aforeserve
Quality Support Service Excellence

Aforeserve Labs Pvt. Ltd.
(A BIS Approved, TEC Recognized & NABL Accredited Lab)
Lab : D-45, Sector-11, Noida-201 301, UP, India
Ph. : +91-120-4104457 Email : helpdesk@aforeserve.co.in
CIN No. : U74999DL2015PTC289051

TEST REPORT

SUMMARY OF TEST REPORT

TEST REPORT NO: ALPL202009071 **DATE:** 07/12/2020

(No of pages in the test report: Page no. 1 to 116)

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:** Power Adaptors for IT equipments
3. **Lead model:** GTM91099-6048-T2
   Series model: GTM91099-3009-4.0-T2, GTM91099-6015-3.0-T2, GTM91099-6015-1.2-T2, GTM91099-6015-T2, GTM91099-6024-6.0-T2, GTM91099-6024-5.0-T2, GTM91099-6024-4.0-T2, GTM91099-6024-T2, GTM91099-6048-12.0-T2
4. **Trade Mark:** GlobTek, Inc.
5. **Model differences provided (if Applicable):** Yes/~~No~~
6. **Model differences verified as per MEITY Guide lines for series formulation:** Yes/~~No~~
7. **Test Results:** Refer below.

PART A: GENERAL

S. NO	TEST REQUIREMENT	TEST CODE	CLAUSE	VERDICT
1.	Components	EL 2100	1.5	P
2.	Power interface	EL 2101	1.6	P
3.	Marking & instructions	EL 2102	1.7	P

PART B: PROTECTION FROM HAZARDS

S. 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	2.1	P
3.	TNV Circuits	EL 2105	2.3	N/A
4.	Limited current circuits	EL 2106	2.4	P
5.	Limited Power sources	EL 2107	2.5	P
6.	Provisions for earthing and bonding	EL 2108	2.6	N/A
7.	Over current 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 distances and distances through insulation	EL 2112	2.10	P

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PART C: WIRING, CONNECTIONS AND PHYSICAL REQUIREMENTS

S. NO	TEST REQUIREMENT	TEST CODE	CLAUSE	VERDICT
1.	Wiring, connections and supply	EL 2113	3	P
2.	Connection to a main supply	EL 2114	3.2	P
3.	Wiring terminals for connection of external conductors	EL 2115	3.3	N/A
4.	Disconnection for 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

S. 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 NETWORKS

S. 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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TEST REPORT NO: ALPL202009071 **DATE:** 07/12/2020

GENERAL INFORMATION:

1. The conformity certificates of the 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 tests have been performed on the model "GTM91099-6048-T2" 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.~~

3. I hereby undertake that the verdict stated in the test reports for all the test matches with the test results. The sample meets all the 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.

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Date: 07/12/2020 (Signature of Authorized person with stamp)

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TEST REPORT

Test Report No.: ALPL202009071		Page 1 of 116
	Issue Date:	07/12/2020

Manufacturer:	**GlobTek (Suzhou) Co., Ltd** **No. 76, Jinling East Road, Suzhou Industrial Park, China**		
Test item:	**Power Adaptor for IT Equipment**		
Identification:	Lead Model: **GTM91099-6048-T2**	*Serial No.:*	000145122/19
Receipt No.:	SC20EPF14963	*Date of receipt:*	*29/09/2020*
Testing laboratory and its address:	Aforeserve Labs Pvt. Ltd D-45, Sector-11, Noida, U.P. -201301		
Test specification:	**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 116 pages including one attachment.

2. Equipment under test (EUT) is **Power Adaptor for IT Equipment** model **GTM91099-6048-T2** with brand GlobTek, Inc. has been tested as per **IS 13252 (Part 1): 2010 + A1: 2013 + A2: 2015 / IEC 60950-1: 2005 + A1: 2009 + A2: 2013** complies with all applicable parameters.

This test report relates to the test sample submitted and list of documents attached.

Tested by:	**Approved by / Authorized Signatory:**	**Issued by:**
Testing Engineer: Uday kumar	Technical Manager: Prakash Barik	DY. Technical Manager: Kuldeep Kumar
Date: 07/12/2020	Date: 07/12/2020	Date: 07/12/2020

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TEST REPORT

	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 Reference No..... :	ALPL202009071
Date of issue ..... :	07/12/2020
Total number of pages	116
Testing Laboratory ..... :	Aforeserve Labs Pvt. Ltd
Address ..... :	D-45, Sector-11, Noida, U.P. -201301
Manufacturer's name ..... :	**GlobTek (Suzhou) Co., Ltd**
Address ..... :	**No. 76, Jinling East Road, Suzhou Industrial Park, China**
Test specification:	
Standard ..... :	**IS 13252 (Part 1): 2010 + A1: 2013+ A2:2015 / IEC 60950-1: 2005 + A1: 2009 +A2:2013**
Test procedure..... :	Compliance Report
Non-standard test method..... :	N/A
Test Report Form No..... :	BIS_IT/PA_IS13252_V1.3
Test Report Form(s) Originator..... :	Bureau of Indian Standards
Master TRF..... :	03/06/2016
Test item description ..... :	**Power Adaptor for IT Equipment**
Trade Mark ..... :	GlobTek, Inc.
Model/Type reference..... :	**Lead Model: GTM91099-6048-T2** **Series model: GTM91099-3009-4.0-T2, GTM91099-6015-3.0-T2, GTM91099-6015-1.2-T2, GTM91099-6015-T2, GTM91099-6024-6.0-T2, GTM91099-6024-5.0-T2, GTM91099-6024-4.0-T2, GTM91099-6024-T2, GTM91099-6048-12.0-T2**
Ratings ..... :	**Input: 100-240Vac,50/60Hz,1.5A** **Output:48V⎓1.25A, 60W**
Other Documents submitted..... :	Please refer to Table – List of Attachments at Page No. 9

Tested by:	Approved by / Authorized Signatory:	Issued by:
Testing Engineer: Uday kumar	Technical Manager: Prakash Barik	DY. Technical Manager: Kuldeep Kumar
Date: 07/12/2020	Date: 07/12/2020	Date: 07/12/2020

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TEST REPORT

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	11	11	13-14
EL 2101	General Requirements	Power interface (Cl.1.6)	05	04	04	15
EL 2102	Marking Requirements	Marking & instructions(Cl.1.7)	39	16	16	16-17
EL 2103	Electrical safety	Protection from electric shock and energy hazards (Cl.2.1)	14	05	05	18
EL 2104	Electrical safety	SELV Circuits (Cl.2.2)	04	04	04	19
EL 2105	Electrical safety	TNV Circuits (Cl.2.3)	12	00	N/A	20
EL 2106	Electrical safety	Limited current circuits (Cl.2.4)	04	04	04	21
EL 2107	Electrical safety	Limited Power sources (Cl.2.5)	07	00	N/A	22
EL 2108	Electrical safety	Provisions for earthing and bonding (Cl.2.6)	19	00	N/A	23-24
EL 2109	Electrical safety	Overcurrent and earth fault protection in primary circuits (Cl.2.7)	07	05	05	25
EL 2110	Electrical safety	Safety Interlocks (Cl.2.8)	13	00	N/A	26
EL 2111	Electrical safety	Electrical Insulation (Cl.2.9)	05	05	05	27
EL 2112	Electrical safety	Clearances, Creepage distances and distances through insulation (Cl.2.10)	63	28	28	28-31
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	04	04	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	04	04	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	05	05	43

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TEST REPORT

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	09	09	46-48
EL 2125	Insulating properties	Electrical requirements and simulated abnormal conditions(Cl.5),5.1	20	11	11	49-50
EL 2126	Insulating properties	Electric Strength (Cl.5.2)	03	03	03	51
EL 2127	Insulating properties	Abnormal operating and fault conditions (Cl.5.3)	11	07	07	52
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	53
EL 2129	Communicating connection	Protection of equipment users from overvoltages on telecommunication networks (Cl.6.2)	06	00	N/A	52
EL 2130	Communicating connection	Protection of the telecommunication wiring system from overheating (Cl.6.3)	05	00	N/A	53-54
EL 2131	Connection to cable distribution systems	Connection to cable distribution systems(Cl.7)	08	00	N/A	55
EL 2132	Fire safety	Tests for resistance to heat and fire (Annex A)	20	02	02	56-57
EL 2133	Insulating properties	Motor tests under abnormal conditions (Annex B)	19	00	N/A	58-59
EL 2134	Electrical Safety	Transformers (Annex C)	03	03	03	60
EL 2135	Insulating properties	Measuring Instruments For Touch-Current Tests (Annex D)	03	02	02	61
EL 2136	Thermal Properties	Temperature Rise Of A Winding(Annex E)	01	00	N/A	62
EL 2137	Electrical safety	Measurement Of Clearances And Creepage Distances(Annex F)	01	01	01	63
EL 2138	Electrical safety	Alternative Method For Determining Minimum Clearances(Annex G)	17	00	N/A	64
EL 2139	Radiation Safety	Ionizing Radiation(Annex H)	01	00	N/A	65
EL 2140	Electrical Safety	Table of electrochemical potentials (Annex J)	01	00	N/A	66
EL 2141	General Requirements	Thermal controls (Annex K)	07	00	N/A	67
EL 2142	General Requirements	Normal load conditions for some types of	08	02	02	68

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		electrical business equipment (Annex L)				
EL 2143	Electrical Safety	Criteria for telephone ringing signals (Annex M)	13	00	N/A	69
EL 2144	Electrical safety	Impulse Test Generators(Annex N)	03	00	N/A	70
EL 2145	General Requirements	Normative References(Annex P)	01	01	01	71
EL 2146	General Requirements	Voltage dependent resistors (VDRs) (Annex Q)	03	00	N/A	72
EL 2147	General Requirements	Examples Of Requirements For Quality Control Programmes(Annex R)	03	00	N/A	73
EL 2148	General Requirements	Procedure For Impulse Testing (Annex S)	04	00	N/A	74
EL 2149	Protection against Ingress of water	Guidance On Protection Against Ingress Of Water (Annex T)	01	00	N/A	75
EL 2150	Wiring	Insulated Winding Wires For Use Without Interleaved Insulation (Annex U)	17	00	N/A	76
EL 2151	Electrical Safety	Ac Power Distribution Systems(Annex V)	05	03	03	77
EL 2152	Electrical Safety	Summation Of Touch Currents (Annex W)	08	00	N/A	78
EL 2153	Electrical Safety	Maximum Heating Effect In Transformer Tests(Annex X)	03	03	03	79
EL 2154	Radiation safety	Ultraviolet light conditioning test (Annex Y)	05	00	N/A	80
EL 2155	Electrical Safety	Overvoltage Categories (Annex Z)	01	01	01	81
EL 2156	Mechanical properties	Mandrel Test(Annex AA)	01	00	N/A	82
EL 2157	Electrical Safety	Changes In The Second Edition(Annex BB)	--	--	--	--
EL 2158	Electrical Safety	Evaluation Of Integrated Circuit (IC) Current Limiters (Annex CC)	06	00	N/A	83
EL 2159	Mechanical properties	Requirements For The Mounting Means Of Rack-Mounted Equipment (Annex DD)	04	00	N/A	84
EL 2160	Electrical Safety	Household And Home/Office Document/Media Shredders (Annex EE)	06	00	N/A	85

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

.....

(Approving Authority)

TEST REPORT

Report No. ALPL202009071	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 /	Page 6 of 116
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Copy of marking plate:

Lead model Marking

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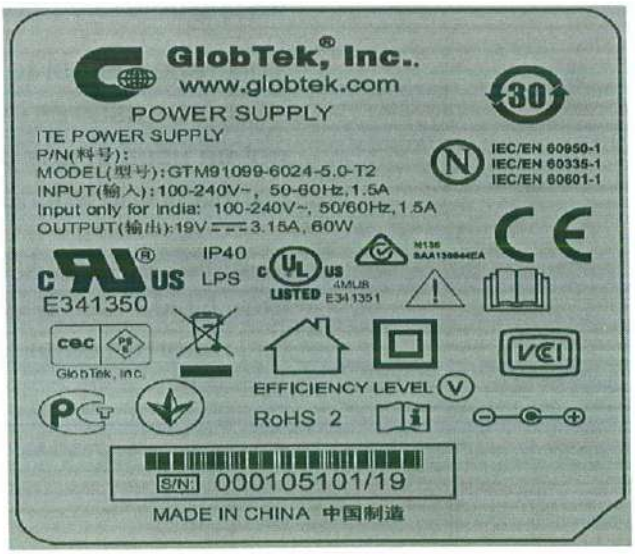

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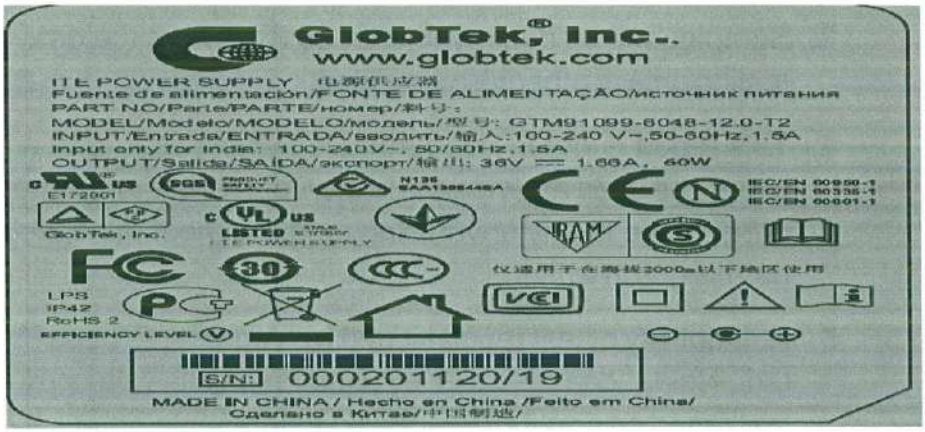
TEST REPORT



MARKING OF SERIES MODEL

GlobTek, Inc.

Trade mark:

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TEST REPORT

Table – List of Attachments

Attachment No.	Attachment Description	No. of pages in Attachment
Attachment I	Plug dimension as per IS 1293:2019	01 (page 115)
Attachment II	Photo Document	01 (page 116)

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 (Not Applicable)
- test object does meet the requirement ..... :	P (Pass)
- test object does not meet the requirement ..... :	F (Fail)

Testing ..... :	
Date of receipt of test item ..... :	29/09/2020
Date(s) of performance of tests ..... :	29/09/2020 to 07/12/2020
Laboratory conditions ..... :	
Ambient Temperature ..... :	(25±10)°C
Ambient Humidity ..... :	(45 %R.H. to 75% R.H.)

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Test item particulars :	**Power Adaptor 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%, +6% ~~<OR> ±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 2000
Altitude of test laboratory (m) :	< 1000
Mass of equipment (kg) :	0.297(Kg)

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

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Dated: 07/12/2020	IEC 60950-1: 2005 + A1:2009 + A2 : 2013	

General product information:

1) **Application details / Description of the product:** The equipment under test (EUT) is Power Adaptor for IT Equipment.

Item: **Power Adaptor for IT Equipment**

Brand Name: GlobTek, Inc.

Model: Lead Model: **GTM91099-6048-T2**
Series Model: **GTM91099-3009-4.0-T2, GTM91099-6015-3.0-T2, GTM91099-6015-1.2-T2, GTM91099-6015-T2, GTM91099-6024-6.0-T2, GTM91099-6024-5.0-T2, GTM91099-6024-4.0-T2, GTM91099-6024-T2, GTM91099-6048-12.0-T2**

Weight: 0.297(Kg)

Max. specified ambient temperature (°C).....:	40°C
Laser classification .....:	N/A

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2) Similarities between the models: Yes
Similarities: Same rated input voltage, Same class of construction, Same mains PCB design layout and transformer
3)Differences between the models: yes
Differences: Model No., Output rating

S. No.	Model No.	Output rating	Input rating
1.	GTM91099-6048-T2	48V⎓1.25A, 60W	Input: 100-240V~ 50/60Hz,1.5A

SERIES MODELS.

S. No.	Model No.	Output rating	Input rating
1	GTM91099-3009-4.0-T2	5V⎓6A, 30W	Input: 100-240V~ 50/60Hz,1.5A
2	GTM91099-6015-3.0-T2	12V⎓5A, 60W	Input: 100-240V~ 50/60Hz,1.5A
3	GTM91099-6015-1.2-T2	13.8V⎓4.34A, 60W	Input: 100-240V~ 50/60Hz,1.5A
4	GTM91099-6015-T2	15V⎓4A, 60W	Input: 100-240V~ 50/60Hz,1.5A
5	GTM91099-6024-6.0-T2	18V⎓3.33A, 60W	Input: 100-240V~ 50/60Hz,1.5A
6	GTM91099-6024-5.0-T2	19V⎓3.15A, 60W	Input: 100-240V~ 50/60Hz,1.5A
7	GTM91099-6024-4.0-T2	20V⎓3A, 60W	Input: 100-240V~ 50/60Hz,1.5A
8	GTM91099-6024-T2	24V⎓2.5A, 60W	Input: 100-240V~ 50/60Hz,1.5A
9	GTM91099-6048-12.0-T2	36V⎓1.66A, 60W	Input: 100-240V~ 50/60Hz,1.5A

Model No. tested with-in the family series: GTM91099-6048-T2

3) 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.

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TEST REPORT

Tests relating to General Requirement — **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 (Please see the 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.		Verification of approvals with due correlation between the components used and the approval certificates submitted (See the table 1.5.1)	P
	Components and subassemblies approved for IEC 62368-1 can be considered as complying with this standard		Certified triple insulation wire used as per IEC 62368-1	P
1.5.2	Evaluation and testing of components	EL 2100-02	Components certified with IEC 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 control	N/A
1.5.4	Transformers	EL 2100-04	Transformer Tested with in appliance (See Annex C and table C.2)	P
1.5.5	Interconnecting cables*	EL 2100-05	Interconnecting cable carry SELV only	P
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	See below	P
1.5.7.1	Resistors bridging functional, basic or supplementary insulation*	EL 2100-08	Resistors are used for functional insulation only	P
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits	EL 2100-09	No such bridging insulation	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	No such circuit	N/A
1.5.8	Components in equipment for IT power distribution systems*	EL 2100-11	Not for IT power distribution system	N/A
1.5.9	Surge suppressors	EL 2100-12	See below	P

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TEST REPORT

Tests relating to General Requirement **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(MOV) used (See table 1.5.1)	P
1.5.9.2	Protection of VDRs*	EL 2100-14	A Fuse is connected in series with the VDR	P
1.5.9.3	Bridging of functional insulation by a VDR*	EL 2100-15	Varistor bridging functional insulation	P
1.5.9.4	Bridging of basic insulation by a VDR*	EL 2100-16	No such bridging insulation by a VDR	N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR*	EL 2100-17	See above Cl. 1.5.9.4	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 = 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 in the requirement tested.

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TEST REPORT

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	See below	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	The neutral conductor is insulated from the body throughout the equipment	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 = 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 in the requirement tested.

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TEST REPORT

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	Satisfactory	P
1.7.1	Power rating and identification markings		See below	P
1.7.1.1	Power rating marking*	EL 2102-01	See copy of marking plate	P
	Rated voltage(s) or voltage ranges(s) (V)*.	EL 2102-02	100-240 Vac	P
	Multiple mains supply connections*.	EL 2102-03	Single mains supply provided	N/A
	Symbol for nature of supply, for d.c. only*:	EL 2102-04	Mains from AC source	N/A
	Rated frequency or rated frequency range (Hz) *:	EL 2102-05	50/60Hz	P
	Rated current (mA or A)*:	EL 2102-06	1.5A	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	GTM91099-6048-T2	P
	Symbol for Class II equipment only* :	EL 2102-10	⧈ marked on marking plate	P
	Other markings and symbols*:	EL 2102-11	Other Markings or symbol do not give rise to misunderstanding	P
1.7.1.3	Use of graphical symbols*	EL 2102-12	DC symbol used in marking label	P
1.7.2	Safety instructions and marking*	EL 2102-13	Instructions are provided on marking label	P
1.7.2.1	General	EL 2102-14	See below	P
1.7.2.2	Disconnect devices*	EL 2102-15	Appliance coupler is considered as disconnet 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	No such system available	N/A
1.7.2.5	Operator access with a tool*	EL 2102-18	No such area	N/A
1.7.2.6	Ozone*	EL 2102-19	Device does not produce ozone	N/A
1.7.3	Short duty cycles*	EL 2102-20	The EUT is continuous operating type	N/A
1.7.4	Supply voltage adjustment*	EL 2102-21	No voltage adjustment	N/A
1.7.5	Power outlets on the equipment*	EL 2102-22	No such power outlet found within EUT	N/A

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TEST REPORT

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

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
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 (FS1) is provided (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	Not connected to dc mains supply	N/A
1.7.8	Controls and indicators	EL 2102-28	No such control and indicators	N/A
1.7.8.1	Identification, location and marking *:	EL 2102-29	No controls and switches within the EUT	N/A
1.7.8.2	Colours*	EL 2102-30	No such colors used	N/A
1.7.8.3	Symbols according to IEC 60417*:	EL 2102-31	No such symbol given	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	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.1.7.13	N/A
1.7.14	Equipment for restricted access locations*	EL 2102-38	Equipment is not intended for installation in a restricted access location	N/A

*- Total number of Requirements to be observed / inspected = 35

Total No of applicable Requirement = 14

No of Requirements for which the sample passed=14

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 in the requirement tested.

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TEST REPORT

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	Satisfactory	P
2.1.1	Protection in operator access areas*	EL 2103-01	Refer cl. 2.1.1.1 to 2.1.1.9	P
2.1.1.1	Access to energized parts	EL 2103-02	See below	P
	Test by inspection :		No access to hazardous parts	P
	Test with test finger (Figure 2A)		The hazardous parts are not accessible	P
	Test with test pin (Figure 2B):		Test pin not touched hazardous live	P
	Test with test probe (Figure 2C)		No connection to TNV circuit	N/A
2.1.1.2	Battery compartments *	EL 2103-03	No TNV circuit within the EUT	N/A
2.1.1.3	Access to ELV wiring	EL 2103-04	No ELV wiring in operator access area	N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		As above	N/A
2.1.1.4	Access to hazardous voltage circuit wiring	EL 2103-05	No hazardous voltage circuit in operator access area	N/A
2.1.1.5	Energy hazards :	EL 2103-06	No hazardous occurred (See table 2.1.1.5)	P
2.1.1.6	Manual controls	EL 2103-07	No manual controls used	N/A
2.1.1.7	Discharge of capacitors in equipment		See below	P
	Measured voltage (V); time-constant (s):	EL 2103-08	Satisfactory (See table 2.1.1.7)	P
2.1.1.8	Energy hazards – d.c. mains supply		Not connected to DC mains supply	N/A
	a) Capacitor connected to the d.c. mains supply :	EL 2103-09	As above	N/A
	b) Internal battery connected to the d.c. mains supply :	EL 2103-10	As above	N/A
2.1.1.9	Audio amplifiers to be tested according to IEC 60065, cl. 9.1.1.:	EL 2103-11	No audio Amplifier	N/A
2.1.2	Protection in service access areas	EL 2103-12	No serviceable part inside the equipment	N/A
2.1.3	Protection in restricted access locations	EL 2103-13	Not intended to be installed in restricted access location	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 in the requirement tested.

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TEST REPORT

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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	Satisfactory	P
2.2.2	Voltages under normal conditions	EL 2104-01	Between any SELV circuit 42.4V peak or 60V DC are not exceeded (See table 2.2.2)	P
2.2.3	Voltages under fault conditions	EL 2104-02	Between any SELV circuit; 71V peak not exceeded for multiple pulse and 120 V peak not exceeded for single pulse (See table 2.2.3)	P
2.2.4	Connection of SELV circuits to other circuits* :	EL 2104-03	SELV circuits are connected to SELV circuit only	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 in the requirement tested.

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TRF No. BIS_IT/PA_IS13252_V1.3

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TEST REPORT

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 within the equipment	N/A
2.3.1	Type of TNV circuits: TNV-1 / TNV-2 / TNV-3	EL 2105-01	Refer Cl.2.3	N/A
	a) Limits of TNV-1:	EL 2105-02	Refer Cl.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	Refer Cl.2.3	N/A
2.3.2	Separation from other circuits and from accessible parts*	EL 2105-04	Refer Cl.2.3	N/A
2.3.2.1	General Requirements	EL 2105-05	Refer Cl.2.3	N/A
2.3.2.2	Protection by basic insulation	EL 2105-06	Refer Cl.2.3	N/A
2.3.2.3	Protection by earthing	EL 2105-07	Refer Cl.2.3	N/A
2.3.2.4	Protection by other constructions :	EL 2105-08	Refer Cl.2.3	N/A
2.3.3	Separation from hazardous voltages	EL 2105-09	Refer Cl.2.3	N/A
2.3.4	Connection of TNV circuits to other circuits	EL 2105-10	Refer Cl.2.3	N/A
2.3.5	Test for operating voltages generated externally	EL 2105-11	Refer Cl.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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TEST REPORT

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	See below	P
2.4.1	General requirements *	EL 2106-01	See table 2.4.2	P
2.4.2	Limit values	EL 2106-02	Measured value not exceeding the limit value (See table 2.4.2)	P
2.4.3	Connection of limited current circuits to other circuits*	EL 2106-03	SELV to SELV connection only	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 in the requirement tested.

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TEST REPORT

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 protective device limited output	N/A
	Max. output voltage (V), Max. output current (A), Max. apparent power (VA)	EL 2107-05	See above cl. no. 2.5d)	N/A
	Current rating of overcurrent protective device (A)	EL 2107-06	See above cl. no. 2.5d)	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 = 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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TEST REPORT

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 II equipment No provision of earthing and bonding	N/A
2.6.1	Protective earthing	EL 2108-01	Refer 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 safely connected to Protective Bonding Conductor.*	EL 2108-02	Refer above Cl.No.2.6	N/A
	Use of symbol for functional earthing:*	EL 2108-03	Refer above Cl.No.2.6	N/A
2.6.3	Protective earthing and protective bonding conductors*	EL 2108-04	Refer above Cl.No.2.6	N/A
2.6.3.2	Size of protective earthing conductors	EL 2108-05	Refer above Cl.No.2.6	N/A
	Rated current (A), cross-sectional area (mm2), AWG		Refer above Cl.No.2.6	N/A
2.6.3.3	Size of protective bonding conductors	EL 2108-06	Refer above Cl.No.2.6	N/A
	Rated current (A), cross-sectional area (mm2), AWG		Refer 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	Refer above Cl.No.2.6	N/A
2.6.3.5	Colour of insulation*:	EL 2108-08	Refer above Cl.No.2.6	N/A
2.6.4	Terminals		Refer 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	Refer above Cl.No.2.6	N/A
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors*	EL 2108-10	Refer above Cl.No.2.6	N/A
2.6.5	Integrity of protective earthing*		Refer above Cl.No.2.6	N/A
2.6.5.1	Interconnection of equipment*	EL 2108-11	Refer above Cl.No.2.6	N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors*	EL 2108-12	Refer above Cl.No.2.6	N/A
2.6.5.3	Disconnection of protective earth*	EL 2108-13	Refer above Cl.No.2.6	N/A

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TEST REPORT

2.6.5.4	Parts that can be removed by an operator*	EL 2108-14	Refer above Cl.No.2.6	N/A
2.6.5.5	Parts removed during servicing*	EL 2108-15	Refer above Cl.No.2.6	N/A
2.6.5.6	Corrosion resistance*	EL 2108-16	Refer above Cl.No.2.6	N/A
2.6.5.7	Screws for protective bonding*	EL 2108-17	Refer above Cl.No.2.6	N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system*	EL 2108-18	No TNV circuit	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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TEST REPORT

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	See below	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 (FS1) A build-in fuse provided as an over current 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 (FS1) used for this purpose	P
2.7.4	Number and location of protective devices :	EL 2109-04	Protective by one built in fuse (FS1)	P
2.7.5	Protection by several devices*	EL 2109-05	Protection by single devices	N/A
2.7.6	Warning to service personnel* :	EL 2109-06	No such warning required	N/A

*- 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 = 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 in the requirement tested.

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TEST REPORT

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 interlock	N/A
2.8.1	General principles*	EL 2110-01	Refer Cl.2.8	N/A
2.8.2	Protection requirements	EL 2110-02	Refer Cl.2.8	N/A
2.8.3	Inadvertent reactivation	EL 2110-03	Refer Cl.2.8	N/A
2.8.4	Fail-safe operation	EL 2110-04	Refer Cl.2.8	N/A
2.8.5	Moving parts	EL 2110-05	Refer Cl.2.8	N/A
2.8.6	Overriding*	EL 2110-06	Refer Cl.2.8	N/A
2.8.7	Switches, relays and their related circuits	EL 2110-07	Refer Cl.2.8	N/A
2.8.7.1	Separation distances for contact gaps and their related circuits`	EL 2110-08	Refer Cl.2.8	N/A
2.8.7.2	Overload test	EL 2110-09	Refer Cl.2.8	N/A
2.8.7.3	Endurance test	EL 2110-10	Refer Cl.2.8	N/A
2.8.7.4	Electric strength test	EL 2110-11	Refer Cl.2.8	N/A
2.8.8	Mechanical actuators	EL 2110-12	Refer Cl.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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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	Satisfactory	P
2.9.1	Properties of insulating materials*	EL 2111-01	Natural rubber, Hygroscopic materials are not used as insulation	P
2.9.2	Humidity conditioning	EL 2111-02	Satisfactory (Components or subassembly not energized)	P
	Relative Humidity : 93 ±3 %, Temperature: t at 40 ± 2°C Duration : 120 hours		93 % 40 ± 2°C 120 hours	P
2.9.3	Grade of insulation*	EL 2111-03	Insulation considered is to be functional and reinforced or double insulation	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 in the requirement tested.

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TEST REPORT

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	See below	P
2.10.1.1	Frequency *	EL 2112-01	50/60Hz	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 insulation complies with 5.3.4 (c)	P
2.10.1.4	Intervening unconnected conductive parts	EL 2112-04	No such Intervening unconnected conductive parts used	N/A
2.10.1.5	Insulation with varying dimensions	EL 2112-05	Insulation with varying dimension is not used	N/A
2.10.1.6	Special separation requirements	EL 2112-06	Special Separation is not used	N/A
2.10.1.7	Insulation in circuits generating starting pulses	EL 2112-07	No circuit generating starting pulses	N/A
2.10.2	Determination of working voltage	EL 2112-08	See below	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	Satisfactory	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	The Equipment is not intended to be supplied by DC Mains	N/A
	c) Unearthed d.c. mains supplies* :	EL 2112-15	The Equipment is not intended to be supplied by DC Mains	N/A
	d) Battery operation* :	EL 2112-16	The Equipment is not intended to be supplied by Battery	N/A
2.10.3.3	Clearances in primary circuits	EL 2112-17	See appended table 2.10.3 and 2.10.4	P
2.10.3.4	Clearances in secondary circuits	EL 2112-18	As above	P
2.10.3.5	Clearances in circuits having starting pulses	EL 2112-19	No such circuit used	N/A
2.10.3.6	Transients from a.c. mains supply :	EL 2112-20	Satisfactory	P

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2.10.3.7	Transients from d.c. mains supply :	EL 2112-21	The Equipment is not connected to DC Mains	N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems	EL 2112-22	Not Connected to telecommunication network & cable distribution system	N/A
2.10.3.9	Measurement of transient voltage levels		No such construction used	N/A
	a) Transients from a mains supply	EL 2112-23	No such construction used	N/A
	For an a.c. mains supply		No such construction used	N/A
	For a d.c. mains supply		Not connected to DC Main Supply	N/A
	b) Transients from a telecommunication network	EL 2112-24	Not Connected to Telecommunication Network	N/A
2.10.4	Creepage distances*	EL 2112-25	See below	P
2.10.4.1	General	EL 2112-26	Satisfactory (See appended table 2.10.3 & 2.10.4)	P
2.10.4.2	Material group and comparative tracking index : CTI tests*	EL 2112-27	Material Group IIIb assumed to be used	P
2.10.4.3	Minimum creepage distances	EL 2112-28	(See appended table 2.10.3 & 2.10.4)	P
2.10.5	Solid insulation	EL 2112-29	See below	P
2.10.5.1	General	EL 2112-30	Satisfactory (See table 2.10.5)	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	(See table 2.10.5)	P
2.10.5.4	Semiconductor devices	EL 2112-33	Approved optical isolator used (See table 1.5.1)	P
2.10.5.5.	Cemented joints	EL 2112-34	No cemented joints used	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	See below	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	No such Insulation in wound components used	N/A

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2.10.5.12	Wire in wound components		Approved triple insulation wire	P
	If Peak Working voltage >71 V		See table 2.10.3 and 2.10.4	P
	a) Basic insulation not under stress	EL 2112-41	No such construction	N/A
	b) Basic, supplementary, reinforced insulation	EL 2112-42	Reinforced insulation	P
	c) Compliance with Annex U	EL 2112-43	Approved triple insulation wire	P
	d) Where two winding wires in contact inside wound component; angle between 45° and 90°	EL 2112-44	The insulation tape and bobbin are provide to protect against mechanical stress	P
2.10.5.13	Wire with solvent-based enamel in wound components		No such construction used	N/A
	a) Electric strength test (Type test as per Cl.5.2.2)	EL 2112-45	As above	N/A
	b) Electric Strength test (Routine test as per Cl.5.2.2)	EL 2112-46	As above	N/A
2.10.5.14	Additional insulation in wound components		No such construction used	N/A
	If Peak Working Voltage >71V		As above	N/A
	a) Basic insulation not under stress	EL 2112-47	As above	N/A
	b) Supplementary, reinforced insulation	EL 2112-48	As above	N/A
2.10.6	Construction of printed boards*		See below	P
2.10.6.1	Uncoated printed boards	EL 2112-49	Satisfactory	P
2.10.6.2	Coated printed boards	EL 2112-50	No coated printed wiring boards	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 layers of a printed board*		Not used to provide supplementary or double reinforced insulation	N/A
	a) Minimum Thickness of insulation: 0.4mm or	EL 2112-52	As above	N/A
	b) Confirm with one of the specification and pass the relevant tests as per Table 2R	EL 2112-53	As above	N/A
2.10.7	Component external terminations	EL 2112-54	No such construction used	N/A
2.10.8	Tests on coated printed boards and coated components		Approved PCB material used	N/A
2.10.8.1	Sample preparation and preliminary inspection*	EL 2112-55	Refer Cl.2.10.8	N/A
2.10.8.2	Thermal conditioning	EL 2112-56	Refer Cl.2.10.8	N/A
2.10.8.3	Electric strength test	EL 2112-57	Refer Cl.2.10.8	N/A

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2.10.8.4	Abrasion resistance test	EL 2112-58	Refer Cl.2.10.8	N/A
2.10.9	Thermal cycling	EL 2112-59	No such construction used	N/A
2.10.10	Test for Pollution Degree 1 environment and for insulating compound	EL 2112-60	Pollution Degree 2	N/A
2.10.11	Tests for semiconductor devices and for cemented joints	EL 2112-61	Cemented joints not used optical isolator used no test required	N/A
2.10.12	Enclosed and sealed parts	EL 2112-62	No such component used	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 in the requirement tested.

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TEST REPORT

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	Refer Cl.No.3.1-3.5	P
3.1.1	Current rating and overcurrent protection	EL 2113-01	Internal wires have adequate cross sectional area to carry the intended current	P
3.1.2	Protection against mechanical damage*	EL 2113-02	Wireways are smooth and free from sharp edges	P
3.1.3	Securing of internal wiring*	EL 2113-03	No excessive strain on internal wire	P
3.1.4	Insulation of conductors	EL 2113-04	All conductor are insulated	P
3.1.5	Beads and ceramic insulators	EL 2113-05	No Beads and ceramic insulators used	N/A
3.1.6	Screws for electrical contact pressure*	EL 2113-06	No screws used for electrical contact pressure	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	No Self-tapping and spaced thread screws used	N/A
3.1.9	Termination of conductors : 10 N pull test	EL 2113-09	10 N pull test performed for relevant conductor no hazard during or after the test	P
3.1.10	Sleeving on wiring*	EL 2113-10	No sleeving on wiring	N/A

*- Total number of Requirements to be observed / inspected = 07
Total No of applicable Requirement = 03
No of Requirements for which the sample passed=03

Total number of tests to be conducted = 04
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 in the requirement tested.

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TEST REPORT

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	Satisfactory	P
3.2.1	Means of connection		See below	P
3.2.1.1	Connection to an a.c. mains supply*	EL 2114-01	Appliance inlet used for connection of a Detachable power supply cord	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	Approved appliance inlet harmonized with IEC 60320-1 is used (See table 1.5.1)	P
3.2.5	Power supply cords		See below	P
3.2.5.1	AC power supply cords*	EL 2114-06	Certified power supply cord set used (See table 1.5.1)	P
	Rated current (A), cross-sectional area (mm^2), AWG		See above cl. no. 3.2.5.1	P
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		Appliance inlet provided	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	Detachable power supply cord used	N/A
3.2.8	Cord guards		No such cord guard used	N/A
	a) Diameter or minor dimension D (mm) : Test mass (g) :	EL 2114-11	See above cl.no.3.2.8	N/A

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	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	Appliance inlet provided	N/A

*- Total number of Requirements to be observed / inspected = 05
Total No of applicable Requirement = 03
No of Requirements for which the sample passed =03

Total number of tests to be conducted = 09
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 in the requirement tested.

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TEST REPORT

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 such wiring terminal used	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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TEST REPORT

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	See below	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	In compliance	P
3.4.2	Disconnect devices*	EL 2116-02	Appliance coupler/ Mains supply plug on the power supply cord	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	P
3.4.6	Number of poles - single-phase and d.c. equipment*	EL 2116-06	Disconnect device disconnects both poles simultaneously	N/A
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	Mains supply plug on the power supply cord used 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 in the requirement tested.

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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	See below	P
3.5.1	General requirements*	EL 2117-01	Interconnection of SELV circuit complies with cl. 2.2	P
3.5.2	Types of interconnection circuits*	EL 2117-02	SELV interconnection circuit	P
3.5.3	ELV circuits as interconnection circuits *	EL 2117-03	No ELV interconnection circuit in EUT	N/A
3.5.4	Data ports for additional equipment	EL 2117-04	No such 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 in the requirement tested.

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TEST REPORT

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	Refer Cl. 4.1-4.7	P
4.1	Stability	EL 2118-01	Mass not exceeding 7kg (Mass of equipment is 0.297(Kg)	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 less than 7 kg	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	Not a floor standing 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	Not a floor standing 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 in the requirement tested.

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TEST REPORT

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	Satisfactory	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 hazards	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 hazards	P
4.2.5	Impact test	EL 2119-05	Transportable equipment	N/A
	a) Fall test as per Fig. 4A	EL 2119-06	See above Cl.4.2.5	N/A
	b) Swing test as per Fig. 4A	EL 2119-07	See above Cl.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 hazards	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 such lamps used	N/A
4.2.10	Wall or ceiling mounted equipment; force(N)	EL 2119-12	No such 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 in the requirement tested.

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TEST REPORT

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	See below	P
4.3.1	Edges and corners*	EL 2120-01	Edges and corners of the enclosure are well rounded	P
4.3.2	Handles and manual controls; force (N)	EL 2120-02	No handles and manual controls used	N/A
4.3.3	Adjustable controls	EL 2120-03	No safety relevant adjustable controls provided	N/A
4.3.4	Securing of parts	EL 2120-04	All parts are secured	P
4.3.5	Connections by Plugs and Sockets*	EL 2120-05	No mismatch connection by plugs and sockets	P
4.3.6	Direct plug-in equipment	EL 2120-06	Not a direct plug-in equipment	N/A
	Torque	EL 2120-07	See above clause no. 4.3.6	N/A
	Compliance with the relevant mains plug standard	EL 2120-08	See above clause no. 4.3.6	N/A
4.3.7	Heating elements in earthed equipment*	EL 2120-09	No heating elements	N/A
4.3.8	Batteries: Portable secondary sealed cells and batteries (Other than button) containing alkaline or other non-acid electrolyte Comply with IEC 62133.		No battery in the equipment	N/A
	a) Overcharging of a rechargeable battery	EL 2120-10	See above clause no. 4.3.8	N/A
	b) Unintentional charging of a non-rechargeable battery	EL 2120-11	See above clause no. 4.3.8	N/A
	c) Reverse charging of a rechargeable battery	EL 2120-12	See above clause no. 4.3.8	N/A
	d) Excessive discharging rate for any battery	EL 2120-13	See above clause no. 4.3.8	N/A
	e) Electric strength as per Cl.5.3.9.2	EL 2120-14	See above clause no. 4.3.8	N/A
4.3.9	Oil & grease*	EL 2120-15	No Oil & Grease	N/A
4.3.10	Dust, powders, liquids and gases	EL 2120-16	Equipment does not produce dust, powder, liquids and gases	N/A
4.3.11	Containers for liquids or gases	EL 2120-17	No such containers for liquids or gases	N/A
4.3.12	Flammable liquids	EL 2120-18	No such flammable liquids used	N/A
4.3.13	Radiation		No such radiation used	N/A
4.3.13.2	Ionizing radiation	EL 2120-19	As above	N/A
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	EL 2120-20	No UV radiation	N/A

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4.3.13.4	Human exposure to ultraviolet (UV) radiation	EL 2120-21	As above	N/A
4.3.13.5	Lasers (including laser diodes) and LED's:		No such LED used	N/A
4.3.13.5.1	Lasers (including laser diodes) For laser see IEC 60825-1, respective part as applicable.	EL 2120-22	No laser used	N/A
	Laser class		As above	N/A
4.3.13.5.2	Light emitting diodes (LED's)	EL 2120-23	No such LED used	N/A
4.3.13.6	Other types*	EL 2120-24	No other type of radiation	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 = 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 in the requirement tested.

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TEST REPORT

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	See below	N/A
4.4.1	General	EL 2121-01	No hazardous moving part	N/A
4.4.2	Protection in operator access areas	EL 2121-02	As above	N/A
4.4.3	Protection in restricted access locations *	EL 2121-03	Not intended to be installed in restricted access location	N/A
4.4.4	Protection in service access areas*	EL 2121-04	No service access areas	N/A
4.4.5	Protection against moving fan blades	EL 2121-05	No such moving parts	N/A
4.4.5.1	General*	EL 2121-06	See above Cl.4.4.5	N/A
	Not considered likely to cause pain or injury. a).....:	EL 2121-07	See above Cl.4.4.5	N/A
	Is considered likely to cause pain, not injury. b)	EL 2121-08	See above Cl.4.4.5	N/A
	Considered likely to cause injury. c).....:	EL 2121-09	See above Cl.4.4.5	N/A
4.4.5.2	Protection for users*	EL 2121-10	See above Cl.4.4.5	N/A
	Use of symbol or warning*	EL 2121-11	See above Cl.4.4.5	N/A
4.4.5.3	Protection for service persons*	EL 2121-12	See above Cl.4.4.5	N/A
	Use of symbol or warning *	EL 2121-13	See above Cl.4.4.5	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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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	See below	P
4.5.1	General	EL 2122-01	Satisfactory (See table 4.5)	P
4.5.2	Temperature tests under normal load condition as per Cl.1.4.5	EL 2122-02	Operating the EUT under normal load condition until obtaining the steady state condition (See table 4.5)	P
4.5.3	Temperature limits for materials*	EL 2122-03	Temperature rise of different parts is still complying the relevant requirement of this standard (See table 4.5)	P
4.5.4	Touch temperature limits*	EL 2122-04	Touch temperature limits is still complying the relevant requirement of this standard (See table 4.5)	P
4.5.5	Resistance to abnormal heat	EL 2122-05	Certified appliance inlet used	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 = 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 in the requirement tested.

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TEST REPORT

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	No opening enclosure are available in this equipment	N/A
4.6.1	Top and side openings	EL 2123-01	See above Cl.4.6	N/A
	Dimensions (mm) :		See above Cl.4.6	N/A
4.6.2	Bottoms of fire enclosures :	EL 2123-02	See above Cl.4.6	N/A
	Construction of the bottom, dimensions (mm) :		See above Cl.4.6	N/A
4.6.3	Doors or covers in fire enclosures*	EL 2123-03	See above Cl.4.6	N/A
4.6.4	Openings in transportable equipment	EL 2123-04	See above Cl.4.6	N/A
4.6.4.1	Constructional design measures	EL 2123-05	See above Cl.4.6	N/A
	Dimensions (mm)		See above Cl.4.6	N/A
4.6.4.2	Evaluation measures for larger openings	EL 2123-06	See above Cl.4.6	N/A
4.6.4.3	Use of metallized parts	EL 2123-07	See above Cl.4.6	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	See above Cl.4.6	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.4.6	N/A
	After temperature conditioning b) Leave the sample between 20°C to 30°C for 1 hour	EL 2123-10	See above Cl.4.6	N/A
	c) Place the sample at - 40°C±2°C for 4 hours	EL 2123-11	See above Cl.4.6	N/A
	d) Remove and allow the sample to come to any convenient temperature between 20 °C and 30 °C for 8 h;	EL 2123-12	See above Cl.4.6	N/A
	e) Place the sample in a cabinet at 91 % to 95 % relative humidity for 72 h;	EL 2123-13	See above Cl.4.6	N/A

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	f) Remove the sample and leave it at any convenient temperature between 20 °C and 30 °C for 1 h;	EL 2123-14	See above Cl.4.6	N/A
	g) Place the sample in an oven at the temperature used for the temperature conditioning for 4 h;	EL 2123-15	See above Cl.4.6	N/A
	h) Remove the sample and allow it to reach any convenient temperature between 20 °C; and 30 °C for 8 h.	EL 2123-16	See above Cl.4.6	N/A
	i) The sample is then immediately subjected to the tests of Cl.4.2 as applicable.	EL 2123-17	See above Cl.4.6	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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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	Satisfactory	P
4.7.1	Reducing the risk of ignition and spread of flame		Components and materials have adequate flammability classification (See appended table 1.5.1)	P
	Method 1, selection and application of components wiring and materials OR	EL 2124-01	Method 1 used	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	Fire enclosure is required to cover all parts	P
4.7.2.2	Parts not requiring a fire enclosure	EL 2124-04	Connectors in secondary circuits	N/A
4.7.3	Materials*	EL 2124-05	See below	P
4.7.3.1	General*	EL 2124-06	Propagation of fire is minimized through the fire enclosure construction	P
	a)Class of material used*	EL 2124-07	See 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 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 appended table 1.5.1	P

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	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	Approved Plastic 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	See above Cl.4.7.3.2	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	See above Cl.4.7.3.2	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	See above Cl.4.7.3.2	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	EL 2124-14	See above Cl.4.7.3.2	N/A
4.7.3.3	Materials for components and other parts outside fire enclosures *		No parts outside of 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.4.7.3.3	N/A

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	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.4.7.3.3	N/A
4.7.3.4	Materials for components and other parts inside fire enclosures		Satisfactory	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	All components are mounted on approved class of material (See table 1.5.1)	P
	Requirements for voltage dependent resistors (VDR's) are in Annex Q.*	EL 2124-18	Certified varistor(MOV) used (See table 1.5.1)	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	N/A

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	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	Voltage not exceeding 4kV	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.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.4.7.3.6	N/A
	Clause 8 - Conditioning	EL 2124-23	See above Cl.4.7.3.6	N/A
	Clause 11 - Evaluation of test results	EL 2124-24	See above Cl.4.7.3.6	N/A

*- Total number of Requirements to be observed / inspected = 07
Total No of applicable Requirement = 05
No of Requirements for which the sample passed= 05

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 in the requirement tested.

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TEST REPORT

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	See below	P
5.1	Touch current and protective conductor current*	EL 2125-01	Satisfactory	P
5.1.2	Configuration of equipment under test (EUT)*	EL 2125-02	See below	P
5.1.2.1	Single connection to an a.c. mains supply*	EL 2125-03	Equipment has only single a.c. mains connection	P
5.1.2.2	Redundant multiple connections to an a.c. mains supply*	EL 2125-04	No multiple power sources	N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply	EL 2125-05	No multiple power sources	N/A
5.1.3	Test circuit	EL 2125-06	See below	P
5.1.4	Application of measuring instrument	EL 2125-07	Testing using D-1 measuring instrument	P
5.1.5	Test procedure	EL 2125-08	Applied	P
5.1.6	Test measurements		See table 5.1.6	P
	a) Value of voltage, U2 measured using the instrument as per Fig. 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	only touch current measured	N/A
	e) Max. protective conductor current =5% of Input current	EL 2125-13	As above	N/A
5.1.7	Equipment with touch current exceeding 3.5 mA	EL 2125-14	The touch current not exceeded 3.5 mA	N/A
5.1.7.1	General	EL 2125-15	See above Cl.5.1.7	N/A
5.1.7.2	Simultaneous multiple connections to the supply	EL 2125-16	See above Cl.5.1.7	N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	EL 2125-17	No connection to the telecommunication network or cable distribution system	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.5.1.8	N/A

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	Supply voltage (V)		See above Cl.5.1.8	N/A
	Measured touch current (mA)		See above Cl.5.1.8	N/A
	Max. allowed touch current (mA)		See above Cl.5.1.8	N/A
5.1.8.2	Summation of touch currents from telecommunication networks	EL 2125-19	No connection to the telecommunication network or cable distribution	N/A
	a) EUT with earthed telecommunication ports :		See above Cl.5.1.8	N/A
	b) EUT whose telecommunication ports have no reference to protective earth		See above Cl.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 = 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 in the requirement tested.

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TEST REPORT

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	See below	P
5.2.1	General*	EL 2126-01	See appended table 5.2	P
5.2.2	Test procedure		Table 5B Used	P
	a) 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	No breakdown observed during the test, performance found satisfactory after the test.	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 in the requirement tested.

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TRF No. BIS_IT/PA_IS13252_V1.3

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TEST REPORT

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	See below	P
5.3.1	Protection against overload and abnormal operation	EL 2127-01	See appended table 5.3	P
5.3.2	Motors	EL 2127-02	No such motor used	N/A
5.3.3	Transformers	EL 2127-03	Tested within Appliance (See appended Annex C & table C.2)	P
5.3.4	Functional insulation:	EL 2127-04	Functional insulation complied with 5.3.4 (C)	P
5.3.5	Electromechanical components	EL 2127-05	No such components	N/A
5.3.6	Audio amplifiers in ITE :	EL 2127-06	No audio amplifier	N/A
5.3.7	Simulation of faults	EL 2127-07	See appended table 5.3	P
5.3.8	Unattended equipment	EL 2127-08	No such construction used	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 flame in the equipment, No molten metal was emitted	P
5.3.9.2	After the tests	EL 2127-10	No flame in the equipment, No molten metal was emitted	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 in the requirement tested.

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TEST REPORT

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	No connection to telecommunication networks	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 U_{op} of $U_{op} = U_{peak} + \Delta U_{sp} + \Delta U_{sa}$ Where U_{peak} is 360V or 180V ΔU_{sp} 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) ΔU_{sa} 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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TEST REPORT

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	No connection to telecommunication networks	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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TEST REPORT

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	No connection to telecommunication networks	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 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 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 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 6.3	N/A

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TEST REPORT

*- 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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TEST REPORT

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	No 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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TEST REPORT

Report No. ALPL202009071	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 /	Page 59 of 116
Dated: 07/12/2020	IEC 60950-1: 2005 + A1:2009 + A2 : 2013	

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	See below	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 is less than 18 Kg	N/A
A.1.1	Samples:	EL 2132-02	See above A.1	N/A
	Wall thickness (mm):		See above A.1	N/A
A.1.2	Conditioning of samples; temperature (°C) :	EL 2132-03	See above A.1	N/A
A.1.3	Mounting of samples :	EL 2132-04	See above A.1	N/A
A.1.4	Test flame (see IEC 60695-11-3)	EL 2132-05	See above A.1	N/A
	Flame A, B, C or D :		See above A.1	N/A
A.1.5	Test procedure	EL 2132-06	See above A.1	N/A
A.1.6	Compliance criteria	EL 2132-07	See above A.1	N/A
	Sample 1 burning time (s):		See above A.1	N/A
	Sample 2 burning time (s):		See above A.1	N/A
	Sample 3 burning time (s):		See above 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 materials used (See table 1.5.1)	P
A.2.1	Samples, material:	EL 2132-09	See above A.2	N/A
	Wall thickness (mm):		See above A.2	N/A
A.2.2	Conditioning of samples; temperature (°C) :	EL 2132-10	See above A.2	N/A
A.2.3	Mounting of samples :	EL 2132-11	See above A.2	N/A
A.2.4	Test flame (see IEC 60695-11-4)	EL 2132-12	See above A.2	N/A
	Flame A, B or C :		See above A.2	N/A
A.2.5	Test procedure	EL 2132-13	See above A.2	N/A
A.2.6	Compliance criteria	EL 2132-14	See above A.2	N/A

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TEST REPORT

Tests relating to Fire Safety — **EL 2132 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
	Sample 1 burning time (s):		See above A.2	N/A
	Sample 2 burning time (s):		See above A.2	N/A
	Sample 3 burning time (s):		See above A.2	N/A
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9	EL 2132-15	See above A.2	N/A
	Sample 1 burning time (s):		See above A.2	N/A
	Sample 2 burning time (s):		See above A.2	N/A
	Sample 3 burning time (s):		See above A.2	N/A
A.3	Hot flaming oil test (see 4.6.2)	EL 2132-16	No such openings	N/A
A.3.1	Mounting of samples	EL 2132-17	See above A.3	N/A
A.3.2	Test procedure	EL 2132-18	See above A.3	N/A
A.3.3	Compliance criterion	EL 2132-19	See above A.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 = 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 in the requirement tested.

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TEST REPORT

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

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TEST REPORT

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 B.1	N/A
	Operating voltage (V) :		See above B.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 = 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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TEST REPORT

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	See below	P
	Position :		Mounted on PCB connected between primary and secondary	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 in the requirement tested.

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TEST REPORT

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	Satisfactory (See Clause 5.1.4)	P
D.1	Measuring instrument	EL 2135-01	Satisfactory	P
D.2	Alternative measuring instrument	EL 2135-02	See above	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 in the requirement tested.

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TEST REPORT

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	See table 1.5.1	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 = 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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TEST REPORT

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	Satisfactory (See clause 2.10)	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 in the requirement tested.

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TEST REPORT

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Dated: 07/12/2020	IEC 60950-1: 2005 + A1:2009 + A2 : 2013	

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	Alternate method not used	N/A
G.1	Clearances	EL 2138-01	See above G	N/A
G.1.1	General	EL 2138-02	See above G	N/A
G.1.2	Summary of the procedure for determining minimum clearances	EL 2138-03	See above G	N/A
G.2	Determination of mains transient voltage (V)	EL 2138-04	See above G	N/A
G.2.1	AC Mains supply	EL 2138-05	See above G	N/A
G.2.2	Earthed d.c. mains supplies	EL 2138-06	See above G	N/A
G.2.3	Unearthed d.c. mains supplies	EL 2138-07	See above G	N/A
G.2.4	Battery operation	EL 2138-08	See above G	N/A
G.3	Determination of telecommunication network transient voltage (V)	EL 2138-09	See above G	N/A
G.4	Determination of required withstand voltage (V)	EL 2138-10	See above G	N/A
G.4.1	Mains transients and internal repetitive peaks	EL 2138-11	See above G	N/A
G.4.2	Transients from telecommunication networks:	EL 2138-12	See above G	N/A
G.4.3	Combination of transients	EL 2138-13	See above G	N/A
G.4.4	Transients from cable distribution systems	EL 2138-14	See above G	N/A
G.5	Measurement of transient voltages (V)	EL 2138-15	See above G	N/A
	a) Transients from a mains supply		See above G	N/A
	For an a.c. mains supply		See above G	N/A
	For a d.c. mains supply		See above G	N/A
	b) Transients from a telecommunication network		See above G	N/A
G.6	Determination of minimum clearances	EL 2138-16	See above 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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TEST REPORT

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	Equipment does not produce ionizing radiation	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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TEST REPORT

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 Such parts	N/A
	Metal(s) used :		See above	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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TEST REPORT

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	See below	N/A
K.1	Making and breaking capacity	EL 2141-01	No thermal control inside the equipment	N/A
K.2	Thermostat reliability; operating voltage (V) :	EL 2141-02	See above K.1	N/A
K.3	Thermostat endurance test; operating voltage (V) :	EL 2141-03	See above K.1	N/A
K.4	Temperature limiter endurance; operating voltage (V) :	EL 2141-04	See above K.1	N/A
K.5	Thermal cut-out reliability	EL 2141-05	See above K.1	N/A
K.6	Stability of operation	EL 2141-06	See above K.1	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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TEST REPORT

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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	Satisfactory	P
L.1	Typewriters*	EL 2142-01	No typewriters used	N/A
L.2	Adding machines and cash registers*	EL 2142-02	No adding machines and cash registers used	N/A
L.3	Erasers*	EL 2142-03	No erasers used	N/A
L.4	Pencil sharpeners*	EL 2142-04	No pencil sharpeners used	N/A
L.5	Duplicators and copy machines*	EL 2142-05	No duplicators and copy machines used	N/A
L.6	Motor-operated files*	EL 2142-06	No motor operated files used	N/A
L.7	Other business equipment*	EL 2142-07	Adaptor was loaded with max normal load and Operated at normal operating instructions	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 in the requirement tested.

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TRF No. BIS_IT/PA_IS13252_V1.3

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TEST REPORT

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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	See below	N/A
M.1	Introduction*	EL 2143-01	No telephone ringing signals	N/A
M.2	Method A	EL 2143-02	See above M.1	N/A
M.3	Method B	EL 2143-03	See above M.1	N/A
M.3.1	Ringing signal	EL 2143-04	See above M.1	N/A
M.3.1.1	Frequency (Hz)	EL 2143-05	See above M.1	N/A
M.3.1.2	Voltage (V)	EL 2143-06	See above M.1	N/A
M.3.1.3	Cadence; time (s), voltage (V)	EL 2143-07	See above M.1	N/A
M.3.1.4	Single fault current (mA)	EL 2143-08	See above M.1	N/A
M.3.2	Tripping device and monitoring voltage	EL 2143-09	See above M.1	N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage	EL 2143-10	See above M.1	N/A
M.3.2.2	Tripping device	EL 2143-11	See above M.1	N/A
M.3.2.3	Monitoring voltage (V)	EL 2143-12	See above M.1	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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TRF No. BIS_IT/PA_IS13252_V1.3

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TEST REPORT

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	No such equipment	N/A
N.1	ITU-T impulse test generators	EL 2144-01	See above N	N/A
N.2	IEC 60065 impulse test generator	EL 2144-02	See above N	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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TEST REPORT

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	In compliance	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 in the requirement tested.

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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 (MOV) 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 Q	P
	a) Preferred climatic categories Lower category temperature: -10°C Upper category temperature: +85°C Duration of damp Test, steady state test: 21 days		See above 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 Q	P
	c) Combined pulse :	EL 2146-01	See above 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 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 in the requirement tested.

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TEST REPORT

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	See below	N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)*	EL 2147-01	No coated printed wiring boards	N/A
R.2	Reduced clearances (see 2.10.3)*	EL 2147-02	See above	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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TEST REPORT

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	No such equipment	N/A
S.1	Test equipment*	EL 2148-01	See above S	N/A
S.2	Test procedure*	EL 2148-02	See above S	N/A
S.3	Examples of waveforms during impulse testing*	EL 2148-03	See above S	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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TEST REPORT

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	IP protection class is IP20	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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TEST REPORT

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	Certified triple insulation wire used	N/A
U.1	GENERAL	EL2150-01	See above U	N/A
U.2	TYPE TESTS	EL2150-02	See above U	N/A
U.2.1	GENERAL	EL2150-03	See above U	N/A
U.2.2	ELECTRIC STRENGTH	EL2150-04	See above U	N/A
U.2.2.1	SOLID ROUND WINDING WIRE AND STRANDED WINDING WIRES	EL2150-05	See above U	N/A
U.2.2.1.1	WIRES WITH NOMINAL CONDUCTOR DIAMETER UPTO AND INCLUDING 0.100MM	EL2150-06	See above U	N/A
U.2.2.1.2	WIRES WITH NOMINAL CONDUCTOR DIAMETER OVER 0.100MM AND INCLUDING 2.500MM	EL2150-07	See above U	N/A
U.2.2.1.3	WIRES WITH NOMINAL CONDUCTOR DIAMETER OVER 2.500MM	EL2150-08	See above U	N/A
U.2.2.2	SQUARE OR RECTANGULAR WIRES	EL2150-09	See above U	N/A
U.2.3	FLEXIBILITY AND ADHERENCE	EL2150-10	See above U	N/A
U.2.4	HEAT SHOCK	EL2150-11	See above U	N/A
U.2.5	RETENTION OF ELECTRIC STRENGTH AFTER BENDING	EL2150-12	See above U	N/A
U.3	TESTING DURING MANUFACTURING	EL2150-13	See above U	N/A
U.3.1	GENERAL	EL2150-14	See above U	N/A
U.3.2	ROUTINE TESTS	EL2150-15	See above U	N/A
U.3.3	SAMPLING TEST	EL2150-16	See above U	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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TEST REPORT

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	See below	P
V.1	Introduction*	EL 2151-01	Satisfactory	P
V.2	TN power distribution systems	EL 2151-02	Single-phase TN power system considered and used for testing.	P
V.3	TT Power Distribution systems	EL 2151-03	No TT Power Distribution systems	N/A
V.4	IT Power Distribution systems	EL 2151-04	No IT Power Distribution systems	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 in the requirement tested.

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TEST REPORT

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 connection to the telecommunication network or cable distribution	N/A
W.1	Touch current from electronic circuits*	EL 2152-01	See above W	N/A
W.1.1	Floating circuits*	EL 2152-02	See above W	N/A
W.1.2	Earthed circuits*	EL 2152-03	See above W	N/A
W.2	Interconnection of several equipments*	EL 2152-04	See above W	N/A
W.2.1	Isolation*	EL 2152-05	See above W	N/A
W.2.2	Common return, isolated from earth*	EL 2152-06	See above W	N/A
W.2.3	Common return, connected to protective earth*	EL 2152-07	See above 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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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	See table 5.3 & 4.5	P
X.1	Determination of maximum input current*	EL 2153-01	In compliance	P
X.2	Overload test procedure*	EL 2153-02	See above Cl. X	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 in the requirement tested.

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TEST REPORT

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	No ultraviolet light	N/A
Y.1	Test apparatus	EL 2154-01	See above Y	N/A
Y.2	Mounting of test samples	EL 2154-02	See above Y	N/A
Y.3	Carbon-arc light-exposure apparatus	EL 2154-03	See above Y	N/A
Y.4	Xenon-arc light exposure apparatus	EL 2154-04	See above Y	N/A

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

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	Complies with Cl. 2.10.3.2	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 in the requirement tested.

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TEST REPORT

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	No such construction	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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TEST REPORT

ests 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	Integrated circuit current limiters is not used	N/A
CC.1	Integrated circuit (IC) current limiters*	EL 2158-01	See above CC	N/A
CC.2	Test program 1	EL 2158-02	See above CC	N/A
CC.3	Test program 2	EL 2158-03	See above CC	N/A
CC.4	Test program 3	EL 2158-04	See above CC	N/A
CC.5	Compliance	EL 2158-05	See above 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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CIN No. : U74999DL2015PTC289051

TEST REPORT

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 rack-mounted equipment	N/A
DD.1	General		See above DD	N/A
DD.2	Mechanical strength test, variable N.....:	EL 2159-01	See above DD	N/A
DD.3	Mechanical strength test, 250N, including end stops.....:	EL 2159-02	See above DD	N/A
DD.4	Compliance*.....:	EL 2159-03	See above 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.

.....
(Approving Authority)

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Report No. ALPL202009071	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 /	Page 88 of 116
Dated: 07/12/2020	IEC 60950-1: 2005 + A1:2009 + A2 : 2013	

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	The equipment is not a household and home/office document/media shredders.	N/A
EE.1	General		See above EE	N/A
EE.2	Markings and instructions*	EL 2160-01	See above EE	N/A
	Use of markings or symbols*.....:		See above EE	N/A
	Information of user instructions, maintenance and/or servicing instructions*.....:		See above EE	N/A
EE.3	Inadvertent reactivation test.....:	EL 2160-02	See above EE	N/A
EE.4	Disconnection of power to hazardous moving parts*	EL 2160-03	See above EE	N/A
	Use of markings or symbols*.....:		See above EE	N/A
EE.5	Protection against hazardous moving parts		See above EE	N/A
	Test with test finger (Figure 2A) .....:	EL 2160-04	See above EE	N/A
	Test with wedge probe (Figure EE1 and EE2) .....:	EL 2160-05	See above EE	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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TRF No. BIS_IT/PA_IS13252_V1.3

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1.5.1	TABLE: List of components				P
Object/part no.	Manufacturer/ trademark	Type/model	Technical data	Standard	Mark(s) of conformity1.
Enclosure	SABIC INNOVATIVE PLASTICS B V	SE1	PPE+PS, Min. V-1, Min. thickness: 2.0mm, 105°C	UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20)	UL E45329
Alt.	SABIC INNOVATIVE PLASTICS B V	SE1X(GG)(f1)	PPE+PS, Min. V-1, Min. thickness: 2.0mm, 105°C	UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20)	UL E45329
Alt.	SABIC INNOVATIVE PLASTICS B V	SE100	PPE+PS, Min. V-1, Min. thickness: 2.0mm, 95°C	UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E45329
Alt.	SABIC INNOVATIVE PLASTICS B V	C2950	PC/ABS, Min. V-0, Min. thickness: 2.0mm, 85°C	UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E45329
Alt.	SABIC INNOVATIVE PLASTICS B V	CX7211	PC/ABS, Min. V-1, Min. thickness: 2.0mm, 90°C	UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E45329
Alt.	SABIC INNOVATIVE PLASTICS B V	945(GG)	PC, Min. V-1, Min. thickness: 2.0mm, 120°C	UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E45329
Alt.	SABIC INNOVATIVE PLASTICS B V	HF500R	PC, V-0, Min. thickness: 2.0mm, 125°C	UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E45329
Alt.	SABIC JAPAN L L C	SE1X(GG)(C)(f1),SE1	PPE+PS, Min. V-1, Min. thickness: 2.0mm, 105°C	UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E207780

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Alt.	SABIC JAPAN L L C	SE100	PPE+PS, Min. V-1, Min. thickness: 2.0mm, 95°C	UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E207780
Alt.	SABIC JAPAN L L C	C2950	PC/ABS, Min. V-0, Min. thickness: 2.0mm, 85°C	UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E207780
Alt.	SABIC JAPAN L L C	CX7211(GG)	PC/ABS, Min. V-1, Min. thickness: 2.0mm, 90°C	UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E207780
Alt.	SABIC JAPAN L L C	945(GG)	PC, Min. V-1, Min. thickness: 2.0mm, 120°C	UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E207780
Alt.	TEIJIN CHEMICALS LTD	LN-1250P(#)(f1) LN-1250G(#)(*)	PC, Min. V-0, Min. thickness: 2.0mm, 115°C	UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E50075
Alt.	CHI MEI CORPORATION	PA-765A(+)	ABS, Min. V-0, Min. thickness: 2.0mm, 85°C	UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E56070
Alt.	CHI MEI CORPORATION	PC-540	PC/ABS, Min. V-0, Min. thickness: 2.0mm, 70°C	UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E56070
PCB	WALEX ELECTRONIC (WUXI) CO LTD	T2, T2A T2B T4	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796 UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E154355

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Alt.	YUANMAN PRINTED CIRCUIT CO LTD	1V0	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796 UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E74757
Alt.	GUANGDE XINKE ELECTRONICS CO LTD	XK-2,XK1	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796 UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E231590
Alt.	GUANGDONG HETONG TECHNOLOGY CO LTD	CEM1 2V0 FR4	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796 UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E243157
Alt.	KUNSHAN CITY HUA SHENG CIRCUIT BOARD CO LTD	HS-S	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796 UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E229877
Alt.	CHEERFUL PLASTIC ELECTRONIC PRODUCTS	02 03 03A	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796 UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E199724
Alt.	JIANGSU DIFEIDA ELECTRONICS CO LTD	DFD-1	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796 UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E213009
Alt.	DONGGUAN DAYSUN ELECTRONIC CO LTD	DS2	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796 UL 94 (Harmonized with IEC 60695-11-10 IEC 60695-11-20	UL E251754
Alt.	SUZHOU CITY YILIHUA ELECTRONICS CO LTD	YLH-1	Min. 1,6 mm thickness, min. V-0, 130°C	IEC 60335-1 UL 796	UL E251781
Alt.	DAFENG AREX ELECTRONICS TECHNOLOGY CO LTD	02V0, 03V0 04V0	Min. 1,6 mm thickness, min. V-0, 130°C	IEC 60335-1 UL 796	UL E186016

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Alt.	BRITE PLUS ELECTRONICS (SUZHOU) CO LTD	DKV0-3A DGV0-3A	Min. 1,6 mm thickness, min. V-0, 130°C	IEC 60335-1 UL 796	UL E177671
Alt.	KUOTIANG ENT LTD	C-2 C-2A	Min. V-0, min 1.6 mm thickness, 130°C	IEC/EN 60950-1 UL 796	UL E227299
Alt.	PACIFIC WIN INDUSTRIAL LTD	PW-02 PW-03	Min. V-0, min 1.6 mm thickness, 130°C	IEC/EN 60950-1 UL 796	UL E228070
Alt.	SHENZHEN TONGCHUANGXIN ELECTRONICS CO LTD	TCX	Min. 1,6 mm thickness, min. V-0, 130°C	IEC 60335-1 UL 796	UL E250336
Alt.	SHANGHAI H-FAST ELECTRONICS CO LTD	211001	Min. 1,6 mm thickness, min. V-0, 130°C	Min. 1,6 mm thickness, min. V-0, 130°C	UL E337862
Alt.	JIANGXI ZHONG XIN HUA ELECTRONICS INDUSTRY CO LTD	ZXH-2, ZXH-3	Min. 1,6 mm thickness, min. V-0, 130°C	Min. 1,6 mm thickness, min. V-0, 130°C	UL E331298
Fuse (FS1,FS2) (FS2 is optional)	Conquer Electronics Co., Ltd.	MST series	T 3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40017118
Alt.	Ever Island Electric Co., Ltd. And Walter Electric	2010, ICP	T 3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40018781 UL E220181
Alt.	SUZHOU WALTER ELECTRONIC CO LTD	ICP	T 3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40012824 UL E56092

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Alt.	Bel Fuse Ltd.	RST-Series(s)	T 3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40011144 UL E20624
Alt.	Cooper Bussmann LLC	SS-5	T 3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40015513 UL E19180
Alt.	Dongguan Better	932	T 3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40033369 UL E300003
Alt.	Hollyland Company Limited	5ET	T 3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40015669 UL E156471
Alt.	SUNNY EAST ENTERPRISE CO LTD	CFD	T 3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40030246 UL E133774
Alt.	Conquer Electronics Co., Ltd.	MET series	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40017157 UL E82636
Alt.	Shenzhen Lanson Electronics Co. Ltd.	SMT	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40012592 UL E221465
Alt.	Zhongshan Lanbao Electrical Appliances Co., Ltd.	RTI-10 Series(s)	T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40017009 UL E213695

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TEST REPORT

X capacitor (CX1) (optional)	Cheng Tung Industrial Co., Ltd.	CTX	Max 0.47µF, Min.250V,100oC X1 or X2	IEC/EN 60384-14 UL 1414	UL CB / US-17992-UL VDE 40022642 UL E193049
Alt.	Tenta Electric Industrial Co. Ltd.	MEX	Max 0.47µF, Min.250V,100oC X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 119119 UL E222911
Alt.	JOEY ELECTRONICS (DONG GUAN) CO LTD	MPX	Max 0.47µF, Min.250V,100oC X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40032481 UL E216807
Alt.	Ultra Tech Xiphi Enterprise Co. Ltd.	HQX	Max 0.47µF, Min.250V,100oC X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40015608 UL E183780
Alt.	Xiangtai Electronic (Shenzhen) Co., Ltd.	MKP/MPX	Max 0.47µF, Min.250V,100oC X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40036065 UL E357475
Alt.	Dain Electronics Co., Ltd.	MEX, MPX, NPX	Max 0.47µF, Min.250V,100oC X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40018798 UL E147776
Alt.	Yuon Yu Electronics Co. Ltd.	MPX	Max 0.47µF, Min.250V,100oC X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40032392 UL E200119
Alt.	Sinhua Electronics (Huzhou) Co., Ltd.	MPX	Max 0.47µF, Min.250V,110oC X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40014686 UL E237560
Alt.	Jiangsu Xinghua Huayu Electronics Co., Ltd.	MPX - Series	Max 0.47µF, Min.250V,100oC X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40022417 UL E311166
Alt.	SHENZHEN JINGHAO CAPACITOR CO LTD	CBB62B	Max 0.47µF, Min.250V,110oC X2	EC/EN 60384-14 UL 60384-14 UL 1414	VDE40018690 UL E252286

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TEST REPORT

Alt.	Foshan Shunde Chuang Ge Electronic Industrial Co., Ltd.	MKP-X2	Min. 250VAC, Max. 0.47µF, 40/105/21/B, X2	IEC/EN 60384-14	VDE 40008922
Alt.	Okaya Electric Industries Co. LTD	RE-Series	Min. 250VAC, Max. 0.47µF, 55/100/56/C, X2	IEC/EN 60384-14	VDE 40028657
Alt.	Vishay Electrónica Portugal, Lda	F 1772 Series(s)	Min. 250VAC, Max. 0.47µF, 40/100/56/C, X2	IEC/EN 60384-14	VDE 40005095
Alt.	Winday Electronic Industrial Co., Ltd.	MPX series	Min. 250VAC, Max. 0.47µF, 40/100/21/C, X2	IEC/EN 60384-14	VDE 40018071
Y capacitor (CY1,CY2) (optional)	TDK Corporation Honjo Factory	CD	Min.250V Min.125oC Max.2200pF Y1	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40029780 UL E37861
Alt.	Success Electronics Co., Ltd.	SE	Min.250V Min.125oC Max.2200pF Y1	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40037211 VDE 40020002 UL E114280
Alt.	Success Electronics Co., Ltd.	SB	Min.250V Min.125oC Max.2200pF Y1	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40037221 VDE 40020001 UL E114280
Alt.	Walsin Technology Corp.	AH	Min.250V Min.125oC Max.2200pF Y1	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40001804 UL E146544
Alt.	Haohua Electronic Co.	CT 7	Min.250V Min.125oC Max.2200pF Y1	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40003902 UL E233106

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Alt.	Xiangtai Electronic (Shenzhen) Co., Ltd.	YO-series	Min.250V Min.125oC Max.2200pF Y1	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40036880 UL E319473
Alt.	JUHONG ELE COMPANY	JB- series	Min.250V Min.125oC Max.2200pF Y1	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40035339 UL E253194
Alt.	Murata Mfg. Co., Ltd.	KX	Min.250V Min.125oC Max.2200pF Y1	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40002831 UL E37921
Alt.	JYA-NAY Co., Ltd.	JN	Min.250V Min.125oC Max.2200pF Y1	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40001831 UL E201384
Alt.	Jyh Chung Electronic Co., Ltd.	JD	Min.250V400v Min.125oC Max.2200pF Y1	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 137027 UL E187963
Alt.	WELSON INDUSTRIAL CO LT D	WD	Min.250V Min.125oC Max.2200pF Y1	IEC/EN 60384-14	VDE UL 40016157
Varistor MOV1/MOV(Optional)	Thinking Electronic Industrial Co., Ltd.	TVR10471K, TVR14471K	Max. Continuous voltage: min 300Vac(rms), 85°C The coating is V-0	IEC 61051-2 IEC 60950-1	VDE005944 UL E314979

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-Alt.	Centra Science Corp	CNR-10D471K, CNR-14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C The coating is V-0	IEC 61051-2 IEC 60950-1	VDE40008220 UL E316325
-Alt.	Success Electronics Co Ltd	SVR10D471K SVR14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C The coating is V-0	IEC 61051-2 IEC 60950-1	VDE40030401 UE330256
-Alt.	WALSIN TECHNOLOGY CORP	VZ10D471K VZ14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C The coating is V-0	IEC 61051-2 IEC 60950-1	VDE5932 UL E309297
-Alt.	BESTBRIGHT ELECTRONICS CO LTD	10D471K 14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C The coating is V-0	IEC 61051-2 IEC 60950-1	VDE40050493 UL E315524
-Alt.	CERAMATE TECHNICAL CO LTD	GNR10D471K GNR14D471K	Max. Continuous voltage: min 300Vac(rms), 85°C The coating is V-0	IEC 61051-2 IEC 60950-1	VDE40031745 UL E315429
-Alt.	BRIGHTKING (SHENZHEN) CO LTD	14D471K 10D471K	Max. Continuous voltage: min 300Vac(rms), 85°C The coating is V-0	IEC 61051-2 IEC 60950-1	VDE40027827 UL E32799
Alt.	Joyin Co., Ltd.	JVT10N471K JVT14N471K	300V rms; 385V d.c,470, 3kA, 8/20µs	IEC 609501 EN 609501	VDE005937 UL E325508

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Photo coupler (U1)	Lite-On Technology Corporation	LTV-817	Dti=0.8mm Int. , EXT.dcr=7.8mm, thermal cycling test,110°C	IEC/EN 60747-5-2 UL 1577	VDE40015248 UL E113898
Alt.	Everlight Electronics Co., Ltd.	EL817	Dti=0.5mm Int. , dcr=6.0mm EXT.dcr=7.7mm, thermal cycling test,110°C	IEC/EN 60747-5-2 UL 1577	VDE 132249 UL E214129
Alt.	Fairchild Semiconductor Pte Ltd.	H11A817B / FOD817B	Insulation voltage: 850V; Transient overvoltage: 6000V; CTI175; Int. Cr/ Ext. Cr: ≥7,0/ 7,0 mm; 30/110/21	IEC/EN 60747-5-2	VDE 40026857
Alt.	Sharp Corporation Electronic Components and Devices Group	PC817	Insulation voltage: 890V; Transient overvoltage: 9000V Int. Cr/ Ext. Cr: 7.62/ 7.62 mm; 30/100/21	IEC/EN 60747-5-2	VDE 40008087
Alt.	Bright Led Electronics Corp.	BPC-817 A/B/C/D/L BPC-817 M BPC-817 S	Dti=0.4mm EXT.dcr=7.0mm, thermal cycling test,110°C	IEC/EN 60747-5-2	VDE 40007240
Alt.	Toshiba Corporation Semiconductor & Storage Products Company	TLP781F	Dti > 0.4mm, Ext cr > 8.0mm, Isolation 3000Vac min., 110°C min.,115 Thermal cycling test	IEC/EN 60747-5-2	VDE 40021173

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Alt.	COSMO Electronics Corporation	K1010 / KP1010	Dti=0.6mm Int. , dcr=4.0mm EXT.dcr=5.0mm, thermal cycling test,115°C	IEC/EN 60747-5-2	VDE 101347
Plug	I-Sheng Manufacturing (Song Gang) Factory	SP-021Q	AC 250V,6A	IS 1293:2005	BIS CM/L 4036041
Alt.	Longwell Company Song Gang Factory	LP-77L	AC 250V,10A	IS 1293:2005	BIS CM/L-4009947
Power supply cord	I-Sheng Manufacturing (Song Gang) Factory	PVC insulated cable	Rated Voltages Upto and Including 1100 V	IS 694:2010	BIS CM/L 4035948
Alt.	Longwell Company Song Gang Factory	PVC insulated cable	Rated Voltages Upto and Including 1100 V	IS 694:2010	BIS CM/L-4009846
Connector	Ching Cheng Wire Material Co., Ltd.	EL-703	AC 250V,2.5A	IEC 60320-1:2015 IEC 60320-3:2014	VDE 40002988
Connector	Longwell Company	LS-7FLS	AC 250V,2.5A	IEC/ EN 60320-1: 2001+ A1:2007	CB by NEMKO AS Ref. Certificate No. NO72344
Appliance inlet	LECI Electronics Co., Ltd	DB-8	2.5A, 250Vac	IEC60320-1	VDE 40032028
Alt.	Rich Bay Co., Ltd.	R-201SN90	2.5A, 250Vac	IEC60320-1	VDE 40030384

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Alt.	TECX-UNIONS Technology Corporation	SO-222	2.5A, 250Vac	IEC60320-1	ENEC-00859
Alt.	Rong Feng Industrial Co., Ltd.	RF-180	2.5A, 250Vac	IEC60320-1	VDE 40030168
Alt.	Inalways Corporation	0721	2.5A, 250Vac	IEC60320-1	ENEC 2010087
Alt.	Zhe Jiang Bei Er jia	ST-A03-005	2.5A, 250Vac	IEC60320-1	VDE 40014833
Alt.	Shenzhen Delikang Electronics Technology Co. Ltd.	CDJ-8	2.5A, 250Vac	IEC60320-1	VDE 40025531
Transformer(T1)	GlobTek INC	XF00694	Class B	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 + A1: 2009 + A2 : 2013	Tested with appliance
Alt.	GlobTek INC	XF00794	Class B	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 + A1: 2009 + A2 : 2013	Tested with appliance
Alt.	GlobTek INC	XF00731	Class B	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 + A1: 2009 + A2 : 2013	Tested with appliance

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Alt.	GlobTek INC	XF00695	Class B	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 + A1: 2009 + A2 : 2013	Tested with appliance
- Insulation system used in T1	GLOBTEK INC	GTX-130-TM	Class 130 (B)	UL 1446(NO equivalent IEC standard)	E243347
Alt.	SHAN DONG BOAM ELECTRIC CO LTD	BOAM-01 or B1	Class 130 (B)	UL 1446(NO equivalent IEC standard)	E252329
-Triple-insulated wire (Secondary)	Great Leoflon Industrial Co., Ltd.	TRW (B) Serie(s)	Class B, reinforced insulation	IEC 60950-1 IEC 61558-2-16 UL 2353 UL 60601-1	VDE 136581 UL E211989
-Alt.	KBI COSMOLINK CO.,LTD.	TIW-M Serie(s)	Class B, reinforced insulation	IEC 60950-1 IEC 61558-2-16 UL 2353 UL 60601-1	VDE 138053 UL E213764
-Alt.	Furukawa Electric Co., Ltd.	TEX-E	Class B, reinforced insulation	IEC 60950-1 IEC 61558-2-16 UL 2353 UL 60601-1	VDE 006735 UL E206440
- Alt	TOTOKU ELECTRIC CO LTD	TIW-2	Reinforced insulation, rated 130° C (Class B)	IEC 60950-1 IEC 61558-2-16 UL 2353 UL 60601-1	VDE 40005152
- Alt	E&B TECHNOLOGY CO LTD	E&B-XXXB E&B-XXXB-1	Reinforced insulation, Class B	IEC 60950-1 IEC 61558-2-16 UL 2353 UL 60601-1	VDE 40023473 UL E315265
-Alt.	SHENZHEN JIUDING NEW MATERIAL CO LTD	DTFW-B	Class B	IEC 60950-1 IEC 61558-2-16 UL 2353 UL 60601-1	VDE 40037495 UL E357999

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-Bobbin	CHANG CHUN PLASTICS CO LTD	T375HF	V-0, 150°C, thickness 0,43 mm min.	IEC 60335-1 UL 94 UL 746 A/B/C/D	UL E59481
- Alt	CHANG CHUN PLASTICS CO LTD	4130	V-0, 140°C, thickness 0,74 mm min.	IEC 60950-1 UL 94 UL 746 A/B/C/D	UL E59481
-Alt.	SUMITOMO BAKELITE CO LTD	PM-9820	V-0, 150°C, thickness 0,45 mm min.	IEC 60335-1 UL 94 UL 746 A/B/C/D	UL E41429
-Alt.	HITACHI CHEMICAL CO LTD	CP-J-8800	V-0, 150°C, thickness 0,45 mm min.	IEC 60335-1 UL 94 UL 746 A/B/C/D	UL E42956
-Insulating tape	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	1350F-1(b) 1350T-1 44	Min.130°C	IEC 60335-1 UL 510	UL E17385
-Alt.	BONDTEC PACIFIC CO LTD	370S (b)	Min.130°C	IEC 60335-1 UL 510	UL E175868
-Alt.	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ CT WF	Min.130°C	IEC 60335-1 UL 510	UL E165111
-Alt.	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	JY25-A(b)	Min.130°C	IEC 60335-1 UL 510	UL E246950
-Alt.	CHANG SHU LIANG YI TAPE INDUSTRY CO LTD	LY-XX(a)(b)	Min.130°C	IEC 60335-1 UL 510	UL E246820

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tubing	GREAT HOLDING INDUSTRIAL CO LTD	TFT/TFS/TFL	Min. 300V, 200°C	IEC 60950-1	UL E156256
-Alt.	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	WF	600V, 200°C	IEC 60950-1	UL E203950
-Alt	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	CB-TT-T , CB-TT-S	Min. 300V, 200°C	IEC 60950-1	UL E180908
Inductor(LF2)	GlobTek	NF00031	Min. 10mH	IEC 60950-1	Tested with appliance
-Alt.	BOAM	NF00031	Min. 10mH	IEC 60950-1	Tested with appliance
-Alt.	Haopuwei	NF00031	Min. 10mH	IEC 60950-1	Tested with appliance
-Alt.	ENG	NF00031	Min. 10mH	IEC 60950-1	Tested with appliance
-Alt.	HEJIA	NF00031	Min. 10mH	IEC 60950-1	Tested with appliance
Supplementary information: 1. Evidence have been evaluated and checked for the agreed level of compliance as per the referred standard					

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V)(AC)	I (A)	I rated (A)	P (W)	Fuse #	I fuse (A)	Condition/status
90	1.60	-	89.63	FS1	1.60	at 50 Hz
100	1.40	1.5	87.89	FS1	1.40	
240	0.68	1.5	83.87	FS1	0.68	
254.4	0.64	-	84.14	FS1	0.64	
90	1.54	-	85.54	FS1	1.54	at 60 Hz
100	1.35	1.5	84.73	FS1	1.35	
240	0.60	1.5	80.28	FS1	0.60	
254.4	0.65	-	81.77	FS1	0.65	
Supplementary information: Loaded at Maximum Normal load						

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2.1.1.5	TABLE: Energy hazard measurement				P
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
48Vdc	1.25	48.5	2.1	101.85	
Supplementary information:					

2.1.1.7	TABLE: Discharge test			P
Condition	τ calculated (s)	τ measured (s)	t u→ 0V (s)	Comments
Between Line and Neutral (normal condition)	3.11	0.52	--	Vpeak= 368V, 37% of Vpeak =136.16V, after 1 sec Vpeak= 24 V
Supplementary information: nil				

2.2.2	TABLE: SELV measurement (under normal conditions)			P
Transformer	Location	Voltage (max.) (V)		Voltage Limitation Component
		V peak	V d.c.	
--	Output terminal	--	48.5	--
Supplementary information:				

2.2.3	TABLE: SELV measurement (under fault conditions)	P
Location	Voltage (max.) (V)	Comments
Output terminal	0	Unit shutdown immediately
Supplementary information:		

2.4.2	TABLE: Limited current circuit measurement					P
Location	Voltage (V)	Current (mA)	Freq. (kHz)	Limit (mA)	Comments	
Y Capacitor (CY1)	0.86	0.43	62.4	43.68	--	
Supplementary information:						

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2.5	TABLE: Limited power source measurement		P
	Limits	Measured	Verdict
According to Table 2B/2C (normal condition) U_{oc}=48.5 V dc			
current (in A)	≤8	2.1	P
apparent power (in VA)	≤100	101.85	P
According to Table 2B/2C (normal condition) U_{oc}=0 V (Short-circuit)			
current (in A)	≤8	0	P
apparent power (in VA)	≤100	0	P
Supplementary information: Limited power exceeding 100VA			

<OR>

2.6.3.4	TABLE: Resistance of earthing measurement	N/A
Location	Voltage drop (V)	Comments
--	--	--
Supplementary information: Tested current 40A.		

2.10.2	Table: Working voltage measurement		P
Location	RMS voltage (V)	Peak voltage (V)	Comments
Line to neutral	**255**	368	Max V_{rms}
Y Capacitor (CY1)	165	238	--
Transformer Pin 1-Pin 5	108	230	--
Transformer Pin 1-Pin 6	113	228	--
Transformer Pin 2-Pin 5	129	242	--
Transformer Pin 3-Pin 5	141	266	--
Transformer Pin 4-Pin 8	232	**436**	Max V_{peak}
Transformer Pin 4-Pin 7	227	416	--
Supplementary information: Transformer Primary Pin Short 1-3,3-4, and Primary Pin Short 5,6,7,8			

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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 & Neutral before fuse (FS1)	368	255	1.5	10.43	3.2	10.43
Basic / supplementary:						
--	--	--	--	--	--	--
Reinforced:						
Transformer (primary pin-4-secondary pin-8)	436	232	6.4	23.30	6.4	23.30
Y Capacitor (CY1)	238	165	4.0	5.68	4.0	5.68
Supplementary information: nil						

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:					
Enclosure	368	255	3000	0.4	2.53
Supplementary information:					

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4.3.8	TABLE: Batteries								N/A
The tests of 4.3.8 are applicable only when appropriate battery data is not available						No such battery used			N/A
Is it possible to install the battery in a reverse polarity position?						No such battery used			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	No such battery used	N/A
- Explosion of the battery	No such battery used	N/A
- Emission of flame or expulsion of molten metal	No such battery used	N/A
- Electric strength tests of equipment after completion of tests	No such battery used	N/A
Supplementary information: No such battery used		

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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):		A: V= 90, 50Hz	B: V= 254.4, 50Hz
t_{amb1} (°C):	A: 25 B:25	t_{amb2} (°C):	A: 25 B:25

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)	
Transformer (T1) (XF00694)	47.3	45.2	87.3	85.2	110
Transformer (T1) (XF00794)	43.2	40.7	83.2	80.7	110
Transformer (T1) (XF00731)	46.3	45.6	86.3	85.6	110
Transformer (T1) (XF00695)	44.1	41.5	84.1	81.5	110
PCB	29.1	28.3	69.1	68.3	130
Inductor (LF2) GlobTek	43.0	41.7	83.0	81.7	110
Inductor (LF2) BOAM	44.7	42.3	84.7	82.3	110
Inductor (LF2) Haopuwei	45.1	44.7	85.1	84.7	110
Inductor (LF2) ENG	42.6	41.7	82.6	81.7	110
Inductor (LF2) HEJIA	43.9	45.1	83.9	85.1	110
Enclosure (outside)	20.1	18.5	60.1	58.5	95

Supplementary information: At maximum normal load

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		N/A
	Allowed impression diameter (mm) .....:	≤2 mm	
Part		Test temperature (°C)	Impression diameter (mm)
--		--	--

Supplementary information: Certified appliance inlet used

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4.6.1, 4.6.2	Table: Enclosure opening measurements	N/A

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

Supplementary information: No openings provided

4.7	Table: Resistance to fire	P

Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence
PCB	*	*	1.26	*	*
Enclosure	*	*	2.53	*	*

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 254.4V, 50 Hz	—

Measurement location (Terminal A connected to...)	Polarity (normal) [mA]		Polarity (reverse) [mA]		Limit (mA)	Comments
	Switch: ON	Switch: OFF	Switch: ON	Switch: OFF		
Line /neutral to external enclosure wrapped with metal foil	0.14	--	0.18	--	0.25	--

Supplementary information:

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 and Neutral (FP831S) open)	AC	1500	No
Basic / supplementary:			
--	--	--	--
Reinforced:			
L/N to external plastic enclosure with metal foil wrapped	AC	3000	No
Primary to secondary circuit of Transformer	AC	3000	No
Supplementary information:			

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5.3	TABLE: Fault condition tests		P
	Ambient temperature (°C) .....:	25	—
	Power source for EUT: Manufacturer, model/type, output rating .....:	See table 1.5.1	—

Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Transformer (Output)	Over load	254.4	2.30hrs	--	--	Temperature on transformer coil:87.5°C Result: No Fire , no hazards
Output terminal	Short circuit	240	10 Sec	--	--	Unit shut down immediately Result: no fire, no hazards
Supplementary information:						

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C.2	TABLE: Insulation of transformers (Transformer(T1) XF00694 GlobTek INC)		P
	Transformer part name ..... :	Transformer (T1)	
	Manufacturer ..... :	See table 1.5.1	
	Type..... :	See table 1.5.1	

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)	436	232	6.4	TIW	6.4	TIW
Primary/input winding and core (internal)			6.4	TIW	6.4	TIW
Secondary/output winding and core (internal)			6.4	TIW	6.4	TIW
Primary/input part and secondary/output part (external)			6.4	23.30	6.4	23.30
Primary/input part and core (external)			6.4	TIW	6.4	TIW
Primary/input part and secondary/output winding (external)			6.4	TIW	6.4	TIW
Secondary/output part and core (external)			6.4	TIW	6.4	TIW
Secondary/output part and primary/input winding (external)			6.4	TIW	6.4	TIW

Description of design:	
(a) Bobbin	
Primary/input pins..... :	1,2,3,4
Secondary/output pins..... :	5,6,7,8
Material (manufacturer, type, ratings)..... :	See Table 1.5.1
Thickness (mm)..... :	1.3 mm(min)
(b) General	
Please insert here a description of the transformer design describing: Concentric windings on bobbin/Core. Windings ends additionally fixed with tape, outer winding is secondary. Teflon tube on all winding exits is provided. Core is considered as primary.	
Supplementary information: TIW: Tripple Insulated Wire(see table 1.5.1),	

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TEST REPORT

C.2	TABLE: Insulation of transformers (Transformer(T1) XF00794 GlobTek INC)		P
	Transformer part name ..... :	Transformer (T1)	
	Manufacturer ..... :	See table 1.5.1	
	Type ..... :	See table 1.5.1	

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)	312	230	4.0	TIW	5.0	TIW
Primary/input winding and core (internal)			4.0	TIW	5.0	TIW
Secondary/output winding and core (internal)			4.0	TIW	5.0	TIW
Primary/input part and secondary/output part (external)			4.0	22.42	5.0	22.42
Primary/input part and core (external)			4.0	TIW	5.0	TIW
Primary/input part and secondary/output winding (external)			4.0	TIW	5.0	TIW
Secondary/output part and core (external)			4.0	TIW	5.0	TIW
Secondary/output part and primary/input winding (external)			4.0	TIW	5.0	TIW

Description of design:	
(a) Bobbin	
Primary/input pins ..... :	1,2,3,4
Secondary/output pins ..... :	5,6,7,8
Material (manufacturer, type, ratings) ..... :	See Table 1.5.1
Thickness (mm) ..... :	1.3 mm(min)
(b) General	
Please insert here a description of the transformer design describing: Concentric windings on bobbin/Core. Windings ends additionally fixed with tape, outer winding is secondary. Teflon tube on all winding exits is provided. Core is considered as primary.	
Supplementary information: TIW: Tripple Insulated Wire(see table 1.5.1),	

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TEST REPORT

C.2	TABLE: Insulation of transformers (Transformer(T1) XF00731 GlobTek INC)		P
	Transformer part name ..... :	Transformer (T1)	
	Manufacturer ..... :	See table 1.5.1	
	Type ..... :	See table 1.5.1	

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)	308	226	4.0	TIW	5.0	TIW
Primary/input winding and core (internal)			4.0	TIW	5.0	TIW
Secondary/output winding and core (internal)			4.0	TIW	5.0	TIW
Primary/input part and secondary/output part (external)			4.0	22.87	5.0	22.87
Primary/input part and core (external)			4.0	TIW	5.0	TIW
Primary/input part and secondary/output winding (external)			4.0	TIW	5.0	TIW
Secondary/output part and core (external)			4.0	TIW	5.0	TIW
Secondary/output part and primary/input winding (external)			4.0	TIW	5.0	TIW

Description of design:	
(a) Bobbin	
Primary/input pins ..... :	1,2,3,4
Secondary/output pins ..... :	5,6,7,8
Material (manufacturer, type, ratings) ..... :	See Table 1.5.1
Thickness (mm) ..... :	1.3 mm(min)
(b) General	
Please insert here a description of the transformer design describing: Concentric windings on bobbin/Core. Windings ends additionally fixed with tape, outer winding is secondary. Teflon tube on all winding exits is provided. Core is considered as primary.	
Supplementary information: TIW: Tripple Insulated Wire(see table 1.5.1),	

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C.2	TABLE: Insulation of transformers (Transformer(T1) XF00695 GlobTek INC)		P
	Transformer part name ..... :	Transformer (T1)	
	Manufacturer ..... :	See table 1.5.1	
	Type ..... :	See table 1.5.1	

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)	328	231	6.4	TIW	6.4	TIW
Primary/input winding and core (internal)			6.4	TIW	6.4	TIW
Secondary/output winding and core (internal)			6.4	TIW	6.4	TIW
Primary/input part and secondary/output part (external)			6.4	23.67	6.4	23.67
Primary/input part and core (external)			6.4	TIW	6.4	TIW
Primary/input part and secondary/output winding (external)			6.4	TIW	6.4	TIW
Secondary/output part and core (external)			6.4	TIW	6.4	TIW
Secondary/output part and primary/input winding (external)			6.4	TIW	6.4	TIW

Description of design:	
(a) Bobbin	
Primary/input pins ..... :	1,2,3,4
Secondary/output pins ..... :	5,6,7,8
Material (manufacturer, type, ratings) ..... :	See Table 1.5.1
Thickness (mm) ..... :	1.3 mm(min)
(b) General	
Please insert here a description of the transformer design describing: Concentric windings on bobbin/Core. Windings ends additionally fixed with tape, outer winding is secondary. Teflon tube on all winding exits is provided. Core is considered as primary.	
Supplementary information: TIW: Tripple Insulated Wire(see table 1.5.1),	

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CIN No. : U74999DL2015PTC289051

TEST REPORT

Plug Dimension:

1.5.2/4.3.6	Table 1 : Plug Dimensions as per IS 1293:2019					P
Type of Plug: Two Pin [x] Three pin []						
Reference points	Ratings					
	2.5A [ ]		6A [X]		16A[ ]	
	Limits	Measured	Limits	Measured	Limits	Measured
A	--	--	22.05-22.35	--	-	-
B	18.95-19.25	19.15	18.95-19.25	--	-	-
C	--	--	7.01-7.085		-	-
D	5.03-5.105	5.08	5.03.-5.105	--	-	-
E	15.77-16.94	16.36	15.77-16.94	--	-	-
F	--	--	20.47-21.64	--	-	-
G	7.94 (min)	8.77	7.94 (min)	--	-	-
Supplementary information: nil						

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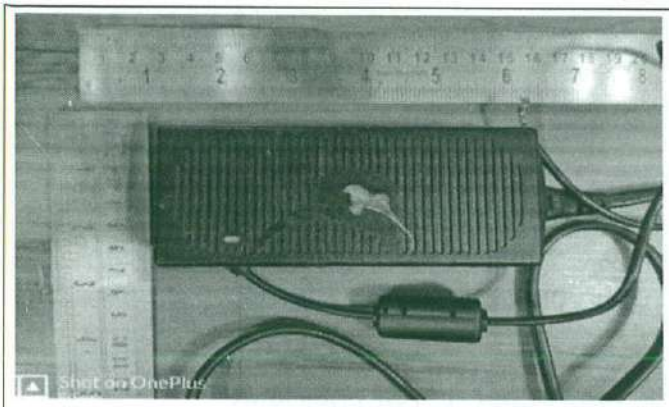
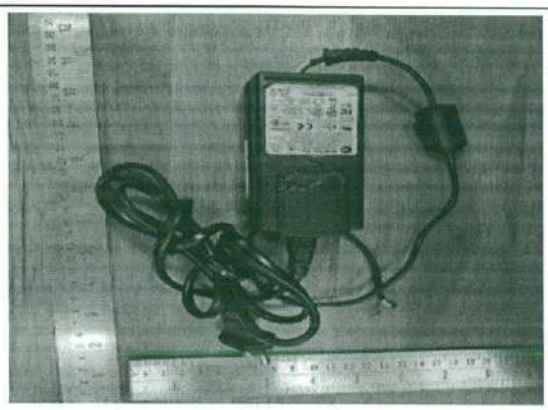
TEST REPORT

Attachment-1

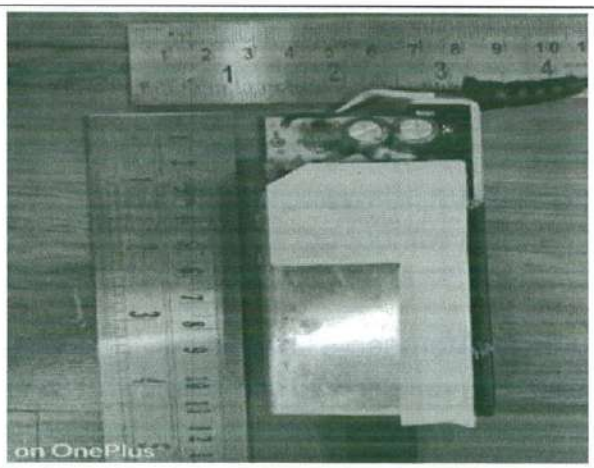
PHOTOGRAPHS



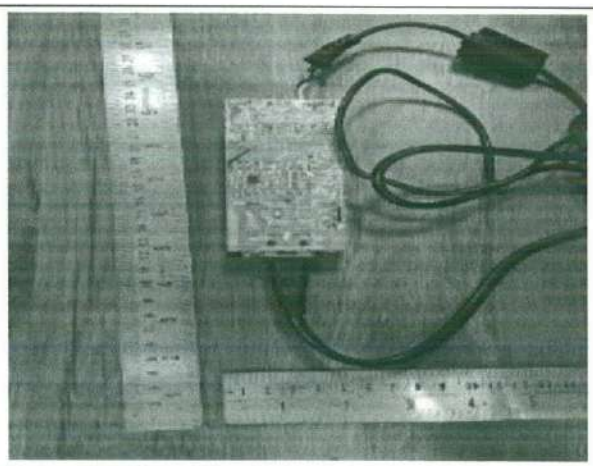
External View 1



External View 2



PCB View 1



PCB View 2

End of the Test Report

TRF No. BIS_IT/PA_IS13252_V1.3