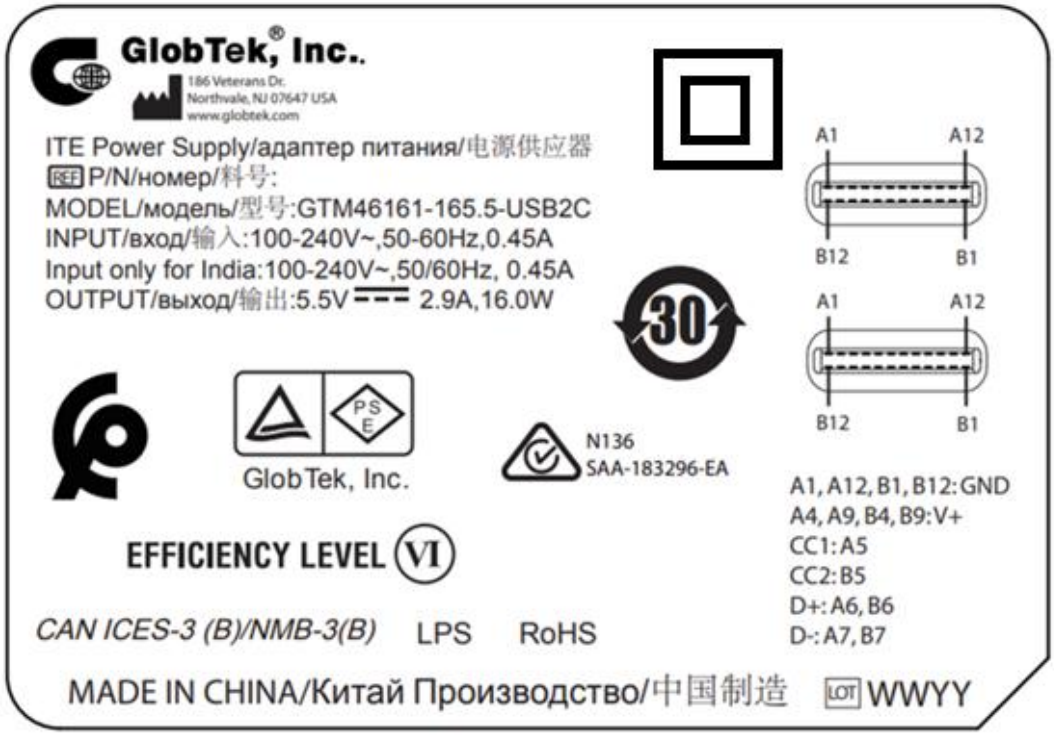
MARKING PLATE OF LEAD MODEL



MARKING PLATE OF SERIES MODELS



MARKING PLATE OF SERIES MODELS



MARKING PLATE OF SERIES MODELS

Table – List of Attachments

Attachment No.	Attachment Description	No. of pages in Attachment
Attachment-1	Plug dimension	109
Attachment-2	Photo Document	110

General remarks:

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.

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 ..... : 18/07/2023

Date(s) of performance of tests..... : 18/07/2023 to 12/08/2023

Laboratory conditions ..... :

Ambient Temperature..... : (25 ± 3)°C

Ambient Humidity ..... : <70 % Rh

Test item particulars ..... :	**ITE Power Supply (Power Adaptors for IT Equipment)**
Equipment mobility ..... :	☒ movable ☐ hand-held ☒ transportable ☐ stationary ☐ for building-in ☒ direct plug-in
Connection to the mains..... :	☒ pluggable equipment ☒ type A ☐ type B ☐ permanent connection ☐ detachable power supply cord ☐ non-detachable power supply cord ☐ not directly connected to the mains
Operating condition ..... :	☒ continuous ☐ rated operating / resting time:
Access location ..... :	☒ operator accessible ☐ restricted access location
Over voltage category (OVC) ..... :	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other:
Mains supply tolerance (%) or absolute mains supply values ..... :	-10%, +10%
Class of equipment ..... :	☐ Class I ☒ Class II ☐ Class III ☐ Not classified
Considered current rating of protective device as a part of the building installation (A) ..... :	16A (For India)
Pollution degree (PD) ..... :	☐ PD 1 ☒ PD 2 ☐ PD 3
IP protection class ..... :	IPX0
Altitude during operation (m) ..... :	Up to 5000
Altitude of test laboratory (m) ..... :	< 1000
Mass of equipment (kg) ..... :	0.100Kg.

Abbreviations that may be used throughout this test report:

PE/PB ..... :	protective earth/protective bonding	Pri ..... :	primary
CB..... :	circuit breaker	sec..... :	secondary
(SW)PS..... :	(switching) power supply	gnd..... :	ground
HV..... :	high voltage	I/O..... :	input/output
PCB ..... :	printed circuit (wiring) board	ii..... :	installation instruction
TIW..... :	triple insulated wire	PSU..... :	Power Supply Unit

B/I ..... : built-in application (compliance shall be guarantee in host equipment)

F/B/S/R : Functional/Basic/Supplementary/Reinforced Insulation

General product information:

1) Application details / Description of the product:

Equipment under test: ITE Power Supply (Power Adaptors for IT Equipment)
Model No.: GTM46161-165.0-USB2A
AC Input: 100-240V~, 50/60Hz, 0.45A
DC Output: 5.0V ⎓ 3.2A 16.0W
Adapter is of Class II Direct Plug-in type with dummy earth pin.

The manufacturer has provided four samples. One is the main sample for testing and the other sample for testing of the alternate components which are to be added in CCL as “Tested within Equipment”. Accordingly the testing was performed on the as EUT with the lead components and the other sample with alternate components and reported accordingly under respective table of the test report

The details of the conditions under which the additional sample with alternate components tested are reported as under:

Component	Transformer (T1)
Condition 1	GlobTek (Suzhou) Co., Ltd
Condition 2	ENG ELECTRIC CO., LTD

Max. specified ambient temperature (°C): 40°C

2) Similarities.....: Same rated input voltage, Same class of construction, Same mains PCB design layout and transformer

3) Differences between the models……:

Model No.	Output Voltage	Output Current	Output Power	Output Port
GTM46161-165.0-USB2A	**5.0**	**3.2**	**16.0**	**2 USB-A port**
GTM46161-165.0-USB	**5.0**	**3.2**	**16.0**	**1 USB-A port**
GTM46161-165.0-USB1A	**5.0**	**3.2**	**16.0**	**1 USB-A port**
GTM46161-155.2-USB1A	**5.2**	**2.88**	**15.0**	**1 USB-A port**
GTM46161-155.0-USBC	**5.0**	**3.0**	**15.0**	**1 USB-C port**
GTM46161-165.5-USBC	**5.5**	**2.9**	**16.0**	**1 USB-C port**
GTM46161-155.0-USB1A1C	**5.0**	**3.0**	**15.0**	**1 USB-C port &1 USB-A port**
GTM46161-165.5-USB1A1C	**5.5**	**2.9**	**16.0**	**1 USB-C port &1 USB-A port**
GTM46161-155.0-USB2C	**5.0**	**3.0**	**15.0**	**2 USB-C port**
GTM46161-165.5-USB2C	**5.5**	**2.9**	**16.0**	**2 USB-C port**

Model No. tested with-in the family series .: GTM46161-165.0-USB2A

4) Options:

The equipment was tested without any optional accessory installed. Hence, this report does not cover parameters that are influenced by the installation of optional accessory that might affect safety in the meaning of this standard.

Tests relating to General Requirements **EL 2100 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
1.5	Components*	EL 2100-00	Verification of approvals with due correlation between the components used and the approval certificates submitted (See table 1.5.1)	P
1.5.1	General:	EL 2100-01	See below	P
	Components shall be complying with IEC 60950-1 or relevant component standard.		Complied	P
	Components and subassemblies approved for IEC 62368-1 can be considered as complying with this standard		Complied	P
1.5.2	Evaluation and testing of components	EL 2100-02	Component certified to IEC standard and/or their harmonized standards are used within their ratings (See table 1.5.1)	P
1.5.3	Thermal controls	EL 2100-03	No thermal controls used	N/A
1.5.4	Transformers	EL 2100-04	See annex C	P
1.5.5	Interconnecting cables*	EL 2100-05	No Interconnecting cables	N/A
1.5.6	Capacitors bridging insulation *	EL 2100-06	Capacitors used in accordance with their rating and complied with subclasses of IEC 60384-14 (See table 1.5.1)	P
1.5.7	Resistors bridging insulation	EL 2100-07	No such resistor bridging insulation	N/A
1.5.7.1	Resistors bridging functional, basic or supplementary insulation*	EL 2100-08	See above Cl. No. 1.5.7	N/A
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits	EL 2100-09	See above Cl. No. 1.5.7	N/A
1.5.7.3	Resistors bridging double insulation or reinforced insulation between the a.c. mains supply and circuits connected to an antenna or coaxial cable	EL 2100-10	See above Cl. No. 1.5.7	N/A
1.5.8	Components in equipment for IT power distribution systems*	EL 2100-11	Not for IT power distribution systems	N/A
1.5.9	Surge suppressors	EL 2100-12	See below	P

Tests relating to General Requirements **EL 2100 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
1.5.9.1	General*	EL 2100-13	Certified Varistor (MOV1) used (See table 1.5.1)	P
1.5.9.2	Protection of VDRs*	EL 2100-14	Certified Fuse (RF1 & FS1) is used to protect Certified Varistor (MOV1)	P
1.5.9.3	Bridging of functional insulation by a VDR*	EL 2100-15	Certified Varistor (MOV1) is used for functional insulation	P
1.5.9.4	Bridging of basic insulation by a VDR*	EL 2100-16	No such construction	N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR*	EL 2100-17	No such construction	N/A

*-Total number of Requirements to be observed / inspected = 10

Total No of applicable Requirement = 06

No of Requirements for which the sample passed = 06

Total number of tests to be conducted = 08

Total No of applicable Tests = 04

No. of tests for which the sample passed = 04

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety **EL 2101 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
1.6	Power interface*	EL 2101-00		P
1.6.1	AC power distribution systems*	EL 2101-01	TN power distribution systems	P
1.6.2	Input current	EL 2101-02	See table 1.6.2	P
1.6.3	Voltage limit of hand-held equipment*	EL 2101-03	Not a hand- held equipment	N/A
1.6.4	Neutral conductor *	EL 2101-04	Class ll equipment	N/A

*-Total number of Requirements to be observed / inspected = 04

Total No of applicable Requirement = 02

No of Requirements for which the sample passed = 02

Total number of tests to be conducted = 01

Total No of applicable Tests = 01

No. of tests for which the sample passed = 01

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Marking Requirements **EL 2102 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
1.7	Marking and instructions*	EL 2102-00		P
1.7.1	Power rating and identification markings		See below	P
1.7.1.1	Power rating marking*	EL 2102-01	See below	P
	Rated voltage(s) or voltage ranges(s) (V)*.	EL 2102-02	100-240V~	P
	Multiple mains supply connections*.	EL 2102-03	No such multiple mains supply connections	N/A
	Symbol for nature of supply, for d.c. only*:	EL 2102-04	No such symbol used	N/A
	Rated frequency or rated frequency range (Hz) *:	EL 2102-05	50/60Hz	P
	Rated current (mA or A)*:	EL 2102-06	0.45A	P
1.7.1.2	Identification markings*	EL 2102-07	See below	P
	Manufacturer's name or trade-mark or identification mark *:	EL 2102-08	GlobTek, Inc.	P
	Model identification or type reference *:	EL 2102-09	**Lead Model:** GTM46161-165.0-USB2A **Series Models: See Copy of Marking plate**	P
	Symbol for Class II equipment only* :	EL 2102-10	Class II Symbol " □ " marked on marking plate	P
	Other markings and symbols*:	EL 2102-11	Other markings and symbols does not give rise to misunderstanding	P
1.7.1.3	Use of graphical symbols*	EL 2102-12	Graphical symbol used	P
1.7.2	Safety instructions and marking*	EL 2102-13	See below	P
1.7.2.1	General	EL 2102-14	Instructions manual provided	P
1.7.2.2	Disconnect devices*	EL 2102-15	Plug is part of direct plug-in equipment considered as disconnect device	P
1.7.2.3	Overcurrent protective devices*	EL 2102-16	Pluggable equipment type A	N/A
1.7.2.4	IT power distribution systems*	EL 2102-17	Not connected to IT power distribution system	N/A
1.7.2.5	Operator access with a tool*	EL 2102-18	No tool is required	N/A
1.7.2.6	Ozone*	EL 2102-19	Ozone not produced	N/A

Tests relating to Marking Requirements

EL 2102 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
1.7.3	Short duty cycles*	EL 2102-20	Equipment intended for continuous operation	N/A
1.7.4	Supply voltage adjustment*	EL 2102-21	No supply voltage adjustment	N/A
1.7.5	Power outlets on the equipment*	EL 2102-22	No standard power outlets	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) Fuse(s) shall clearly and adequately marked with fuse number and rating*.	EL 2102-23	Certified Fuse (RF1& FS1) is used (See table 1.5.1)	P
1.7.7	Wiring terminals	EL 2102-24	See below	N/A
1.7.7.1	Protective earthing and bonding terminals*	EL 2102-25	Class II Equipment	N/A
1.7.7.2	Terminals for a.c. mains supply conductors*	EL 2102-26	Not a permanently connected equipment	N/A
1.7.7.3	Terminals for d.c. mains supply conductors*	EL 2102-27	No dc mains supply	N/A
1.7.8	Controls and indicators	EL 2102-28	See below	P
1.7.8.1	Identification, location and marking *:	EL 2102-29	Functions of controls affecting safety are obvious regardless of language	P
1.7.8.2	Colours*	EL 2102-30	Only functional indicator are colour used	P
1.7.8.3	Symbols according to IEC 60417*:	EL 2102-31	No such symbol used	N/A
1.7.8.4	Markings using figures* :	EL 2102-32	No such equipment	N/A
1.7.9	Isolation of multiple power sources*	EL 2102-33	No multiple power source	N/A
1.7.10	Thermostats and other regulating devices*	EL 2102-34	No thermostat or other regulating device used	N/A
1.7.11	Durability	EL 2102-35	Marking is legible and durable after test	P
1.7.12	Removable parts*	EL 2102-36	No such removable parts	N/A
1.7.13	Replaceable batteries*	EL 2102-37	No battery used	N/A
	Language(s)		See above Cl. No. 1.7.13	N/A
1.7.14	Equipment for restricted access locations*	EL 2102-38	Equipment is not intended for installation in restricted access location	N/A

*-Total number of Requirements to be observed / inspected	= 35
Total No of applicable Requirement	= 16
No of Requirements for which the sample passed	= 16
Total number of tests to be conducted	= 04
Total No of applicable Tests	= 02
No. of tests for which the sample passed	= 02

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety **EL 2103 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.1	Protection from electric shock and energy hazards*	EL 2103-00		P
2.1.1	Protection in operator access areas*	EL 2103-01	Complies	P
2.1.1.1	Access to energized parts	EL 2103-02	Complies	P
	Test by inspection :		No hazardous parts are accessible to user	P
	Test with test finger (Figure 2A)		No access with test finger to any parts	P
	Test with test pin (Figure 2B):		The test pin cannot touch bare hazardous parts	P
	Test with test probe (Figure 2C)		No TNV circuits	N/A
2.1.1.2	Battery compartments *	EL 2103-03	No battery compartment	N/A
2.1.1.3	Access to ELV wiring	EL 2103-04	No ELV wiring	N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		See above Cl. No. 2.1.1.3	N/A
2.1.1.4	Access to hazardous voltage circuit wiring	EL 2103-05	No circuit wiring	N/A
2.1.1.5	Energy hazards :	EL 2103-06	No hazardous energy level (See table 2.1.1.5)	P
2.1.1.6	Manual controls	EL 2103-07	No such controls	N/A
2.1.1.7	Discharge of capacitors in equipment		No such capacitor used	N/A
	Measured voltage (V); time-constant (s):	EL 2103-08	See above Cl. No. 2.1.1.7	N/A
2.1.1.8	Energy hazards – d.c. mains supply		No dc mains supply	N/A
	a) Capacitor connected to the d.c. mains supply :	EL 2103-09	See above Cl. No. 2.1.1.8	N/A
	b) Internal battery connected to the d.c. mains supply :	EL 2103-10	See above Cl. No. 2.1.1.8	N/A
2.1.1.9	Audio amplifiers to be tested according to IEC 60065, cl. 9.1.1.:	EL 2103-11	No such equipment	N/A
2.1.2	Protection in service access areas	EL 2103-12	Unintentional contact with hazardous bare parts during service operation is not likely	P
2.1.3	Protection in restricted access locations	EL 2103-13	Not for restricted access locations	N/A

*-Total number of Requirements to be observed / inspected	= 03
Total No of applicable Requirement	= 02
No of Requirements for which the sample passed	= 02
Total number of tests to be conducted	= 11
Total No of applicable Tests	= 03
No. of tests for which the sample passed	= 03

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety

EL 2104 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.2	SELV circuits*	EL 2104-00		P
2.2.2	Voltages under normal conditions	EL 2104-01	Within SELV limit under normal operating conditions (see table 2.2.2)	P
2.2.3	Voltages under fault conditions	EL 2104-02	Within SELV limit under fault conditions (see table 2.2.3)	P
2.2.4	Connection of SELV circuits to other circuits* :	EL 2104-03	Complied	P

*-Total number of Requirements to be observed / inspected = 02

Total No of applicable Requirement = 02

No of Requirements for which the sample passed = 02

Total number of tests to be conducted = 02

Total No of applicable Tests = 02

No. of tests for which the sample passed = 02

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety **EL 2105 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.3	TNV circuits*	EL 2105-00	No TNV circuits	N/A
2.3.1	Type of TNV circuits: TNV-1 / TNV-2 / TNV-3	EL 2105-01	See above Cl. No. 2.3	N/A
	a) Limits of TNV-1:	EL 2105-02	See above Cl. No. 2.3	N/A
	b) Limits of TNV-2 or TNV-3: Continuous voltages, combination of AC and DC values, are such that : $\frac{U_{ac}}{71} + \frac{U_{dc}}{120} \leq 1$	EL 2105-03	See above Cl. No. 2.3	N/A
2.3.2	Separation from other circuits and from accessible parts*	EL 2105-04	See above Cl. No. 2.3	N/A
2.3.2.1	General Requirements	EL 2105-05	See above Cl. No. 2.3	N/A
2.3.2.2	Protection by basic insulation	EL 2105-06	See above Cl. No. 2.3	N/A
2.3.2.3	Protection by earthing	EL 2105-07	See above Cl. No. 2.3	N/A
2.3.2.4	Protection by other constructions :	EL 2105-08	See above Cl. No. 2.3	N/A
2.3.3	Separation from hazardous voltages	EL 2105-09	See above Cl. No. 2.3	N/A
2.3.4	Connection of TNV circuits to other circuits	EL 2105-10	See above Cl. No. 2.3	N/A
2.3.5	Test for operating voltages generated externally	EL 2105-11	See above Cl. No. 2.3	N/A

*-Total number of Requirements to be observed / inspected = 02
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 10
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety **EL 2106 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.4	Limited current circuits *	EL 2106-00		P
2.4.1	General requirements *	EL 2106-01	See table 2.4.2	P
2.4.2	Limit values	EL 2106-02	See table 2.4.2	P
2.4.3	Connection of limited current circuits to other circuits*	EL 2106-03	Complied with requirement of Cl. No. 2.4.1	P

*-Total number of Requirements to be observed / inspected = 03

Total No of applicable Requirement = 03

No of Requirements for which the sample passed = 03

Total number of tests to be conducted = 01

Total No of applicable Tests = 01

No. of tests for which the sample passed = 01

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety

EL 2107 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.5	Limited power sources *	EL 2107-00	See below	P
	a) Inherently limited output	EL 2107-01	No Inherently limited output	N/A
	b) Impedance limited output	EL 2107-02	No Impedance limited output	N/A
	c) Regulating network limited output under normal operating and single fault condition Use of integrated circuit (IC) current limiters	EL 2107-03	See table 2.5	P
	d) Overcurrent protective device limited output	EL 2107-04	No such over current protective device limited output	N/A
	Max. output voltage (V), Max. output current (A), Max. apparent power (VA)	EL 2107-05	See table 2.5	P
	Current rating of overcurrent protective device (A)	EL 2107-06	No such over current protective device used	N/A

*-Total number of Requirements to be observed / inspected = 01

Total No of applicable Requirement = 01

No of Requirements for which the sample passed = 01

Total number of tests to be conducted = 06

Total No of applicable Tests = 02

No. of tests for which the sample passed = 02

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety

EL 2108 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.6	Provisions for earthing and bonding*	EL 2108-00	Class ll equipment	N/A
2.6.1	Protective earthing	EL 2108-01	See above Cl. No. 2.6	N/A
2.6.2	Functional earthing : The Functional earthing either separated from hazardous voltages by double or reinforced insulation or by protectively earthed screen or conductive part separated by at least basic insulation, or safely connected to Protective Bonding Conductor.*	EL 2108-02	See above Cl. No. 2.6	N/A
	Use of symbol for functional earthing:*	EL 2108-03	See above Cl. No. 2.6	N/A
2.6.3	Protective earthing and protective bonding conductors*	EL 2108-04	See above Cl. No. 2.6	N/A
2.6.3.2	Size of protective earthing conductors	EL 2108-05	See above Cl. No. 2.6	N/A
	Rated current (A), cross-sectional area (mm2),		See above Cl. No. 2.6	N/A
2.6.3.3	Size of protective bonding conductors	EL 2108-06	See above Cl. No. 2.6	N/A
	Protective current Rating (A), cross-sectional area (mm2)		See above Cl. No. 2.6	N/A
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min):	EL 2108-07	See above Cl. No. 2.6	N/A
2.6.3.5	Colour of insulation*:	EL 2108-08	See above Cl. No. 2.6	N/A
2.6.4	Terminals		See above Cl. No. 2.6	N/A
2.6.4.2	Protective earthing and bonding terminals : Rated current(A), Type, Nominal thread diameter (mm)	EL 2108-09	See above Cl. No. 2.6	N/A
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors*	EL 2108-10	See above Cl. No. 2.6	N/A
2.6.5	Integrity of protective earthing*		See above Cl. No. 2.6	N/A
2.6.5.1	Interconnection of equipment*	EL 2108-11	See above Cl. No. 2.6	N/A

2.6.5.2	Components in protective earthing conductors and protective bonding conductors*	EL 2108-12	See above Cl. No. 2.6	N/A
2.6.5.3	Disconnection of protective earth*	EL 2108-13	See above Cl. No. 2.6	N/A
2.6.5.4	Parts that can be removed by an operator*	EL 2108-14	See above Cl. No. 2.6	N/A
2.6.5.5	Parts removed during servicing*	EL 2108-15	See above Cl. No. 2.6	N/A
2.6.5.6	Corrosion resistance*	EL 2108-16	See above Cl. No. 2.6	N/A
2.6.5.7	Screws for protective bonding*	EL 2108-17	See above Cl. No. 2.6	N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system*	EL 2108-18	See above Cl. No. 2.6	N/A

*-Total number of Requirements to be observed / inspected = 14
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 05
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety **EL 2109 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.7	Overcurrent and earth fault protection in primary circuits*	EL 2109-00		P
2.7.1	Basic requirements: Protection in primary circuits against overcurrents, short-circuits and earth faults shall be provided, either as an integral part of the equipment or as part of building installation.	EL 2109-01	The equipment relies on fuse A build-in fuse provided as an overcurrent protection device	P
	If pluggable equipment Type B or permanently connected equipment relies on protective device external to the equipment for protection, the equipment installation Instructions shall so state and shall also specify the requirements for short-circuit protection or overcurrent protection or, where necessary, for both.		Pluggable equipment type A	N/A
2.7.2	Faults not simulated in 5.3.7 need not be fitted as an integral part of the equipment*	EL 2109-02	No such protection as integral part of the equipment	P
2.7.3	Short-circuit backup protection	EL 2109-03	Certified Fuse (RF1) & Fuse (FS1) is used	P
2.7.4	Number and location of protective devices :	EL 2109-04	Certified Fuse (FS1) used in Line & Fuse (RF1) used in Neutral	P
2.7.5	Protection by several devices*	EL 2109-05	Complies	P
2.7.6	Warning to service personnel* :	EL 2109-06	Provided	P

*-Total number of Requirements to be observed / inspected = 04
Total No of applicable Requirement = 03
No of Requirements for which the sample passed = 03

Total number of tests to be conducted = 03
Total No of applicable Tests = 05
No. of tests for which the sample passed = 05

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety **EL 2110 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.8	Safety Interlocks*	EL 2110-00	No safety interlocks	N/A
2.8.1	General principles*	EL 2110-01	See above Cl. No. 2.8	N/A
2.8.2	Protection requirements	EL 2110-02	See above Cl. No. 2.8	N/A
2.8.3	Inadvertent reactivation	EL 2110-03	See above Cl. No. 2.8	N/A
2.8.4	Fail-safe operation	EL 2110-04	See above Cl. No. 2.8	N/A
2.8.5	Moving parts	EL 2110-05		N/A
2.8.6	Overriding*	EL 2110-06	See above Cl. No. 2.8	N/A
2.8.7	Switches, relays and their related circuits	EL 2110-07		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits`	EL 2110-08	See above Cl. No. 2.8	N/A
2.8.7.2	Overload test	EL 2110-09	See above Cl. No. 2.8	N/A
2.8.7.3	Endurance test	EL 2110-10	See above Cl. No. 2.8	N/A
2.8.7.4	Electric strength test	EL 2110-11	See above Cl. No. 2.8	N/A
2.8.8	Mechanical actuators	EL 2110-12	See above Cl. No. 2.8	N/A

*-Total number of Requirements to be observed / inspected = 03

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 10

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety

EL 2111 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.9	Electrical insulation*	EL 2111-00		P
2.9.1	Properties of insulating materials*	EL 2111-01	Natural rubber, materials containing asbestos and hygroscopic materials are not used	P
2.9.2	Humidity conditioning	EL 2111-02	See below	P
	Relative Humidity : 93 ±3 %, Temperature: t at 40 ± 2°C Duration : 120 hours		Relative humidity: (93±3)%RH Temperature: (40±2)°C Tested for 120 hours	P
2.9.3	Grade of insulation*	EL 2111-03	Adequate grade of insulation used	P
2.9.4	Separation from hazardous voltages*	EL 2111-04	See below	P
	Method(s) used		Method 1(b) used	P

*-Total number of Requirements to be observed / inspected = 04

Total No of applicable Requirement = 04

No of Requirements for which the sample passed = 04

Total number of tests to be conducted = 01

Total No of applicable Tests = 01

No. of tests for which the sample passed = 01

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety

EL 2112 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.10	Clearances, creepage distances and distances through Insulation*	EL 2112-00		P
2.10.1.1	Frequency *	EL 2112-01		P
2.10.1.2	Pollution degrees*	EL 2112-02	Pollution degree 2	P
2.10.1.3	Reduced values for functional insulation	EL 2112-03	Functional insulations complies with requirements of Cl. No. 5.3.4c)	P
2.10.1.4	Intervening unconnected conductive parts	EL 2112-04	Complied	P
2.10.1.5	Insulation with varying dimensions	EL 2112-05	No such transformer	N/A
2.10.1.6	Special separation requirements	EL 2112-06	Special separation is not used or required	N/A
2.10.1.7	Insulation in circuits generating starting pulses	EL 2112-07	No such circuits	N/A
2.10.2	Determination of working voltage	EL 2112-08	See table 2.10.2	P
2.10.2.2	RMS working voltage	EL 2112-09	See table 2.10.2	P
2.10.2.3	Peak working voltage	EL 2112-10	See table 2.10.2	P
2.10.3	Clearances	EL 2112-11	See below Cl. No. 2.10.3.2 to 2.10.3.9	P
2.10.3.1	General	EL 2112-12		P
2.10.3.2	Mains transient voltages*		See below	P
	a) AC mains supply * :	EL 2112-13	Overvoltage category II, mains transient voltage 2500Vpeak	P
	b) Earthed d.c. mains supplies* :	EL 2112-14	No dc mains supply	N/A
	c) Unearthed d.c. mains supplies* :	EL 2112-15	No dc mains supply	N/A
	d) Battery operation* :	EL 2112-16	No battery used	N/A
2.10.3.3	Clearances in primary circuits	EL 2112-17	See table 2.10.3 and 2.10.4	P
2.10.3.4	Clearances in secondary circuits	EL 2112-18	Complies with Cl. No. 5.3.4(c)	P
2.10.3.5	Clearances in circuits having starting pulses	EL 2112-19	No such circuits	N/A
2.10.3.6	Transients from a.c. mains supply :	EL 2112-20	Considered mains transient voltage 1500Vpeak	P
2.10.3.7	Transients from d.c. mains supply :	EL 2112-21	No dc mains supply	N/A

2.10.3.8	Transients from telecommunication networks and cable distribution systems :	EL 2112-22	No telecommunication network and cable distribution systems	N/A
2.10.3.9	Measurement of transient voltages			N/A
	a) Transients from a mains supply	EL 2112-23		N/A
	For an a.c. mains supply			N/A
	For a d.c. mains supply			N/A
	b) Transients from a telecommunication network	EL 2112-24		N/A
2.10.4	Creepage distances*	EL 2112-25	See below Cl. No. 2.10.4.2 to 2.10.4.3	P
2.10.4.1	General	EL 2112-26		P
2.10.4.2	Material group and comparative tracking index : CTI tests*	EL 2112-27	Material group IIIb assumed	P
2.10.4.3	Minimum creepage distances	EL 2112-28	See table 2.10.3 and 2.10.4	P
2.10.5	Solid insulation	EL 2112-29	See below	P
2.10.5.1	General	EL 2112-30		P
2.10.5.2	Distances through insulation	EL 2112-31	See table 2.10.5	P
2.10.5.3	Insulating compound as solid insulation	EL 2112-32	No such components used	N/A
2.10.5.4	Semiconductor devices	EL 2112-33		N/A
2.10.5.5.	Cemented joints	EL 2112-34	No cemented joints	N/A
2.10.5.6	Thin sheet material – General	EL 2112-35	Considered	P
2.10.5.7	Separable thin sheet material	EL 2112-36	See table 2.10.5	P
2.10.5.8	Non-separable thin sheet material	EL 2112-37	Separable thin sheet material used	N/A
2.10.5.9	Thin sheet material – standard test procedure	EL 2112-38	Alternative test procedure used	N/A
	Electric strength test as per Cl.5.2.2		See above Cl. No. 2.10.5.9	N/A
2.10.5.10	Thin sheet material – alternative test procedure	EL 2112-39	Electric strength test applied on each layer of the insulation tape	P
	Electric strength test as per Cl.5.2.2		See table 5.2	P
2.10.5.11	Insulation in wound components	EL 2112-40	Electric strength test applied on Transformer	P
2.10.5.12	Wire in wound components		Complied	P
	If Peak Working voltage >71 V		Working voltage exceeded 71V peak	P

	a) Basic insulation not under stress	EL 2112-41	No such insulation	N/A
	b) Basic, supplementary, reinforced insulation	EL 2112-42	Reinforced insulation used	P
	c) Compliance with Annex U	EL 2112-43		N/A
	d) Where two winding wires in contact inside wound component; angle between 45° and 90°	EL 2112-44	Physical separation in the form of insulation sheet material or tube to relieve mechanical strength at the crossover point	P
2.10.5.13	Wire with solvent-based enamel in wound components		No such wound component used	N/A
	a) Electric strength test (Type test as per Cl.5.2.2)	EL 2112-45	See above Cl. No. 2.10.5.13	N/A
	b) Electric Strength test (Routine test as per Cl.5.2.2)	EL 2112-46	See above Cl. No. 2.10.5.13	N/A
2.10.5.14	Additional insulation in wound components		No such wound components	N/A
	If Peak Working Voltage >71V		See above Cl. No. 2.10.5.14	N/A
	a) Basic insulation not under stress	EL 2112-47	See above Cl. No. 2.10.5.14	N/A
	b) Supplementary, reinforced insulation	EL 2112-48	See above Cl. No. 2.10.5.14	N/A
2.10.6	Construction of printed boards*		See below	P
2.10.6.1	Uncoated printed boards	EL 2112-49	Certified Uncoated printed board used	P
2.10.6.2	Coated printed boards	EL 2112-50	Not used	N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board	EL 2112-51	No such construction	N/A
2.10.6.4	Insulation between conductors on different surfaces of a printed board*		See above Cl. No. 2.10.6.3	N/A
	a) Minimum Thickness of insulation: 0.4mm or	EL 2112-52	See above Cl. No. 2.10.6.3	N/A
	b) Confirm with one of the specification and pass the relevant tests as per Table 2R	EL 2112-53	See above Cl. No. 2.10.6.3	N/A
2.10.7	Component external terminations	EL 2112-54	No external termination used	N/A
2.10.8	Tests on coated printed boards and coated components		Uncoated printed board used	N/A

2.10.8.1	Sample preparation and preliminary inspection*	EL 2112-55	See above Cl. No. 2.10.8	N/A
2.10.8.2	Thermal conditioning	EL 2112-56	See above Cl. No. 2.10.8	N/A
2.10.8.3	Electric strength test	EL 2112-57	See above Cl. No. 2.10.8	N/A
2.10.8.4	Abrasion resistance test	EL 2112-58	See above Cl. No. 2.10.8	N/A
2.10.9	Thermal cycling	EL 2112-59		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound	EL 2112-60	Pollution degree 2	N/A
2.10.11	Tests for semiconductor devices and cemented joints	EL 2112-61		N/A
2.10.12	Enclosed and sealed parts	EL 2112-62	No enclosed and sealed parts	N/A

*-Total number of Requirements to be observed / inspected = 10

Total No of applicable Requirement = 06

No of Requirements for which the sample passed = 06

Total number of tests to be conducted = 53

Total No of applicable Tests = 22

No. of tests for which the sample passed = 22

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Wiring

EL 2113 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
3.0	Wiring, connections and supply*	EL 2113-00	See below	P
3.1.1	Current rating and overcurrent protection	EL 2113-01	No internal wiring used	N/A
3.1.2	Protection against mechanical damage*	EL 2113-02	See above	N/A
3.1.3	Securing of internal wiring*	EL 2113-03	See above	N/A
3.1.4	Insulation of conductors	EL 2113-04	See above	N/A
3.1.5	Beads and ceramic insulators	EL 2113-05	No beads and ceramic insulators	N/A
3.1.6	Screws for electrical contact pressure*	EL 2113-06	No such screw used	N/A
3.1.7	Insulating materials in electrical connections*	EL 2113-07	No contact pressure through insulating material	N/A
3.1.8	Self-tapping and spaced thread screws*	EL 2113-08	Self tapping and spaced thread screws not used	N/A
3.1.9	Termination of conductors : 10 N pull test	EL 2113-09	After test,Terminations cannot become displaced so that clearance and creepage distance did not reduced	P
3.1.10	Sleeving on wiring*	EL 2113-10	No sleeving used	N/A

*-Total number of Requirements to be observed / inspected = 07
Total No of applicable Requirement = 02
No of Requirements for which the sample passed = 02

Total number of tests to be conducted = 04
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Wiring

EL 2114 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
3.2	Connection to a mains supply*	EL 2114-00		P
3.2.1	Means of connection		See below	P
3.2.1.1	Connection to an a.c. mains supply*	EL 2114-01	Plug is part of direct plug-in equipment considered as disconnect device	P
	As per IS 13252 (Part 1): 2010 Cl.No.3.2.1.1, Note: It is a legal requirement to provide a plug that complies with the national wiring rules		Plug is part of direct plug-in equipment confirming to the requirement of dimensions for plug as per IS 1293:2019 (See Attachment No. 1)	P
3.2.1.2	Connection to a d.c. mains supply*	EL 2114-02	Not connected to dc mains	N/A
3.2.2	Multiple supply connections	EL 2114-03	No multiple supply connections	N/A
3.2.3	Permanently connected equipment	EL 2114-04	Not a permanently connected equipment	N/A
3.2.4	Appliance inlets: Are so Located that parts at hazardous voltage are not accessible during insertion or removal of the connector, connector can be inserted without difficulty and after insertion of the connector, the equipment is not supported by the connector for any position of normal use on a flat surface (appliance inlets complying with IEC 60309 or IEC 60320 considered to comply with this requirement.	EL 2114-05	Appliance inlet not used	N/A
3.2.5	Power supply cords		Direct plug-in equipment	N/A
3.2.5.1	AC power supply cords*	EL 2114-06	See above Cl. No. 3.2.5	N/A
	Rated current (A), cross-sectional area (mm^2), AWG		See above Cl. No. 3.2.5	N/A
3.2.5.2	DC power supply cords*	EL 2114-07	Not connected to dc mains	N/A
3.2.6	Cord anchorages and strain relief		Cord not used	N/A
	Mass of the equipment: Pull Force (N):	EL 2114-08	See above Cl. No. 3.2.6	N/A
	b) Longitudinal displacement: 2 mm (Max)	EL 2114-09	See above Cl. No. 3.2.6	N/A

3.2.7	Protection against mechanical damage	EL 2114-10	Direct plug-in equipment	N/A
3.2.8	Cord guards		Direct plug-in equipment	N/A
	a) Diameter or minor dimension D (mm) : Test mass (g) :	EL 2114-11	See above Cl. No. 3.2.8	N/A
	b) Radius of curvature of cord : 1.5 D (Min)	EL 2114-12	See above Cl. No. 3.2.8	N/A
3.2.9	Supply wiring space	EL 2114-13	See above Cl. No. 3.2.8	N/A

*-Total number of Requirements to be observed / inspected = 05

Total No of applicable Requirement = 02

No of Requirements for which the sample passed = 02

Total number of tests to be conducted = 09

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Wiring

EL 2115 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
3.3	Wiring terminals for connection of external conductors*	EL 2115-00	No wiring terminals	N/A
3.3.1	Wiring terminals*	EL 2115-01	See above Cl. No. 3.3	N/A
3.3.2	Connection of non-detachable power supply cords	EL 2115-02	See above Cl. No. 3.3	N/A
3.3.3	Screw terminals*	EL 2115-03	See above Cl. No. 3.3	N/A
3.3.4	Conductor sizes to be connected	EL 2115-04	See above Cl. No. 3.3	N/A
	Rated current (A), cord/cable type, cross-sectional area (mm2)		See above Cl. No. 3.3	N/A
3.3.5	Wiring terminal sizes	EL 2115-05	See above Cl. No. 3.3	N/A
	Rated current (A), type, nominal thread diameter (mm)		See above Cl. No. 3.3	N/A
3.3.6	Wiring terminal design	EL 2115-06	See above Cl. No. 3.3	N/A
3.3.7	Grouping of wiring terminals*	EL 2115-07	See above Cl. No. 3.3	N/A
3.3.8	Stranded wire	EL 2115-08	See above Cl. No. 3.3	N/A

*-Total number of Requirements to be observed / inspected = 04
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 05
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Wiring

EL 2116 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
3.4	Disconnection from the mains supply*	EL 2116-00		P
3.4.1	General Requirement A disconnect device or devices shall be provided to disconnect the equipment from the mains supply for servicing.	EL 2116-01	See below	P
3.4.2	Disconnect devices*	EL 2116-02	Plug is part of direct plug-in equipment considered as disconnect device	P
3.4.3	Permanently connected equipment*	EL 2116-03	Not a permanently connected equipment	N/A
3.4.4	Parts which remain energized*	EL 2116-04	No parts remain energized	N/A
3.4.5	Switches in flexible cords*	EL 2116-05	No switches in flexible cords	N/A
3.4.6	Number of poles - single-phase and d.c. equipment*	EL 2116-06	Disconnect device disconnects both poles simultaneously	P
3.4.7	Number of poles - three-phase equipment*	EL 2116-07	Single phase equipment	N/A
3.4.8	Switches as disconnect devices*	EL 2116-08	No such switches used	N/A
3.4.9	Plugs as disconnect devices*	EL 2116-09	Plug is part of direct plug-in equipment considered as disconnect device	P
3.4.10	Interconnected equipment*	EL 2116-10	No such equipment	N/A
3.4.11	Multiple power sources*	EL 2116-11	No multiple power sources	N/A

*-Total number of Requirements to be observed / inspected = 11
Total No of applicable Requirement = 04
No of Requirements for which the sample passed = 04

Total number of tests to be conducted = 01
Total No of applicable Tests = 01
No. of tests for which the sample passed = 01

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Wiring

EL 2117 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
3.5	Interconnection of equipment*	EL 2117-00		P
3.5.1	General requirements*	EL 2117-01	See below	P
3.5.2	Types of interconnection circuits*	EL 2117-02	SELV-SELV connection only	P
3.5.3	ELV circuits as interconnection circuits *	EL 2117-03	No ELV circuits	N/A
3.5.4	Data ports for additional equipment	EL 2117-04	No data ports for additional equipment	N/A

*-Total number of Requirements to be observed / inspected = 04

Total No of applicable Requirement = 03

No of Requirements for which the sample passed = 03

Total number of tests to be conducted = 01

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Mechanical Properties **EL 2118 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4	PHYSICAL REQUIREMENTS*	EL 2118-00		P
4.1	Stability	EL 2118-01	See below	N/A
	a) A unit having a mass of 7 kg or more shall not fall over when tilted to an angle of 10° from its normal upright position. Alternatively, the unit is placed in its intended position of use on a plane, inclined at an angle of 10° to the horizontal, and then rotated slowly through an angle of 360° about its normal vertical axis.	EL 2118-02	Mass<7Kg.	N/A
	b) A floor-standing unit having a mass of 25 kg or more shall not fall over when a force equal to 20 % of the weight of the unit, but not more than 250 N, is applied in any direction except upwards, at a height not exceeding 2 m from the floor.	EL 2118-03	No such equipment	N/A
	c) A floor-standing unit shall not fall over when a constant downward force of 800 N is applied at the point of maximum moment to any horizontal surface of at least 125 mm by at least 200 mm, at a height up to 1 m from the floor.	EL 2118-04	No such equipment	N/A

*-Total number of Requirements to be observed / inspected = 01
Total No of applicable Requirement = 01
No of Requirements for which the sample passed = 01

Total number of tests to be conducted = 04
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Mechanical Properties **EL 2119 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4.2	Mechanical Strength	EL 2119-00		P
4.2.1	General	EL 2119-01	See below	P
4.2.2	Steady force test, 10 N	EL 2119-02	Force applied on components Result: No damage, no hazard	P
4.2.3	Steady force test, 30 N	EL 2119-03	No such parts	N/A
4.2.4	Steady force test, 250 N	EL 2119-04	Force applied on each side of the enclosure Result: No damage, no hazard	P
4.2.5	Impact test	EL 2119-05	No such equipment	N/A
	a) Fall test as per Fig. 4A	EL 2119-06	See above Cl. No. 4.2.5	N/A
	b) Swing test as per Fig. 4A	EL 2119-07	See above Cl. No. 4.2.5	N/A
4.2.6	Drop test; height (mm) :	EL 2119-08	Dropped three times from a height of 1000mm Result: No damage, no hazard	P
4.2.7	Stress relief test	EL 2119-09	Test performed at 70°C for 7 hours, no deformation of enclosure	P
4.2.8	Cathode Ray Tubes	EL 2119-10	No cathode ray tubes used	N/A
4.2.9	High Pressure Lamps*	EL 2119-11	No high pressure lamps	N/A
4.2.10	Wall or ceiling mounted equipment; force(N)	EL 2119-12	Not a wall or ceiling mounted equipment	N/A

*-Total number of Requirements to be observed / inspected = 01
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 12
Total No of applicable Tests = 06
No. of tests for which the sample passed = 06

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Mechanical Properties

EL 2120 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4.3	Design and Construction*	EL 2120-00		P
4.3.1	Edges and corners*	EL 2120-01	All edges and corners accessible to operator are rounded and smoothed	P
4.3.2	Handles and manual controls; force (N):	EL 2120-02	Handles and manual controls are not used	N/A
4.3.3	Adjustable controls	EL 2120-03	No such controls used	N/A
4.3.4	Securing of parts	EL 2120-04	Internal parts are well secured against mechanical stresses occurring in normal use	P
4.3.5	Connections by Plugs and Sockets*	EL 2120-05	No misconnection likely to create hazard	P
4.3.6	Direct plug-in equipment	EL 2120-06	Plug dimension complies with IS 1293:2019 (See Attachment No. 1)	P
	Torque	EL 2120-07	Complied	P
	Compliance with the relevant mains plug standard	EL 2120-08	See above Cl. No. 4.3.6	P
4.3.7	Heating elements in earthed equipment*	EL 2120-09	No heating elements in the equipment	N/A
4.3.8	Batteries Portable secondary sealed cells and batteries (other than button) containing alkaline or other non-acid electrolyte shall comply with IEC 62133			N/A
	a) Overcharging of a rechargeable battery	EL 2120-10		N/A
	b) Unintentional charging of a non-rechargeable battery	EL 2120-11		N/A
	c) Reverse charging of a rechargeable battery	EL 2120-12		N/A
	d) Excessive discharging rate for any battery	EL 2120-13		N/A
	e) Electric strength as per Cl.5.3.9.2	EL 2120-14		N/A
4.3.9	Oil & grease*	EL 2120-15		N/A
4.3.10	Dust, powders, liquids and gases	EL 2120-16		N/A

4.3.11	Containers for liquids or gases	EL 2120-17		N/A
4.3.12	Flammable liquids	EL 2120-18		N/A
4.3.13	Radiation			N/A
4.3.13.2	Ionizing radiation	EL 2120-19		N/A
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	EL 2120-20		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation	EL 2120-21		N/A
4.3.13.5	Lasers (including laser diodes) and LED's:			N/A
4.3.13.5.1	Lasers (including laser diodes) For laser see IEC 60825-1, respective part as applicable.	EL 2120-22		N/A
	Laser class :			N/A
4.3.13.5.2	Light emitting diodes (LED's)	EL 2120-23		N/A
4.3.13.6	Other types*	EL 2120-24		N/A

*-Total number of Requirements to be observed / inspected = 06

Total No of applicable Requirement = 03

No of Requirements for which the sample passed = 03

Total number of tests to be conducted = 19

Total No of applicable Tests = 04

No. of tests for which the sample passed = 04

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Mechanical Properties **EL 2121 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4.4	Protection against hazardous moving parts	EL 2121-00	No hazardous moving part	N/A
4.4.1	General	EL 2121-01	See above Cl. No. 4.4	N/A
4.4.2	Protection in operator access areas	EL 2121-02	See above Cl. No. 4.4	N/A
4.4.3	Protection in restricted access locations *	EL 2121-03	See above Cl. No. 4.4	N/A
4.4.4	Protection in service access areas*	EL 2121-04	See above Cl. No. 4.4	N/A
4.4.5	Protection against moving fan blades	EL 2121-05	See above Cl. No. 4.4	N/A
4.4.5.1	General*	EL 2121-06	See above Cl. No. 4.4	N/A
	Not considered likely to cause pain or injury. a)……..…:	EL 2121-07	See above Cl. No. 4.4	N/A
	Is considered likely to cause pain, not injury. b)	EL 2121-08	See above Cl. No. 4.4	N/A
	Considered likely to cause injury. c)……..……:	EL 2121-09	See above Cl. No. 4.4	N/A
4.4.5.2	Protection for users*	EL 2121-10	See above Cl. No. 4.4	N/A
	Use of symbol or warning*	EL 2121-11	See above Cl. No. 4.4	N/A
4.4.5.3	Protection for service persons*	EL 2121-12	See above Cl. No. 4.4	N/A
	Use of symbol or warning *	EL 2121-13	See above Cl. No. 4.4	N/A

*-Total number of Requirements to be observed / inspected = 07
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 07
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Thermal Properties

EL 2122 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4.5	Thermal Requirements*	EL 2122-00		P
4.5.1	General	EL 2122-01	See below	P
4.5.2	Temperature tests	EL 2122-02	See table 4.5	P
4.5.3	Temperature limits for materials*	EL 2122-03	See table 4.5	P
4.5.4	Touch temperature limits*	EL 2122-04	See table 4.5	P
4.5.5	Resistance to abnormal heat	EL 2122-05	Certified material used	P

*-Total number of Requirements to be observed / inspected = 03

Total No of applicable Requirement = 03

No of Requirements for which the sample passed = 03

Total number of tests to be conducted = 03

Total No of applicable Tests = 03

No. of tests for which the sample passed = 03

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Mechanical Properties

EL 2123 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4.6	Openings in enclosures*	EL 2123-00	See below	N/A
4.6.1	Top and side openings	EL 2123-01	No openings	N/A
	Dimensions (mm) :		See above Cl. No. 4.6.1	N/A
4.6.2	Bottoms of fire enclosures :	EL 2123-02		N/A
	Construction of the bottom, dimensions (mm) :			N/A
4.6.3	Doors or covers in fire enclosures*	EL 2123-03	Doors or covers are not used	N/A
4.6.4	Openings in transportable equipment	EL 2123-04	No openings	N/A
4.6.4.1	Constructional design measures	EL 2123-05	See above Cl. No. 4.6.4	N/A
	Dimensions (mm)		See above Cl. No. 4.6.4	N/A
4.6.4.2	Evaluation measures for larger openings	EL 2123-06	See above Cl. No. 4.6.4	N/A
4.6.4.3	Use of metallized parts	EL 2123-07	No metallized parts	N/A
4.6.5	Adhesives for constructional purposes: Compliance is checked by examination of the construction and of the available data. If such data is not available, compliance is checked by the following tests.	EL 2123-08	No adhesive parts	N/A
	a)Temperature Conditioning at : 100°C ± 2°C for one week; or 90°C ± 2°C for three weeks; or 82°C ± 2°C for eight weeks.	EL 2123-09	See above Cl. No. 4.6.5	N/A
	After temperature conditioning b) Leave the sample between 20°C to 30°C for 1 hour	EL 2123-10	See above Cl. No. 4.6.5	N/A
	c) Place the sample at - 40°C±2°C for 4 hours	EL 2123-11	See above Cl. No. 4.6.5	N/A
	d) Remove and allow the sample to come to any convenient temperature between 20°C and 30°C for 8h;	EL 2123-12	See above Cl. No. 4.6.5	N/A

	e) Place the sample in a cabinet at 91% to 95% relative humidity for 72h;	EL 2123-13	See above Cl. No. 4.6.5	N/A
	f) Remove the sample and leave it at any convenient temperature between 20°C and 30°C for 1h;	EL 2123-14	See above Cl. No. 4.6.5	N/A
	g) Place the sample in an oven at the temperature used for the temperature conditioning for 4h;	EL 2123-15	See above Cl. No. 4.6.5	N/A
	h) Remove the sample and allow it to reach any convenient temperature between 20°C; and 30°C for 8h.	EL 2123-16	See above Cl. No. 4.6.5	N/A
	i) The sample is then immediately subjected to the tests of Cl.4.2 as applicable.	EL 2123-17	See above Cl. No. 4.6.5	N/A

*-Total number of Requirements to be observed / inspected = 02
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 16
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Fire Safety

EL 2124 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4.7	Resistance to fire*	EL 2124-00		P
4.7.1	Reducing the risk of ignition and spread of flame		See below	P
	Method 1, selection and application of components wiring and materials OR	EL 2124-01	Method 1 used (see table 1.5.1)	P
	Method 2, application of all of simulated fault condition tests	EL 2124-02	Method 2 not used	N/A
4.7.2	Conditions for a fire enclosure*		See below	P
4.7.2.1	Parts requiring a fire enclosure*	EL 2124-03	The fire enclosure is required to cover all parts	P
4.7.2.2	Parts not requiring a fire enclosure	EL 2124-04	See above Cl. No. 4.7.2.1	N/A
4.7.3	Materials*	EL 2124-05	See below	P
4.7.3.1	General*	EL 2124-06	See below	P
	a)Class of material used*	EL 2124-07	Components and materials have adequate flammability classes (See appended table 1.5.1)	P
	b) Where HB40 CLASS MATERIAL, HB75 CLASS MATERIAL or HBF CLASS FOAMED MATERIAL, is required, material passing the glow-wire test at 550 °C according to IEC 60695-2-11 is acceptable as an alternative.	EL 2124-08	No such class material used	N/A
	c) Where it is not practical to protect components against overheating under fault conditions, the components shall be mounted on V-1 CLASS MATERIAL. Additionally, such components shall be separated from material of a class lower than V-1 CLASS MATERIAL by at least 13 mm of air, or by a solid barrier of V-1 CLASS MATERIAL.	EL 2124-09	Certified material used (see table 1.5.1)	P
4.7.3.2	Materials for fire enclosures		See below	P
	a) For MOVABLE EQUIPMENT having a total mass not exceeding 18 kg, the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of V-1 CLASS MATERIAL or shall pass the test of Clause A.2.	EL 2124-10	Certified material used (see table 1.5.1)	P

	b) For MOVABLE EQUIPMENT having a total mass exceeding 18 kg and for all STATIONARY EQUIPMENT, the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of 5VB CLASS MATERIAL or shall pass the test of Clause A.1.	EL 2124-11	No such equipment	N/A
	c) Materials for components that fill an opening in a FIRE ENCLOSURE, and that are intended to be mounted in this opening shall : be of V-1 CLASS MATERIAL; or pass the tests of Clause A.2; or comply with the flammability requirements of the relevant IEC component standard	EL 2124-12	No such openings	N/A
	d) Plastic materials of a FIRE ENCLOSURE shall be located more than 13 mm through air from arcing parts such as unenclosed commutators and unenclosed switch contacts.	EL 2124-13	No such arcing parts	N/A
	e)Plastic materials of a FIRE ENCLOSURE located less than 13mm through air from non-arcing parts which, under any condition of normal or abnormal operation,could attain a temperature sufficient to ignite the material, shall be capable of passing the test of IEC 60695-2-20. The average time to ignition of the samples shall be not less than 15sec. If the sample melts through without igniting, the time at which this occurs is not considered to be the time to ignition.	EL 2124-14	No such construction	N/A
4.7.3.3	Materials for components and other parts outside fire enclosures *		No materials for components and other parts outside fire enclosure	N/A
	a) Materials shall be of : − HB75 CLASS MATERIAL if the thinnest significant thickness of this material is < 3 mm, or − HB40 CLASS MATERIAL if the thinnest significant thickness of this material is ≥ 3 mm, or − HBF CLASS FOAMED MATERIAL.*	EL 2124-15	See above Cl. No. 4.7.3.3	N/A

	b) Connectors shall comply with one of the following: − be made of V-2 CLASS MATERIAL; or − pass the tests of Clause A.2; or − comply with the flammability requirements of the relevant IEC component standard; or − be mounted on V-1 CLASS MATERIAL and be of a small size; or − be located in a SECONDARY CIRCUIT supplied by a power source that is limited to a maximum of 15 VA (see 1.4.11) under normal operating conditions and after a single fault in the equipment (see 1.4.14).	EL 2124-16	See above Cl. No. 4.7.3.3	N/A
4.7.3.4	Materials for components and other parts inside fire enclosures		See below	P
	a) Inside FIRE ENCLOSURES, materials for components and other parts shall comply with one of the following: − be of V-2 CLASS MATERIAL or HF-2 CLASS FOAMED MATERIAL; or − pass the flammability test described in Clause A.2; or − meet the flammability requirements of a relevant IEC component standard that includes such requirements.	EL 2124-17	Certified material used (See table 1.5.1)	P
	Requirements for voltage dependent resistors (VDR's) are in Annex Q.*	EL 2124-18	See Annex Q	P
4.7.3.5	Materials for air filter assemblies : Air filter assemblies shall be constructed of V-2 CLASS MATERIAL, or HF-2 CLASS FOAMED MATERIAL.	EL 2124-19	No air filter assemblies	N/A
4.7.3.6	Materials used in high-voltage components		No high voltage components used	N/A

	a) High-voltage components operating at peak-to-peak voltages exceeding 4 kV shall either be of V-2 CLASS MATERIAL, or HF-2 CLASS FOAMED MATERIAL, or comply with 14.4 of IEC 60065 or pass the needle flame test according to IEC 60695-11-5.	EL 2124-20	See above Cl. No. 4.7.3.6	N/A
	b) Compliance is checked by inspection of the equipment and material data sheets and, if necessary, by − the tests for V-2 CLASS MATERIAL or HF-2 CLASS FOAMED MATERIAL; or − the test described in 14.4 of IEC 60065; or − the needle flame test according to IEC 60695-11-5.	EL 2124-21	See above Cl. No. 4.7.3.6	N/A
	c) In addition to above, the following details apply, referring to clauses of IEC 60695-11-5: Clause 7 - Severities	EL 2124-22	See above Cl. No. 4.7.3.6	N/A
	Clause 8 - Conditioning	EL 2124-23	See above Cl. No. 4.7.3.6	N/A
	Clause 11 - Evaluation of test results	EL 2124-24	See above Cl. No. 4.7.3.6	N/A

*-Total number of Requirements to be observed / inspected = 07
Total No of applicable Requirement = 06
No of Requirements for which the sample passed = 06

Total number of tests to be conducted = 18
Total No of applicable Tests = 04
No. of tests for which the sample passed = 04

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Insulating Properties

EL 2125 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
5.0	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS*	EL 2125-00		P
5.1	Touch current and protective conductor current*	EL 2125-01	See below	P
5.1.2	Configuration of equipment under test (EUT)*	EL 2125-02	See below Cl. No. 5.1.2.1	P
5.1.2.1	Single connection to an a.c. mains supply*	EL 2125-03	The EUT has only one mains connections	P
5.1.2.2	Redundant multiple connections to an a.c. mains supply*	EL 2125-04	No multiple connections	N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply	EL 2125-05	See above Cl. No. 5.1.2.2	N/A
5.1.3	Test circuit	EL 2125-06	As per figure 5A	P
5.1.4	Application of measuring instrument	EL 2125-07	Tested using figure D.1 measuring instrument of Annex D	P
5.1.5	Test procedure	EL 2125-08	Complies	P
5.1.6	Test measurements		See below	P
	a) r.m.s value of voltage, U2 measured using the instrument as per Fig. D.1 or r.m.s value of current measured using the instrument as per Fig. D.2 Alternatively, peak value of voltage, U2, is measured using the measuring instrument described in Clause D.1	EL 2125-09	See table 5.1.6	P
	b) Measured touch current (mA):	EL 2125-10	See table 5.1.6	P
	c) Calculated value of TOUCH CURRENT (mA) = U2 / 500	EL 2125-11	See table 5.1.6	P
	d) Measured protective conductor current(mA)	EL 2125-12		N/A
	e) Max. protective conductor current =5% of Input current	EL 2125-13		N/A
5.1.7	Equipment with touch current exceeding 3.5 mA	EL 2125-14		N/A
5.1.7.1	General	EL 2125-15		N/A
5.1.7.2	Simultaneous multiple connections to the supply	EL 2125-16	No multiple connections	N/A

5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	EL 2125-17	No telecommunication networks	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system	EL 2125-18	See above Cl. No. 5.1.8	N/A
	Supply voltage (V)		See above Cl. No. 5.1.8	N/A
	Measured touch current (mA)		See above Cl. No. 5.1.8	N/A
	Max. allowed touch current (mA)		See above Cl. No. 5.1.8	N/A
5.1.8.2	Summation of touch currents from telecommunication networks	EL 2125-19	See above Cl. No. 5.1.8	N/A
	a) EUT with earthed telecommunication ports :		See above Cl. No. 5.1.8	N/A
	b) EUT whose telecommunication ports have no reference to protective earth		See above Cl. No. 5.1.8	N/A

*-Total number of Requirements to be observed / inspected = 05
Total No of applicable Requirement = 04
No of Requirements for which the sample passed = 04

Total number of tests to be conducted = 15
Total No of applicable Tests = 06
No. of tests for which the sample passed = 06

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Insulating Properties

EL 2126 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
5.2	Electric strength*	EL 2126-00		P
5.2.1	General*	EL 2126-01	See below	P
5.2.2	Test procedure		Table 5B used	P
	The test voltages for electric strength for the appropriate grade of insulation [FUNCTIONAL INSULATION if required by 5.3.4 b), BASIC INSULATION, SUPPLEMENTARY INSULATION or REINFORCED INSULATION] are as specified in either: − Table 5B using the PEAK WORKING VOLTAGE (U), as determined in 2.10.2; or − Table 5C using the REQUIRED WITHSTAND VOLTAGE, as determined in G.4.	EL 2126-02	See table 5.2	P

*-Total number of Requirements to be observed / inspected = 02
Total No of applicable Requirement = 02
No of Requirements for which the sample passed = 02

Total number of tests to be conducted = 01
Total No of applicable Tests = 01
No. of tests for which the sample passed = 01

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Insulating Properties

EL 2127 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
5.3	Abnormal operating and fault conditions	EL 2127-00		P
5.3.1	Protection against overload and abnormal operation	EL 2127-01	See table 5.3	P
5.3.2	Motors	EL 2127-02	No motors used	N/A
5.3.3	Transformers	EL 2127-03	See annex C	P
5.3.4	Functional insulation:	EL 2127-04	Complies with Cl. No. 5.3.4c)	P
5.3.5	Electromechanical components	EL 2127-05	No such components used	N/A
5.3.6	Audio amplifiers in ITE :	EL 2127-06	Not used	N/A
5.3.7	Simulation of faults	EL 2127-07	See table 5.3	P
5.3.8	Unattended equipment	EL 2127-08	No such equipment	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions*		See below	P
5.3.9.1	During the tests	EL 2127-09	No fire occurred, no molten metal emitted and no distortion of enclosure	P
5.3.9.2	After the tests	EL 2127-10	No breakdown occurred	P

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 11

Total No of applicable Tests = 07

No. of tests for which the sample passed = 07

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Communicating Connection

EL 2128 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment	EL 2128-00	Equipment is not for connection to telecommunication network	N/A
6.1.1	Protection from hazardous voltages	EL 2128-01	See above Cl. No. 6.1	N/A
6.1.2	Separation of the telecommunication network from earth*		See above Cl. No. 6.1	N/A
6.1.2.1	Requirements: - Surge suppressors that bridge the insulation shall have a minimum rated operating voltage Uop of Uop =Upeak + Δusp + Δusa Where Upeak is 360V or 180V Δusp is the maximum increase of the rated operating voltage due to variations in component production(If not specified by the manufacturer, shall be taken as 10% of the rated operating voltage of the component) Δusa is the maximum increase of the rated operating voltage due to the component ageing over the expected life of the equipment(If not specified by the manufacturer, shall be taken as 10% of the rated operating voltage of the component) -Insulation is subjected to electric strength test according to 5.2.2. The a.c test voltage is 1.5kV or 1.0kV - Components bridging the insulation that are left in place during electric strength testing shall not be damaged. There shall be no breakdown of insulation during electric strength testing.	EL 2128-02	See above Cl. No. 6.1	N/A
6.1.2.2	Exclusions	EL 2128-03	See above Cl. No. 6.1	N/A

*-Total number of Requirements to be observed / inspected	= 00
Total No of applicable Requirement	= 00
No of Requirements for which the sample passed	= N/A
Total number of tests to be conducted	= 04
Total No of applicable Tests	= 00
No. of tests for which the sample passed	= N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Communicating Connection **EL 2129 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
6.2	Protection of equipment users from overvoltages on telecommunication networks*	EL 2129-00	Equipment is not for connection to telecommunication network	N/A
6.2.1	Separation requirements	EL 2129-01	See above Cl. No. 6.2	N/A
6.2.2	Electric strength test procedure	EL 2129-02	See above Cl. No. 6.2	N/A
6.2.2.1	Impulse test	EL 2129-03	See above Cl. No. 6.2	N/A
6.2.2.2	Steady-state test	EL 2129-04	See above Cl. No. 6.2	N/A
6.2.2.3	Compliance criteria	EL 2129-05	See above Cl. No. 6.2	N/A

*-Total number of Requirements to be observed / inspected = 01

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 05

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Communicating Connection

EL 2130 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
6.3	Protection of the telecommunication wiring system from overheating	EL 2130-00	Equipment is not for connection to telecommunication wiring system	N/A
	a)If current limiting is due to the inherent impedance of the power source, the output current into any resistive load, including a short-circuit, is measured. The current limit shall not be exceeded after 60 s of test. Max. output current (A) :	EL 2130-01	See above Cl. No. 6.3	N/A
	b) If current limiting is provided by an overcurrent protective device having a specified time/current characteristic: – the time/current characteristic shall show that a current equal to 110 % of the current limit will be interrupted within 60 min; and	EL 2130-02	See above Cl. No. 6.3	N/A
	c) the output current into any resistive load, including a short-circuit, with the overcurrent protective device bypassed, measured after 60 s of test, shall not exceed 1 000/U, where U is the output voltage measured in accordance with 1.4.5 with all load circuits disconnected.	EL 2130-03	See above Cl. No. 6.3	N/A

	d) If current limiting is provided by an overcurrent protective device that does not have a specified time/current characteristic: – the output current into any resistive load, including a short-circuit, shall not exceed the current limit after 60 s of test; and – the output current into any resistive load, including a short-circuit, with the overcurrent protective device bypassed, measured after 60 s of test, shall not exceed 1 000/U, where U is the output voltage measured in accordance with 1.4.5 with all load circuits disconnected.	EL 2130-04	See above Cl. No. 6.3	N/A

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 05

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Connection to cable distribution system **EL 2131 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
7	Connection to cable distribution systems*	EL 2131-00	Equipment is not for connection to cable distribution system	N/A
7.1	General requirements*	EL 2131-01	See above Cl. No. 7	N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment	EL 2131-02	See above Cl. No. 7	N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system	EL 2131-03	See above Cl. No. 7	N/A
7.4	Insulation between primary circuits and cable distribution systems	EL 2131-04	See above Cl. No. 7	N/A
7.4.1	General	EL 2131-05	See above Cl. No. 7	N/A
7.4.2	Voltage surge test	EL 2131-06	See above Cl. No. 7	N/A
7.4.3	Impulse test	EL 2131-07	See above Cl. No. 7	N/A

*-Total number of Requirements to be observed / inspected = 02
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 06
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Fire Safety

EL 2132 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE	EL 2132-00		P
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)	EL 2132-01	Mass<18Kg.	N/A
A.1.1	Samples:	EL 2132-02	See above Cl. No. A.1	N/A
	Wall thickness (mm):		See above Cl. No. A.1	N/A
A.1.2	Conditioning of samples; temperature (°C) :	EL 2132-03	See above Cl. No. A.1	N/A
A.1.3	Mounting of samples :	EL 2132-04	See above Cl. No. A.1	N/A
A.1.4	Test flame (see IEC 60695-11-3)	EL 2132-05	See above Cl. No. A.1	N/A
	Flame A, B, C or D :		See above Cl. No. A.1	N/A
A.1.5	Test procedure	EL 2132-06	See above Cl. No. A.1	N/A
A.1.6	Compliance criteria	EL 2132-07	See above Cl. No. A.1	N/A
	Sample 1 burning time (s):		See above Cl. No. A.1	N/A
	Sample 2 burning time (s):		See above Cl. No. A.1	N/A
	Sample 3 burning time (s):		See above Cl. No. A.1	N/A
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)	EL 2132-08	Certified material used (See table 1.5.1)	P
A.2.1	Samples, material:	EL 2132-09	See above Cl. No. A.2	N/A
	Wall thickness (mm):		See above Cl. No. A.2	N/A
A.2.2	Conditioning of samples; temperature (°C) :	EL 2132-10	See above Cl. No. A.2	N/A
A.2.3	Mounting of samples :	EL 2132-11	See above Cl. No. A.2	N/A
A.2.4	Test flame (see IEC 60695-11-4)	EL 2132-12	See above Cl. No. A.2	N/A

Tests relating to Fire Safety

EL 2132 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
	Flame A, B or C :		See above Cl. No. A.2	N/A
A.2.5	Test procedure	EL 2132-13	See above Cl. No. A.2	N/A
A.2.6	Compliance criteria	EL 2132-14	See above Cl. No. A.2	N/A
	Sample 1 burning time (s):		See above Cl. No. A.2	N/A
	Sample 2 burning time (s):		See above Cl. No. A.2	N/A
	Sample 3 burning time (s):		See above Cl. No. A.2	N/A
A.2.7	Alternative test acc. To IEC 60695-11-5, cl. 5 and 9	EL 2132-15	See above Cl. No. A.2	N/A
	Sample 1 burning time (s):		See above Cl. No. A.2	N/A
	Sample 2 burning time (s):		See above Cl. No. A.2	N/A
	Sample 3 burning time (s):		See above Cl. No. A.2	N/A
A.3	Hot flaming oil test (see 4.6.2)	EL 2132-16		N/A
A.3.1	Mounting of samples	EL 2132-17		N/A
A.3.2	Test procedure	EL 2132-18		N/A
A.3.3	Compliance criterion	EL 2132-19		N/A

*-Total number of Requirements to be observed / inspected = 00
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 20
Total No of applicable Tests = 02
No. of tests for which the sample passed = 02

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Insulating Properties

EL 2133 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)	EL 2133-00	No motor used	N/A
B.1	General requirements	EL 2133-01	See above Cl. No. B	N/A
	Position :		See above Cl. No. B	N/A
	Manufacturer :		See above Cl. No. B	N/A
	Type :		See above Cl. No. B	N/A
	Rated values :		See above Cl. No. B	N/A
B.2	Test conditions	EL 2133-02	See above Cl. No. B	N/A
B.3	Maximum temperatures	EL 2133-03	See above Cl. No. B	N/A
B.4	Running overload test	EL 2133-04	See above Cl. No. B	N/A
B.5	Locked-rotor overload test	EL 2133-05	See above Cl. No. B	N/A
	Test duration (days):		See above Cl. No. B	N/A
	Electric strength test: test voltage (V) :		See above Cl. No. B	N/A
B.6	Running overload test for d.c. motors in secondary circuits	EL 2133-06	See above Cl. No. B	N/A
B.6.1	General	EL 2133-07	See above Cl. No. B	N/A
B.6.2	Test procedure	EL 2133-08	See above Cl. No. B	N/A
B.6.3	Alternative test procedure	EL 2133-09	See above Cl. No. B	N/A
B.6.4	Electric strength test; test voltage (V):	EL 2133-10	See above Cl. No. B	N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits	EL 2133-11	See above Cl. No. B	N/A
B.7.1	General	EL 2133-12	See above Cl. No. B	N/A
B.7.2	Test procedure	EL 2133-13	See above Cl. No. B	N/A
B.7.3	Alternative test procedure	EL 2133-14	See above Cl. No. B	N/A
B.7.4	Electric strength test; test voltage (V) :	EL 2133-15	See above Cl. No. B	N/A
B.8	Test for motors with capacitors	EL 2133-16	See above Cl. No. B	N/A
B.9	Test for three-phase motors	EL 2133-17	See above Cl. No. B	N/A

Tests relating to Insulating Properties

EL 2133 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
B.10	Test for series motors	EL 2133-18	See above Cl. No. B	N/A
	Operating voltage (V) :		See above Cl. No. B	N/A

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 19

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety

EL 2134 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)*	EL 2134-00		P
	Position :		See table 1.5.1	P
	Manufacturer :		See table 1.5.1	P
	Type :		See table 1.5.1	P
	Rated values :		See table 1.5.1	P
	Method of protection:		Overcurrent protection by circuit design	P
C.1	Overload test	EL 2134-01	See table 5.3	P
C.2	Insulation	EL 2134-02	See table 5.2 and C.2	P
	Protection from displacement of windings:		Windings mechanically secured and soldered to pins, insulations tapes and coil spacer tapes provided to avoid displacement	P

*-Total number of Requirements to be observed / inspected = 01

Total No of applicable Requirement = 01

No of Requirements for which the sample passed = 01

Total number of tests to be conducted = 02

Total No of applicable Tests = 02

No. of tests for which the sample passed = 02

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Insulating Properties

EL 2135 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)	EL 2135-00		P
D.1	Measuring instrument	EL 2135-01	Measuring instrument D.1 used	P
D.2	Alternative measuring instrument	EL 2135-02	Alternative measuring instrument not used	N/A

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 03

Total No of applicable Tests = 02

No. of tests for which the sample passed = 02

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Thermal Properties **EL 2136– V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)	EL2136-00		N/A

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 01

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety

EL 2137 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)	EL2137-00	Complies	P

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 01

Total No of applicable Tests = 01

No. of tests for which the sample passed = 01

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical safety

EL 2138 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES	EL 2138-00	Alternative method not used	N/A
G.1	Clearances	EL 2138-01	See above Cl. No. G	N/A
G.1.1	General	EL 2138-02	See above Cl. No. G	N/A
G.1.2	Summary of the procedure for determining minimum clearances	EL 2138-03	See above Cl. No. G	N/A
G.2	Determination of mains transient voltage (V)	EL 2138-04	See above Cl. No. G	N/A
G.2.1	AC Mains supply	EL 2138-05	See above Cl. No. G	N/A
G.2.2	Earthed d.c. mains supplies	EL 2138-06	See above Cl. No. G	N/A
G.2.3	Unearthed d.c. mains supplies	EL 2138-07	See above Cl. No. G	N/A
G.2.4	Battery operation	EL 2138-08	See above Cl. No. G	N/A
G.3	Determination of telecommunication network transient voltage (V)	EL 2138-09	See above Cl. No. G	N/A
G.4	Determination of required withstand voltage (V)	EL 2138-10	See above Cl. No. G	N/A
G.4.1	Mains transients and internal repetitive peaks	EL 2138-11	See above Cl. No. G	N/A
G.4.2	Transients from telecommunication networks:	EL 2138-12	See above Cl. No. G	N/A
G.4.3	Combination of transients	EL 2138-13	See above Cl. No. G	N/A
G.4.4	Transients from cable distribution systems	EL 2138-14	See above Cl. No. G	N/A
G.5	Measurement of transient voltages (V)	EL 2138-15	See above Cl. No. G	N/A
	a) Transients from a mains supply		See above Cl. No. G	N/A
	For an a.c. mains supply		See above Cl. No. G	N/A
	For a d.c. mains supply		See above Cl. No. G	N/A
	b) Transients from a telecommunication network		See above Cl. No. G	N/A
G.6	Determination of minimum clearances	EL 2138-16	See above Cl. No. G	N/A

*-Total number of Requirements to be observed / inspected	= 00
Total No of applicable Requirement	= 00
No of Requirements for which the sample passed	= N/A
Total number of tests to be conducted	= 17
Total No of applicable Tests	= 00
No. of tests for which the sample passed	= N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Radiation Safety **EL 2139 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
H	ANNEX H, IONIZING RADIATION (see 4.3.13)	EL 2139-00		N/A

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 01

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety

EL 2140 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)*	EL 2140-00	No earthing and bonding terminals	N/A
	Metal(s) used :		See above Cl. No. J	N/A

*-Total number of Requirements to be observed / inspected = 01

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 00

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to General Requirement **EL 2141 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)*	EL 2141-00	No thermal controls	N/A
K.1	Making and breaking capacity	EL 2141-01	See above Cl. No. K	N/A
K.2	Thermostat reliability; operating voltage (V) :	EL 2141-02	See above Cl. No. K	N/A
K.3	Thermostat endurance test; operating voltage (V) :	EL 2141-03	See above Cl. No. K	N/A
K.4	Temperature limiter endurance; operating voltage (V) :	EL 2141-04	See above Cl. No. K	N/A
K.5	Thermal cut-out reliability	EL 2141-05	See above Cl. No. K	N/A
K.6	Stability of operation	EL 2141-06	See above Cl. No. K	N/A

*-Total number of Requirements to be observed / inspected = 01

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 06

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to General Requirement **EL 2142 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)*	EL 2142-00	See below	P
L.1	Typewriters*	EL 2142-01	See below Cl. No. L.7	N/A
L.2	Adding machines and cash registers*	EL 2142-02	See below Cl. No. L.7	N/A
L.3	Erasers*	EL 2142-03	See below Cl. No. L.7	N/A
L.4	Pencil sharpeners*	EL 2142-04	See below Cl. No. L.7	N/A
L.5	Duplicators and copy machines*	EL 2142-05	See below Cl. No. L.7	N/A
L.6	Motor-operated files*	EL 2142-06	See below Cl. No. L.7	N/A
L.7	Other business equipment*	EL 2142-07	Maximum normal load obtained by operating the equipment at rated output	P

*-Total number of Requirements to be observed / inspected = 08

Total No of applicable Requirement = 02

No of Requirements for which the sample passed = 02

Total number of tests to be conducted = 00

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety

EL 2143 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)	EL 2143-00	No telephone ringing signals used	N/A
M.1	Introduction*	EL 2143-01	See above Cl. No. M	N/A
M.2	Method A	EL 2143-02	See above Cl. No. M	N/A
M.3	Method B	EL 2143-03	See above Cl. No. M	N/A
M.3.1	Ringing signal	EL 2143-04	See above Cl. No. M	N/A
M.3.1.1	Frequency (Hz)	EL 2143-05	See above Cl. No. M	N/A
M.3.1.2	Voltage (V)	EL 2143-06	See above Cl. No. M	N/A
M.3.1.3	Cadence; time (s), voltage (V) ...	EL 2143-07	See above Cl. No. M	N/A
M.3.1.4	Single fault current (mA)	EL 2143-08	See above Cl. No. M	N/A
M.3.2	Tripping device and monitoring voltage	EL 2143-09	See above Cl. No. M	N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage	EL 2143-10	See above Cl. No. M	N/A
M.3.2.2	Tripping device	EL 2143-11	See above Cl. No. M	N/A
M.3.2.3	Monitoring voltage (V)	EL 2143-12	See above Cl. No. M	N/A

*-Total number of Requirements to be observed / inspected = 01
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 12
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical safety

EL 2144 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
N	ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)	EL 2144-00		N/A
N.1	ITU-T impulse test generators	EL 2144-01		N/A
N.2	IEC 60065 impulse test generator	EL 2144-02		N/A

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 03

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to General Requirements **EL 2145– V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
P	ANNEX P, NORMATIVE REFERENCES	EL 2145-00		N/A

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 01

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to General Requirements **EL 2146 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)	EL 2146-00	Certified Varistor (MOV1) used (See table 1.5.1)	P
	A VDR shall comply with iec 61051-2, whether a fire enclosure is provided or not, taking into account all of the following:		See above Cl. No. Q	P
	Preferred climatic categories Lower category temperature: -10ºC Upper category temperature: +85ºC Duration of damp Test, steady state test:21 days		See above Cl. No. Q	P
	b) Maximum continuous voltage: Atleast 1,25 times the rated voltage of the equipment or Atleast 1,25 times the upper voltage of the rated voltage range		See above Cl. No. Q	P
	c) Combination pulse :	EL 2146-01	See above Cl. No. Q	P
	d) Body of the VDR shall comply with Needle flame test according to IEC 60695-11-5 with the following test severities: duration of application of the test flame: 10 s after flame time: 5s [This test is not required if VDR complies with V-1 CLASS MATERIAL]	EL 2146-02	See above Cl. No. Q	P

*-Total number of Requirements to be observed / inspected = 00
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 03
Total No of applicable Tests = 03
No. of tests for which the sample passed = 03

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to General Requirement **EL 2147– V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES*	EL 2147-00		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)*	EL 2147-01		N/A
R.2	Reduced clearances (see 2.10.3)*	EL 2147-02		N/A

*-Total number of Requirements to be observed / inspected = 03

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 00

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to General Requirement **EL 2148 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)*	EL 2148-00		N/A
S.1	Test equipment*	EL 2148-01		N/A
S.2	Test procedure*	EL 2148-02		N/A
S.3	Examples of waveforms during impulse testing*	EL 2148-03		N/A

*-Total number of Requirements to be observed / inspected = 04

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 00

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Protection against Ingress of water **EL 2149 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)	EL 2149-00	IPX0	N/A

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 01

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Wiring **EL 2150 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)	EL2150-00		N/A
U.1	General	EL2150-01		N/A
U.2	Type tests	EL2150-02		N/A
U.2.1	General	EL2150-03		N/A
U.2.2	Electric strength	EL2150-04		N/A
U.2.2.1	Solid round winding wire and stranded winding wires	EL2150-05		N/A
U.2.2.1.1	Wires with nominal conductor diameter upto and including 0.100mm	EL2150-06		N/A
U.2.2.1.2	Wires with nominal conductor diameter over 0.100mm and including 2.500mm	EL2150-07		N/A
U.2.2.1.3	Wires with nominal conductor diameter over 2.500mm	EL2150-08		N/A
U.2.2.2	Square or rectangular wires	EL2150-09		N/A
U.2.3	Flexibility and adherence	EL2150-10		N/A
U.2.4	Heat shock	EL2150-11		N/A
U.2.5	Retention of electric strength after bending	EL2150-12		N/A
U.3	Testing during manufacturing	EL2150-13		N/A
U.3.1	General	EL2150-14		N/A
U.3.2	Routine tests	EL2150-15		N/A
U.3.3	Sampling test	EL2150-16		N/A

*-Total number of Requirements to be observed / inspected = 00
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 17
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety **EL 2151 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1) *	EL 2151-00	TN power distribution systems used	P
V.1	Introduction*	EL 2151-01	See above Cl. No. V	P
V.2	TN power distribution systems	EL 2151-02	See above Cl. No. V	P
V.3	TT Power Distribution systems	EL 2151-03	See above Cl. No. V	N/A
V.4	IT Power Distribution systems	EL 2151-04	See above Cl. No. V	N/A

*-Total number of Requirements to be observed / inspected = 02

Total No of applicable Requirement = 02

No of Requirements for which the sample passed = 02

Total number of tests to be conducted = 03

Total No of applicable Tests = 01

No. of tests for which the sample passed = 01

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety

EL 2152 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
W	ANNEX W, SUMMATION OF TOUCH CURRENTS *	EL 2152-00	No such construction	N/A
W.1	Touch current from electronic circuits*	EL 2152-01	See above Cl. No. W	N/A
W.1.1	Floating circuits*	EL 2152-02	See above Cl. No. W	N/A
W.1.2	Earthed circuits*	EL 2152-03	See above Cl. No. W	N/A
W.2	Interconnection of several equipments*	EL 2152-04	See above Cl. No. W	N/A
W.2.1	Isolation*	EL 2152-05	See above Cl. No. W	N/A
W.2.2	Common return, isolated from earth*	EL 2152-06	See above Cl. No. W	N/A
W.2.3	Common return, connected to protective earth*	EL 2152-07	See above Cl. No. W	N/A

*-Total number of Requirements to be observed / inspected = 08

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 00

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety **EL 2153– V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)*	EL 2153-00		P
X.1	Determination of maximum input current*	EL 2153-01		P
X.2	Overload test procedure*	EL 2153-02	See table 5.3	P

*-Total number of Requirements to be observed / inspected = 03

Total No of applicable Requirement = 03

No of Requirements for which the sample passed = 03

Total number of tests to be conducted = 00

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Radiation Safety **EL 2154– V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)	EL 2154-00		N/A
Y.1	Test apparatus	EL 2154-01		N/A
Y.2	Mounting of test samples	EL 2154-02		N/A
Y.3	Carbon-arc light-exposure apparatus	EL 2154-03		N/A
Y.4	Xenon-arc light exposure apparatus	EL 2154-04		N/A

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 05

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety **EL 2155– V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)*	EL 2155-00	OVC II	P

*-Total number of Requirements to be observed / inspected = 01

Total No of applicable Requirement = 01

No of Requirements for which the sample passed = 01

Total number of tests to be conducted = 00

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Mechanical Properties **EL 2156 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)	EL 2156-00		N/A

*-Total number of Requirements to be observed / inspected = 00

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 01

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Electrical Safety

EL 2158 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
CC	Evaluation of integrated circuit (IC) current limiters*	EL 2158-00	No integrated circuit current limiters used	N/A
CC.1	Integrated circuit (IC) current limiters*	EL 2158-01	See above Cl. No. CC	N/A
CC.2	Test program 1	EL 2158-02	See above Cl. No. CC	N/A
CC.3	Test program 2	EL 2158-03	See above Cl. No. CC	N/A
CC.4	Test program 3	EL 2158-04	See above Cl. No. CC	N/A
CC.5	Compliance	EL 2158-05	See above Cl. No. CC	N/A

*-Total number of Requirements to be observed / inspected = 02

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 04

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Mechanical Properties **EL 2159 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
DD	Requirements for the mounting means of rack-mounted equipment*	EL 2159-00	No such equipment	N/A
DD.1	General		See above Cl. No. DD	N/A
DD.2	Mechanical strength test, variable N……..:	EL 2159-01	See above Cl. No. DD	N/A
DD.3	Mechanical strength test, 250N, including end stops……..:	EL 2159-02	See above Cl. No. DD	N/A
DD.4	Compliance*……..:	EL 2159-03	See above Cl. No. DD	N/A

*-Total number of Requirements to be observed / inspected = 02

Total No of applicable Requirement = 00

No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 02

Total No of applicable Tests = 00

No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

Tests relating to Mechanical Properties **EL 2160 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
EE	ANNEX EE, Household and home/office document/media shredders	EL 2160-00		N/A
EE.1	General			N/A
EE.2	Markings and instructions*	EL 2160-01		N/A
	Use of markings or symbols*:			N/A
	Information of user instructions, maintenance and/or servicing instructions*:			N/A
EE.3	Inadvertent reactivation test:	EL 2160-02		N/A
EE.4	Disconnection of power to hazardous moving parts*	EL 2160-03		N/A
	Use of markings or symbols*:			N/A
EE.5	Protection against hazardous moving parts			N/A
	Test with test finger (Figure 2A):	EL 2160-04		N/A
	Test with wedge probe (Figure EE1 and EE2) :	EL 2160-05		N/A

*-Total number of Requirements to be observed / inspected = 02
Total No of applicable Requirement = 00
No of Requirements for which the sample passed = N/A

Total number of tests to be conducted = 04
Total No of applicable Tests = 00
No. of tests for which the sample passed = N/A

Certificate: It is certified that the above tests were performed and found to be passing/ ~~failing~~ in the requirement tested

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(Approving Authority)

1.5.1	TABLE: List of components				P
Object/part no.	**Manufacturer/ trademark**	**Type/model**	**Technical data**	**Standard**	**Mark(s) of conformity[1.]**
Plastic enclosure and plug holder	SABIC INNOVATIVE PLASTICS B V	C2950	V-0,85°C, Min. thickness: 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E45329
Alternate	SABIC INNOVATIVE PLASTICS B V	CX7211(GG)	V-0, 90°C, Min. thickness: 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E45329
Alternate	SABIC INNOVATIVE PLASTICS B V	945(GG)	V-0, 130°C, Min. thickness: 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E45329
Alternate	FORMOSA CHEMICALS & FIBRE CORP PLASTICS DIV	AC310(+)	V-0, 85°C, Min. thickness: 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E162823
Alternate	TEIJIN LIMITED RESIN AND PLASTIC	LN-1250G	V-0, 125°C, Min. thickness: 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E50075
Alternate	SABIC JAPAN L L C	945	V-0, 125°C, Min. thickness: 1.5mm	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E207780
Transformer (T1)	GlobTek (Suzhou) Co., Ltd	XF01036	Class B	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 + A1:2009 + A2:2013	Tested within Equipment
Alternate	ENG ELECTRIC CO., LTD	XF01036	Class B	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 + A1:2009 + A2:2013	Tested within Equipment
Insulation system	GLOBTEK INC	GTX-130-TM	Class B	UL 1446 (Equivalent to applicable parts of IEC 60950-1)	UL E243347
Alternate	ENG ELECTRIC CO LTD	ENG130-1	Class B	UL 1446 (Equivalent to applicable parts of IEC 60950-1)	UL E308897
Magnet wire (primary)	NINGBO JINTIAN NEW MATERIAL CO LTD	2UEW/155	155°C	UL 1446 (Equivalent to applicable parts of IEC 60950-1)	UL E227047

Alternate	PACIFIC ELECTRIC WIRE & CABLE (SHENZHEN) CO LTD	UEWN/U, UEWS/U	130°C	UL 1446 (Equivalent to applicable parts of IEC 60950-1)	UL E201757
Alternate	JUNG SHING WIRE CO LTD	UEW-4, UEY-2	130°C	UL 1446 (Equivalent to applicable parts of IEC 60950-1)	UL E174837
Alternate	JIANGSU HONGLIU MAGNET WIRE TECHNOLOGY CO LTD	2UEW/130	130°C	UL 1446 (Equivalent to applicable parts of IEC 60950-1)	UL E335065
Alternate	WUXI JUFENG COMPOUND LINE CO LTD	2UEWB	130°C	UL 1446 (Equivalent to applicable parts of IEC 60950-1)	UL E206882
Alternate	JIANGSU DARTONG M & E CO LTD	UEW	130°C	UL 1446 (Equivalent to applicable parts of IEC 60950-1)	UL E237377
Alternate	SHANDONG SAINT ELECTRIC CO LTD	UEW/130	130°C	UL 1446 (Equivalent to applicable parts of IEC 60950-1)	UL E194410
Alternate	ZHEJIANG LANGLI ELECTRIC EQUIPMENTS CO LTD	UEW	155°C	UL 1446 (Equivalent to applicable parts of IEC 60950-1)	UL E222214
Alternate	HUIZHOU HUILI INDUSTRIAL CO LTD	MIW-B(x)	MW75#, 130°C	UL 1446 (Equivalent to applicable parts of IEC 60950-1)	UL E322908
-Triple-insulated wire (Secondary)	Great Leoflon Industrial Co., Ltd.	TRW (B) Serie(s)	ClassB,130°C reinforced insulation	IEC 62368-1:2014	VDE 136581
Alternate	KBI COSMOLINK CO.,LTD.	TIW-M Serie(s)	Class B,130°C reinforced insulation	IEC 62368-1:2014	VDE 138053
Alternate	Furukawa Electric Co., Ltd. Electronics	TEX-E	Class B,130°C reinforced insulation	IEC 62368-1:2014	VDE 006735
Alternate	TOTOKU ELECTRIC CO LTD	TIW-2	Class B,130°C reinforced insulation	IEC 62368-1:2014	VDE 40005152
Alternate	E&B TECHNOLOGY CO LTD	E&B-XXXB, E&B-XXXB-1	Class B,130°C reinforced insulation	IEC 62368-1:2014	VDE 40023473

-Bobbin	CHANG CHUN PLASTICS CO LTD	T375J(G5)(G6)	V-0, 150°C, thickness 0.45 mm min.	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E59481
Alternate	CHANG CHUN PLASTICS CO LTD	T375HF, T373J	V-0, 150°C, thickness 0.45 mm min.	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E59481
Alternate	SUMITOMO BAKELITE CO LTD	PM-9820, PM-9630, PM-9823	V-0, 150°C, thickness 0.74 mm min.	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E41429
Alternate	Resonac Techno Service Corporation	CP-J-8800	V-0, 150°C, thickness 0.45 mm min.	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E514814
Alternate	CHANG CHUN PLASTICS CO LTD	4130	V-0, 150°C, thickness 0.45 mm min.	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E59481
-Insulating tape	HUIZHOU YAHUA ELECTRONIC TECHNOLOGY CO LTD	CT	Min.130°C	UL 510A (No Equivalent IEC Standard)	UL E495875
Alternate	3M COMPANY	1350F-1 (b), 1350T-1 (b), 44	Min.130°C	UL 510A (No Equivalent IEC Standard)	UL E17385
Alternate	BONDTEC PACIFIC CO LTD	370S (b)	Min.130°C	UL 510A (No Equivalent IEC Standard)	UL E175868
Alternate	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ,CT,WF	Min.130°C	UL 510A (No Equivalent IEC Standard)	UL E165111
Alternate	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	JY25-A (b)	Min.130°C	UL 510A (No Equivalent IEC Standard)	UL E246950
Alternate	CHANG SHU LIANG YI TAPE INDUSTRY CO LTD	LY-XX	Min.130°C	UL 510A (No Equivalent IEC Standard)	UL E246820
PTFE tubing	GREAT HOLDING INDUSTRIAL CO LTD	TFT	Min. 300V, 200°C	UL 224 (No Equivalent IEC Standard)	UL E156256
Alternate	GREAT HOLDING INDUSTRIAL CO LTD	TFS	Min. 300V, 200°C	UL 224 (No Equivalent IEC Standard)	UL E156256

Alternate	Shenzhen Woer Heat-Shrinkable Material Co Ltd	WF	600V, 200°C	UL 224 (No Equivalent IEC Standard)	UL E203950
Alternate	Changyuan Electronics (Shenzhen) Co Ltd	CB-TT-T, CB-TT-S	Min. 300V, 200°C	UL 224 (No Equivalent IEC Standard)	UL E180908
Bridging-Capacitor (CY1, CY2) (optional)	Success Electronics Co., Ltd.	SE	250Vac, 125°C, Max. 1000pF	IEC 60384-14: 2013/AMD1: 2016	VDE 40037211
Alternate	TDK Corporation	CD	250Vac,125°C, Max. 1000pF	IEC 60384-14: 2013/AMD1: 2016	VDE 40029780
Alternate	Success Electronics Co., Ltd.	SB	250Vac, 125°C, Max. 1000pF	IEC 60384-14: 2013/AMD1: 2016	VDE 40037221
Alternate	Murata Mfg. Co., Ltd.	KX	250Vac, 125°C, Max. 1000pF	IEC 60384-14: 2013/AMD1: 2016	VDE 40002831
Alternate	Walsin Technology Corp.	AH	250Vac, 125°C, Max. 1000pF	IEC 60384-14: 2013/AMD1: 2016	VDE 40001804
Alternate	Haohua Electronic Co.	CT7	250Vac, 125°C, Max. 1000pF	IEC 60384-14: 2013/AMD1: 2016	VDE 40003902
Alternate	Hongzhi Enterprises Ltd.	X1Y1 Series	250Vac, 125°C, Max. 1000pF	IEC 60384-14: 2013/AMD1: 2016	VDE 40038760
Alternate	SHANTOU HIGH-NEW TECHNOLOGY DEVELOPMNT ZONE SONGTIAN ENTERPRISE CO LTD	CD	250Vac, 125°C, Max. 1000pF	IEC 60384-14: 2013/AMD1: 2016	VDE 40025754
Fuse (RF1)	Suzhou Walter Electronic Co. Ltd.	ICP	T2 A, 250V, LBC	IEC 60127-1:2006/AMD1:2011 +AMD2:2015	VDE 40012824
Alternate	Suzhou Walter Electronic Co. Ltd.	ICP	T1 A 250V, LBC	IEC 60127-1:2006/AMD1:2011 +AMD2:2015	VDE 40012824
Alternate	SHENZHEN GREAT ELECTRONICS CO LTD	RXF-1W	1 Ω, 1 W	UL 1412 (No Equivalent IEC Standard)	UL E301541
Alternate	JIANGSU XINYANG ELECTRONIC COMPONENT CO LTD	RF10-1W	1 Ω, 1 W	UL 1412 (No Equivalent IEC Standard)	UL E312842

Alternate	SHENZHEN KAYOCOTA ELECTRONICS CO LTD	FRKNP-1WS	1 Ω, 1 W	UL 1412 (No Equivalent IEC Standard)	UL E318056
Alternate	TZAI YUAN ENTERPRISE CO LTD	KNF1W	1 Ω, 1 W	UL 1412 (No Equivalent IEC Standard)	UL E355632
Alternate	YAGEO COMPONENTS (SUZHOU) CO LTD	FKN	1 Ω, 1 W	UL 1412 (No Equivalent IEC Standard)	UL E323780
Alternate	ANHUI CHANGSHENG ELECTRONICS CO LTD	RXF21-1W	1 Ω, 1 W	UL 1412 (No Equivalent IEC Standard)	UL E306095
Alternate	Zhongshan LanbaoElectrical Appliances Co., Ltd.	RTI-10 Serie(s)	T1 A or T2 A, 250V, LBC	IEC 60127-1:2006/AMD1:2011 +AMD2:2015	VDE 40017009
Fuse (FS1)	Conquer Electronics Co., Ltd.	MST	T2A, 250V, LBC	IEC 60127-1:2006/AMD1:2011 +AMD2:2015	VDE 40017118
Alternate	Conquer Electronics Co., Ltd.	MST	T1A 250V, LBC	IEC 60127-1:2006/AMD1:2011 +AMD2:2015	VDE 40017118
Alternate	SUZHOU WALTER ELECTRONIC CO LTD	2000	T1 A or T2 A, 250V, LBC	IEC 60127-1:2006/AMD1:2011 +AMD2:2015	VDE 40018790
Alternate	SUZHOU WALTER ELECTRONIC	2010	T1 A or T2 A, 250V, LBC	IEC 60127-1:2006/AMD1:2011 +AMD2:2015	VDE 40018781
Alternate	Bel Fuse Ltd.	RST	T1 A or T2 A, 250V, LBC	IEC 60127-1:2006/AMD1:2011 +AMD2:2015	VDE 40011144
Alternate	Cooper Bussmann LLC	SS-5	T1 A or T2 A, 250V, LBC	IEC 60127-1:2006/AMD1:2011 +AMD2:2015	VDE 40015513
Alternate	Suzhou Walter Electronic Co. Ltd.	ICP	T1 A or T2 A, 250V, LBC	IEC 60127-1:2006/AMD1:2011 +AMD2:2015	VDE 40012824

Alternate	Shenzhen Lanson Electronics Co. Ltd.	SMT	T1 A or T2 A, 250V, LBC	IEC 60127-1:2006/AMD1:2011 +AMD2:2015	VDE 40012592
Varistor (MOV1)	Success Electronics Co., Ltd.	SVR10D471K	300Vac, coating is V-0, 125 °C, 6KV/3KA, pulse test passed	IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2: 1991 IEC 61051-1:2007	VDE 40030401
Alternate	Success Electronics Co., Ltd.	SVR14D471K	300Vac, coating is V-0, 125 °C, 6KV/3KA, pulse test passed	IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2: 1991 IEC 61051-1:2007	VDE 40030401
Alternate	Centra Science Corp.	10D471K, 14D471K	300Vac, coating is V-0, 125 °C, 6KV/3KA, pulse test passed	IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2: 1991 IEC 61051-1:2007	VDE 40008220
Alternate	Thinking Electronic Industrial Co.,Ltd.	TVR10471K, TVR14471K, TFV10S471K, TVR10621K	300Vac, coating is V-0, 125 °C, 6KV/3KA, pulse test passed	IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2: 1991 IEC 61051-1:2007	VDE 005944
Alternate	Joyin Co., Ltd.	JVR10N471K, JVR14N471K	300Vac, Coating is V-0, 125 °C, 6KV/3KA, pulse test passed	IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2: 1991 IEC 61051-1:2007	VDE 005937
Alternate	CeramateTechn. Co., Ltd.	GNR10D471K, GNR14D471K	300Vac, coating is V-0, 125 °C, 6KV/3KA, pulse test passed	IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2: 1991 IEC 61051-1:2007	VDE 40031745
Alternate	BestBright Electronics Co. Ltd	14D471K, 10D471K	300Vac, coating is V-0, 125 °C, 6KV/3KA, pulse test passed	IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2: 1991 IEC 61051-1:2007	VDE 40027827
Alternate	BestBright Electronics Co. Ltd	10D471K, 14D471K	300Vac, coating is V-0, 125 °C, 6KV/3KA, pulse test passed	IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2: 1991 IEC 61051-1:2007	VDE 40005858
Alternate	Hongzhi Enterprises Ltd.	HEL-10D471K, HEL-14D471K	300Vac, coating is V-0, 125 °C, 6KV/3KA, pulse test passed	IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2: 1991 IEC 61051-1:2007	VDE 40037512

Alternate	Guangxi New Future Information Industry Co., Ltd.	10D471K, 14D471K	300Vac, coating is V-0, 125 °C, 6KV/3KA, pulse test passed	IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2: 1991 IEC 61051-1:2007	VDE 40030322
Alternate	Thinking Electronic Industrial Co., Ltd.	TVR10471-M	300Vac, coating is V-0, 125 °C, 6KV/3KA, pulse test passed	IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2: 1991 IEC 61051-1:2007	VDE 40036061
Alternate	SHANTOU HIGH-NEW TECHNOLOGY DEVELOPMNT ZONE SONGTIAN ENTERPRISE CO LTD	10D471K, 14D471K,10D621K	300Vac, coating is V-0, 125 °C, 6KV/3KA, pulse test passed	IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2: 1991 IEC 61051-1:2007	VDE 40023049
Alternate	Guangdong Huiwan Electronics Technology Co.,LTD.	V-471K-10D,V-471K-10E V-471K-14D,V-471-14E	300Vac, coating is V-0, 125 °C, 6KV/3KA, pulse test passed	IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2: 1991 IEC 61051-1:2007	VDE 40043880
Alternate	XIAMEN SET ELECTRONICS CO LTD	TFV8S471K, TFV10S471K	300Vac, coating is V-0, 125 °C, 6KV/3KA, pulse test passed	IEC 61051-2:1991 /AMD1:2009 IEC 61051-2-2: 1991 IEC 61051-1:2007	TUV J 50554061
PCB	WALEX ELECTRONIC (WUXI) CO LTD	T4	V-0, 130°C, Min. 1.2 mm thickness	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No Equivalent IEC Standard)	UL E154355
Alternate	WALEX ELECTRONIC (WUXI) CO LTD	T2, T2A, T2B,	V-0, 130°C, Min. 1.2 mm thickness	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No Equivalent IEC Standard)	UL E154355
Alternate	Guangdong Hetong Technology Co Ltd	CEM1, 2V0, FR4	V-0, 130°C, Min. 1.2 mm thickness	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No Equivalent IEC Standard)	UL E243157

Alternate	DONGGUAN DAYSUN ELECTRONIC CO LTD	DS2	V-0, 130°C, Min. 1.2 mm thickness	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No Equivalent IEC Standard)	UL E251754
Alternate	Dafeng Arex Electronics Technology Co Ltd	02V0, 03V0, 04V0	V-0, 130°C, Min. 1.2 mm thickness	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No Equivalent IEC Standard)	UL E186016
Alternate	SHENZHEN TONGCHUANG XIN ELECTRONICS CO LTD	TCX	V-0, 130°C, Min. 1.2 mm thickness	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No Equivalent IEC Standard)	UL E250336
Alternate	PACIFIC WIN INDUSTRIAL LTD	PW-02, PW-03	V-0, 130°C, Min. 1.2 mm thickness	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No Equivalent IEC Standard)	UL E228070
Alternate	GOLDEN TRIANGLE PCB & TECHNOLOGIES LTD	GT-D	V-0, 130°C, Min. 1.2 mm thickness	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No Equivalent IEC Standard)	UL E340752
Alternate	KUOTIANG ENT LTD	C-2, C-2A, C-4	V-0, 130°C, Min. 1.2 mm thickness	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No Equivalent IEC Standard)	UL E227299
Alternate	KINGBOARD LAMINATES HOLDINGS LTD	KB-3151C, KB-5150	V-0, 130°C, Min. 1.2 mm thickness	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No Equivalent IEC Standard)	UL E123995

Alternate	SHENZHEN JINDIAN PRECISION CIRCUIT CO LTD	JD-1, JD-1A	V-0, 130°C, Min. 1.2 mm thickness	UL 94 (Flammability test equivalent to IEC 60695-11-10) UL 796 (No Equivalent IEC Standard)	UL E347010
Inductor (LF1)	WUXI HAOPUWEI ELECTRONICS CO.,LTD	RC00258	15mH,130℃	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 + A1:2009 + A2:2013	Tested within Equipment
Inductor (LF2)	WUXI HAOPUWEI ELECTRONICS CO.,LTD	LF024	27uH,130℃	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 + A1:2009 + A2:2013	Tested within Equipment
Supplementary information: 1. Evidences provided by the manufacturer for the listed components are verified by us and the evidences are conforming to the requirements of the relevant standard.					

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
90.0	0.322	--	21.22	FS1,RF1	0.322	Maximum normal load/50Hz Condition 1
100.0	0.280	0.45A	21.01	FS1,RF1	0.280	
240.0	0.112	0.45A	20.76	FS1,RF1	0.112	
264.0	0.094	--	20.19	FS1,RF1	0.094	
90.0	0.326	--	21.28	FS1,RF1	0.326	Maximum normal load/50Hz Condition 2
100.0	0.284	0.45A	21.08	FS1,RF1	0.284	
240.0	0.116	0.45A	20.79	FS1,RF1	0.116	
264.0	0.099	--	20.26	FS1,RF1	0.099	
Supplementary information: Condition 1 & 2 defined at page No.12 of 110						

2.1.1.5	TABLE: Energy hazard measurement				P
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
5Vdc	3.2	5.226	3.455	17.899	
Supplementary information:					

2.1.1.7	TABLE: Discharge test				N/A
Condition	τ calculated (s)	τ measured (s)	t u→ 0V (s)	Comments	
--	--	--	--	--	
Supplementary information: No such capacitor used					

2.2.2	TABLE: SELV measurement (under normal conditions)			P
Transformer	Location	Voltage (max.) (V)		Voltage Limitation Component
		V peak	V d.c.	
T1	Pin 8 to Pin 9	18	--	--
--	Output	--	5.226	--
Supplementary information:				

2.2.3	TABLE: SELV measurement (under fault conditions)		P
Location	Voltage (max.) (V)	Comments	
Transformer (T1) (S-C) (Pin 8-9)	0.0	Unit shutdown immediately	
Supplementary information: (S-C)=short circuit			

2.4.2	TABLE: Limited current circuit measurement					P
Location	Voltage (V)	Current(mA)	Freq (kHz)	Limit (mA)	Comments	
Bridging Y-Capacitor (CY1+CY2)	1.16	0.58	0.05	0.7	2 KΩ resistor used	
Supplementary information:						

2.5	TABLE: Limited power source measurement		P
	Max. Limits	Measured	Verdict
According to Table 2B/2C (normal condition) Output at USB 1 Uoc=5.226Vdc			
current (in A)	8	1.729	P
apparent power (in VA)	100	8.952	P
According to Table 2B/2C (normal condition) Output at USB 2 Uoc=5.224Vdc			
current (in A)	8	1.726	P
apparent power (in VA)	100	8.947	P
According to Table 2B/2C (single fault condition) USB 1 (S-C), Output Voltage = 0Vdc			
current (in A)	8	0.0	P
apparent power (in VA)	100	0.0	P
Supplementary information: (S-C) = Short-Circuit			

2.6.3.4	TABLE: Resistance of earthing measurement	N/A
Location	Resistance measured (Ω)	Comments
--	--	--
Supplementary information: Class II equipment		

<OR>

2.6.3.4	TABLE: Resistance of earthing measurement	N/A
Location	Voltage drop (V)	Comments
--	--	--
Supplementary information: Class II equipment		

2.10.2	Table: Working voltage measurement		P
Location	RMS voltage (V)	Peak voltage (V)	Comments
Line to Neutral	240	342	--
Transformer (T1)			
Pin 2,4 to Pin 8	176	252	--
Pin 2,4 to Pin 9	184	264	--
Pin 1 to Pin 8	232	334	--
Pin 1 to Pin 9	246	352	--
Pin 5 to Pin 8	196	280	--
Pin 5 to Pin 9	204	292	--
Pin 3 to Pin 8	218	312	--
Pin 3 to Pin 9	226	324	--
Supplementary information:			

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements					P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Functional:						
Line to Neutral	342	240	2.3	3.88	2.5	3.88
Basic / supplementary:						
--	--	--	--	--	--	--
Reinforced:						
Transformer (T1) (Primary trace to Secondary Pin)	352	246	6.0	7.12	6.0	7.12
Supplementary information:						

2.10.5	TABLE: Distance through insulation measurements				P
Distance through insulation (DTI) at/of:	U peak (V)	U r.m.s. (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Basic:					
--	--	--	--	--	--
Supplementary:					
--	--	--	--	--	--
Reinforced:					
Insulation tape of transformer (T1)	352	246	3000	Min. 2 layers	2 layers
Supplementary information:					

4.3.8	TABLE: Batteries								N/A
The tests of 4.3.8 are applicable only when appropriate battery data is not available				No battery used					N/A
Is it possible to install the battery in a reverse polarity position?				See above					N/A
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition	--	--	--	--	--	--	--	--	--
Max. current during fault condition	--	--	--	--	--	--	--	--	--
Test results:									Verdict
- Chemical leaks						--			--
- Explosion of the battery						--			--
- Emission of flame or expulsion of molten metal						--			--
- Electric strength tests of equipment after completion of tests						--			--
Supplementary information: No battery used									

4.5	TABLE: Temperature rise measurements	P

Temperatures were measured according cl. 1.4.5. Test in condition A and B at continuous normal operation as for power input measurements of table 1.6.2 resulted in highest temperature values.
Temperatures are calculated according cl. 1.4.12.3 with regard to the maximum ambient operation temperature of 40°C (T_{ma}) as specified by the manufacturer.

test voltage(s) (V): Condition 1		A: 90.0 V, 50 Hz		B: 264.0V, 50 Hz		
t_{amb1} (°C):	A: 25°C B: 25°C	t_{amb2} (°C):		A: 25°C B: 25°C		
Temperature of part/at: (measured with thermocouples)		Measured temperature rise at T_{amb}		Calculated temperature at T_{ma}		Allowed T_{max} (°C)
		A dT (K)	B dT (K)	A T (°C)	B T (°C)	
PCB near Fuse (FS1)		16	18	56	58	130
Transformer (T1) Coil		31	34	71	74	110
Inductor (LF1) Coil		19	21	59	61	120
Inductor (LF2) Coil		22	23	62	63	120
Plastic Enclosure		5	6	45	46	85
plug holder		7	8	47	48	85
test voltage(s) (V): Condition 2		A: 90.0 V, 50 Hz		B: 264.0V, 50 Hz		
t_{amb1} (°C):	A: 25°C B: 26°C	t_{amb2} (°C):		A: 25°C B: 26°C		
Temperature of part/at: (measured with thermocouples)		Measured temperature rise at T_{amb}		Calculated temperature at T_{ma}		Allowed T_{max} (°C)
		A dT (K)	B dT (K)	A T (°C)	B T (°C)	
PCB near Fuse (FS1)		17	19	57	59	130
Transformer (T1) Coil		33	36	73	76	110
Inductor (LF1) Coil		20	22	60	62	120
Inductor (LF2) Coil		23	24	63	64	120
Plastic Enclosure		6	7	46	47	85
plug holder		8	8	48	48	85

Supplementary information: Condition 1 & 2 defined at page No.12 of 110

Temperatures measured with winding resistance method: Not used

temperature T of winding: (winding resistance method)	(V)	R_1 (Ω)	R_2 (Ω)	T (°C)	allowed T_{max} (°C)	insulation class
--	--	--	--	--	--	--

Supplementary information:

4.5.5	TABLE: Ball pressure test of thermoplastic parts		P
	Allowed impression diameter (mm) .....:	≤ 2 mm	--

Part	Test temperature (°C)	Impression diameter (mm)
--	--	--

Supplementary information: Certified material used (See table 1.5.1)

4.6.1, 4.6.2	Table: Enclosure opening measurements	N/A

Location	Size (mm)	Comments
--	--	--

Supplementary information: No opening

4.7	Table: Resistance to fire				P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence
--	--	--	--	--	--
Supplementary information: Certified material used (See table 1.5.1)					

5.1.6	TABLE: Touch current and protective conductor current measurement					P
	Test voltage (V) ..... :	AC 264.0V@ 50Hz				--
Measurement location	Polarity (normal) [mA]		Polarity (reverse) [mA]		Limit (mA)	Comments
(Terminal A connected to...)	Switch: ON	Switch: OFF	Switch: ON	Switch: OFF		
Line /neutral to external enclosure wrapped with metal foil	0.036	--	0.032	--	0.25	Condition 1
Line /neutral to external enclosure wrapped with metal foil	0.038	--	0.034	--	0.25	Condition 2
Supplementary information: Condition 1 & 2 defined at page No.12 of 110						

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			P
Test voltage applied between:	Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No	
Functional:				
Line to Neutral {Fuse opened}	AC	1500	No	
Basic / supplementary:				
--	--	--	--	
Reinforced: Condition 1				
Line/ Neutral to external plastic enclosure with metal foil wrapped	AC	3000	No	
Insulating tape of each layer of Transformer (T1)	AC	3000	No	
Transformer (T1) winding primary to secondary	AC	3000	No	
Supplementary information:				
Reinforced: Condition 2				
Line/ Neutral to external plastic enclosure with metal foil wrapped	AC	3000	No	
Insulating tape of each layer of Transformer (T1)	AC	3000	No	
Transformer (T1) winding primary to secondary	AC	3000	No	
Supplementary information: Condition 1 & 2 defined at page No.12 of 110				

5.3	TABLE: Fault condition tests:-		P
	Ambient temperature (°C) ..... :	26˚C	P
	Power source for EUT: Manufacturer, model/type, output rating :	See table 1.5.1	P

Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
C5	S-C	264.0	1 minute	FS1,RF1	--	Output shut down immediately Result: No fire, No Hazard
Transformer (T1) Sec. pin Condition 1	S-C	90.0	1 minute	FS1,RF1	--	Unit shut down immediately Result: No fire, No Hazard
Transformer (T1) Pin (8-9) Condition 2	S-C	264.0	1 minute	FS1,RF1	--	Unit shut down immediately Result: No fire, No Hazard
Output Condition 1	Over load	90.0	4 hours 10 minutes	FS1,RF1	0.328	Temperature on Transformer (T1): 69˚C Result: No fire, No Hazard
Output Condition 1	Over load	264.0	4 hours 15 minutes	FS1,RF1	0.101	Temperature on Transformer (T1): 71˚C Result: No fire, No Hazard
Output Condition 2	Over load	264.0	4 hours 25 minutes	FS1,RF1	0.108	Temperature on Transformer (T1): 72˚C Result: No fire, No Hazard
Output Condition 2	Over load	90.0	4 hours 10 minutes	FS1,RF1	0.336	Temperature on Transformer (T1): 73˚C Result: No fire, No Hazard
Supplementary information: (S-C)=short – circuit, Condition 1 & 2 defined at page No.12 of 110						

C.2	TABLE: Insulation of transformers (T1)		P
	Transformer part name.....:	See table 1.5.1	—
	Manufacturer.....:	See above	—
	Type.....:	See above	—

Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Primary /input winding and secondary/output winding (internal)	352	246	6.0	T.I.W	6.0	T.I.W
Primary/input winding and core (internal)			6.0	T.I.W	6.0	T.I.W
Secondary/output winding and core (internal)			6.0	T.I.W	6.0	T.I.W
Primary/input part and secondary/output part (external)			6.0	7.12	6.0	7.12
Primary/input part and core (external)			6.0	T.I.W	6.0	T.I.W
Primary/input part and secondary/output winding (external)			6.0	T.I.W	6.0	T.I.W
Secondary/output part and core (external)			6.0	T.I.W	6.0	T.I.W
Secondary/output part and primary/input winding (external)			6.0	7.12	6.0	7.12

Description of design:	
(a) Bobbin	
Primary/input pins.....:	2,4,1,5,3
Secondary/output pins.....:	8,9
Material (manufacturer, type, ratings) .....:	See appended table 1.5.1
Thickness (mm).....:	See appended table 1.5.1
(b) General	
Concentric windings on Bobbin/Core. Winding ends additionally fixed with tape, outer winding is secondary. Teflon tube on all winding exits are provided. Core is considered as primary. The distance insulation tape is 1.5mm min.	
Supplementary information: T.I.W= Triple insulated wire	

Attachment No. 1 : Plug Dimensions

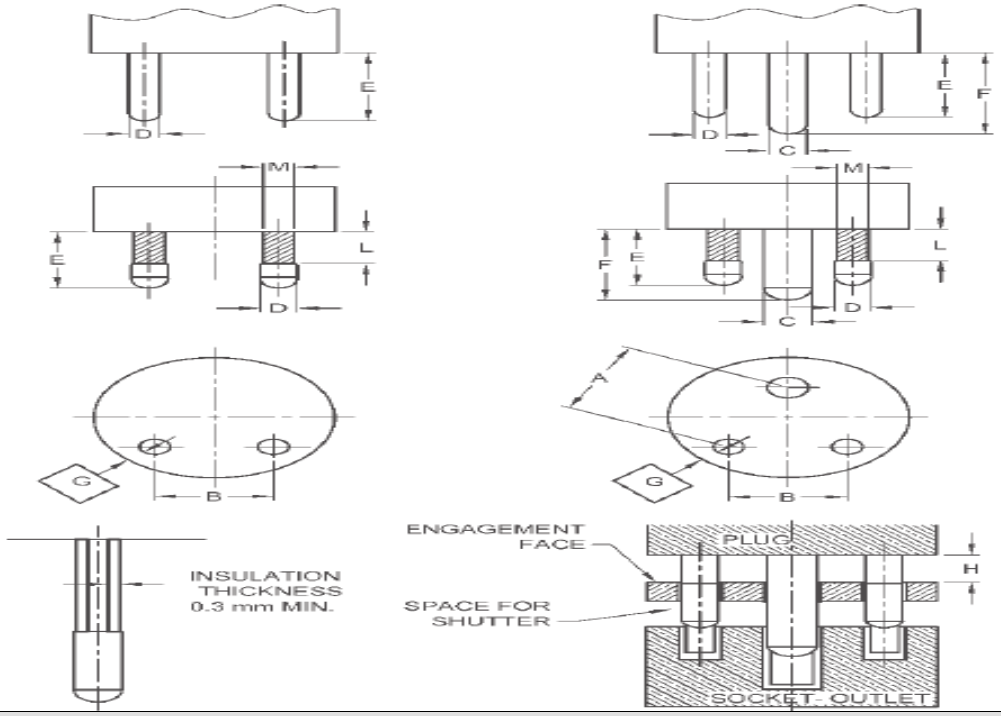


Table 1 : Plug Dimensions

Type of Plug: Two pin [ ] Three pin [X] (with dummy earth pin)

Reference points	Ratings					
	2.5A[ ]		6A [X]		16A [ ]	
	Limits	Measured	Limits	Measured	Limits	Measured
A	---	---	22.05-22.35	22.07	28.45-28.75	---
B	18.95-19.25	---	18.95-19.25	19.11	25.25-25.55	---
C	---	---	7.01-7.085	7.04	8.66-8.735	---
D	5.03-5.105	---	5.03-5.105	5.05	7.01-7.085	---
E	15.77-16.94	---	15.77-16.94	16.84	20.47-21.64	---
F	---	---	20.47-21.64	20.72	28.47-29.64	---
G	7.94 (min.)	---	7.94 (min.)	8.04	9.52 (min.)	---
H	5.16-7.54	---	5.16-7.54	N/A	6.76-9.12	---
L	7.5	---	7.5	N/A	9	---
M	4.58 Max.	---	4.58 Max.	N/A	6.56 Max.	---

Supplementary information: Above dimensional limits are as per IS 1293:2019 in mm

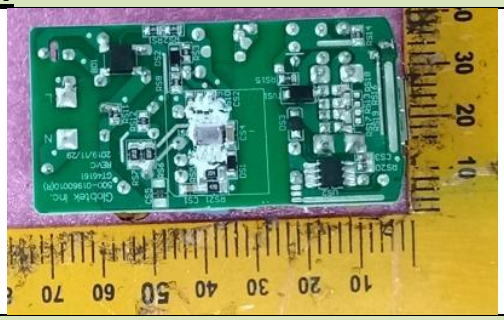
PHOTOGRAPH

PRODUCT VIEW

Port View

INTERNAL VIEW

PCB TOP VIEW



PCB BOTTOM VIEW

****END OF TEST REPORT****