SUMMARY OF TEST REPORT

TEST REPORT NO. KTRC/2104000616 DATED 14.05.2021

(Number of pages in test report: page no 1 to 119)

TEST FORMAT AS PER IS 13252(Part 1) : 2010+A1:2013+A2:2015/

IEC 60950-1:2005+ A1:2009+A2:2013

1. Name of Manufacturer: GlobTek (Suzhou) Co., Ltd.
2. Product: ITE Power Supply (Power Adaptor for IT Equipment)
3. Model(s): Lead Model: GTM41134-0606-1.0
   Series Model: GTM41134-0606-0.8, GTM41134-0606, GTM41134-0612-5.5, GTM41134-0612-4.5, GTM41134-0612-3.0, GTM41134-0612, GTM41134-0624-5.0, GTM41134-0624, GTM41134-0648
4. Model differences provided (if applicable): Yes/~~No~~
5. Model differences verified as per MEITY Guidelines for series formulation: Yes/~~No~~
6. Test result: See below

PART A: GENERAL

SL.NO	TEST REQUIREMENT	CLAUSE	VERDICT
1.	Components	1.5	P
2.	Power interface	1.6	P
3.	Marking and Instructions	1.7	P

PART B: PROTECTION FROM HAZARDS

SL.NO	TEST REQUIREMENT	CLAUSE	VERDICT
1.	Protection from electric shock and energy hazards	2.1	P
2.	SELV circuits	2.2	P
3.	TNV circuits	2.3	N/A
4.	Limited current circuits	2.4	N/A
5.	Limited power sources	2.5	P
6.	Provisions for earthing and bonding	2.6	N/A
7.	Over current for earth fault protection in primary circuits	2.7	P
8.	Safety interlocks	2.8	N/A
9.	Electrical insulation	2.9	P
10.	Clearances, creepage distance and distances through insulation	2.10	P

PART C: WIRING, CONNECTION AND PHYSICAL REQUIREMENTS

SL.NO	TEST REQUIREMENT	CLAUSE	VERDICT
1.	General	3.1	P
2.	Connection to a mains supply	3.2	P
3.	Wiring terminals for connection of external conductors	3.3	N/A
4.	Disconnection from the supply	3.4	P
5.	Interconnection of equipment	3.5	P
6.	Stability	4.1	N/A
7.	Mechanical strength	4.2	P
8.	Design and construction	4.3	P

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Plot No. 141 C, Electronic Complex, Pardeshipura, Indore - 452010 (INDIA) Ph.+91 - 4787555 (30 Lines), 4046055, 4048055
Email : contact@kailtech.net, electronics@kailtech.net ◆ Web : www.kailtech.net ◆ CIN - U73100MP2006PTC019006

9.	Project against hazardous moving parts	4.4	N/A
10.	Thermal requirements	4.5	P
11.	Openings in enclosures	4.6	N/A
12.	Resistance to fire	4.7	P

PART D: ELECTRICAL REQUIREMENT AND SIMULATED ABNORMAL CONDITIONS

SL.NO	TEST REQUIREMENT	CLAUSE	VERDICT
1.	Touch current and protective current	5.1	P
2.	Electric strength	5.2	P
3.	Abnormal operating and fault condition	5.3	P

PART E: CONNECTION TO TELECOMMUNICATION NETWORK AND CABLE DISTRIBUTION SYSTEM

SL.NO	TEST REQUIREMENT	CLAUSE	VERDICT
1.	Protection of telecommunication network service persons and users of others equipment connected to the network, from hazards in the equipment	6.1	N/A
2.	Protection of equipment users from over voltages on telecommunication network	6.2	N/A
3.	Protection of the telecommunication wiring system from overheating	6.3	N/A
4.	Connection to cable distribution systems - General	7.1	N/A
5.	Protection of cable distribution system services persons and users of other equipment connected to the system, from hazardous voltages in the equipment	7.2	N/A
6.	Protection of equipment users from over voltages on the cable distribution system	7.3	N/A
7.	Insulation between primary and cable distribution systems	7.4	N/A

General Information:

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

CONCLUSION:

1) Sample meets all relevant requirements of IS 13252(Part1) : 2010+A1:2013+A2:2015/ IEC 60950-1:2005+ A1:2009+A2:2013

2) ~~Sample fails to meet the following test requirements~~:

I hereby, undertake that the verdict stated in the test reports for all the tests matches with the test results. The sample meets all relevant requirements of IS 13252 (Part 1) : 2010.+A1:2013+A2:2015 /IEC 60950-1:2005+ A1:2009+A2:2013 ~~does not meet the requirements stated above at 2)~~ of conclusion. If any deviation is found, suitable punitive action may be taken by BIS.

Date: 14.05.2021

(Signature of Authorized person with Stamp)

(ii)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

ULR : TC783221000002199F

Test Report No.: KTRC/2104000616	Page 1 of 119
	Issue Date: 14.05.2021

Manufacturer:	GlobTek (Suzhou) Co., Ltd. No. 76, Jinling East Road, Suzhou Indistrial Park, China	
Test item:	ITE Power Supply (Power Adaptor for IT Equipment)	
Identification:	Lead Model: GTM41134-0606-1.0 Series Model: GTM41134-0606-0.8 GTM41134-0606, GTM41134-0612-5.5, GTM41134-0612-4.5,GTM41134-0612-3.0, GTM41134-0612, GTM41134-0624-5.0, GTM41134-0624,GTM41134-0648	Serial No.: Not Mentioned
Receipt No.:	KTRC/2104000616	Date of receipt: 16.04.2021
Testing laboratory and its address:	Kailtech Test & Research Centre Pvt. Ltd. 141-C, Electronic Complex Industrial Area, Indore-452010(INDIA)	
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 / ~~failed~~ the test specification(s).	
Other Aspects: This test report relates to the test sample submitted.		

Tested by:	Approved by / Authorized Signatory:	Issued by:
(Name/ Designation): Er.Rajendra S. Rajpoot Sr. Engineer	(Name/ Designation): Er.Dharmendra Sharma Manager	(Name/ Designation): Er.Pallavi Joshi Engineer
Date: 14.05.2021	Date: 14.05.2021	Date: 14.05.2021

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

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. ..... :	KTRC/2104000616
Date of issue ..... :	14.05.2021
Total number of pages ..... :	119
Testing Laboratory ..... :	Kailtech Test & Research Centre Pvt. Ltd.
Address ..... :	141-C, Electronic Complex Industrial Area, Indore-452010(INDIA)
Manufacturer's name ..... :	GlobTek (Suzhou) Co., Ltd.
Address ..... :	No. 76, Jinling East Road, Suzhou Indistrial 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 ..... :	ITE Power Supply (Power Adaptor for IT Equipment)
Trade Mark ..... :	GlobTek®, Inc.
Model/Type reference ..... :	Lead Model: GTM41134-0606-1.0 Series Model: GTM41134-0606-0.8, GTM41134-0606, GTM41134-0612-5.5,GTM41134-0612-4.5, GTM41134-0612-3.0, GTM41134-0612, GTM41134-0624-5.0, GTM41134-0624, GTM41134-0648
Ratings ..... :	Lead Model: Input:100-240Vac, 50/60Hz, 0.6A Output: 5.0V ⎓ 1.2A, 6.0W Series Model: See copy of marking plate
Other Documents submitted ..... :	Please refer to Table – List of Attachments at Page No. 11

Tested by:	Approved by / Authorized Signatory:	Issued by:
(Name/ Designation): Er.Rajendra S. Rajpoot Sr. Engineer	(Name/ Designation): Er.Dharmendra Sharma Manager	(Name/ Designation): Er.Pallavi Joshi Engineer
Date: 14.05.2021	Date: 14.05.2021	Date: 14.05.2021

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	05	05	14-15
EL 2101	General Requirements	Power interface (Cl.1.6)	05	04	04	16
EL 2102	Marking Requirements	Marking & instructions(Cl.1.7)	39	16	16	17-19
EL 2103	Electrical safety	Protection from electric shock and energy hazards (Cl.2.1)	14	07	07	20-21
EL 2104	Electrical safety	SELV Circuits (Cl.2.2)	04	04	04	22
EL 2105	Electrical safety	TNV Circuits (Cl.2.3)	11	00	00	23
EL 2106	Electrical safety	Limited current circuits (Cl.2.4)	04	00	00	24
EL 2107	Electrical safety	Limited Power sources (Cl.2.5)	07	03	03	25
EL 2108	Electrical safety	Provisions for earthing and bonding (Cl.2.6)	19	00	00	26-27
EL 2109	Electrical safety	Overcurrent and earth fault protection in primary circuits (Cl.2.7)	07	06	06	28-29
EL 2110	Electrical safety	Safety Interlocks (Cl.2.8)	13	00	00	30
EL 2111	Electrical safety	Electrical Insulation (Cl.2.9)	05	05	05	31
EL 2112	Electrical safety	Clearances, Creepage distances and distances through insulation (Cl.2.10)	63	29	29	32-36
EL 2113	Wiring	Wiring, connections and supply (Cl.3)	11	07	07	37-38
EL 2114	Wiring	Connection to a main supply (Cl.3.2)	14	02	02	39-40
EL 2115	Wiring	Wiring terminals for connection of external conductors (Cl.3.3)	09	00	00	41

EL 2116	Wiring	Disconnection for the main supply (Cl.3.4)	12	05	05	42
EL 2117	Wiring	Interconnection of equipment (Cl.3.5)	05	03	03	43
EL 2118	Mechanical properties	Stability (Cl.4.1)	05	00	00	44-45
EL 2119	Mechanical properties	Mechanical strength (Cl.4.2)	13	06	06	46
EL 2120	Mechanical properties	Design and construction (Cl.4.3)	25	07	07	47-48
EL 2121	Mechanical properties	Protection against hazardous moving parts (Cl.4.4)	14	00	00	49
EL 2122	Thermal Properties	Thermal requirements (Cl.4.5)	06	06	06	50
EL 2123	Mechanical properties	Openings in Enclosures (Cl.4.6)	18	00	00	51-52
EL 2124	Fire Safety	Resistance to fire (Cl.4.7)	25	09	09	53-57
EL 2125	Insulating properties	Electrical requirements and simulated abnormal conditions(Cl.5),5.1	20	10	10	58-59
EL 2126	Insulating properties	Electric Strength (Cl.5.2)	03	03	03	60
EL 2127	Insulating properties	Abnormal operating and fault conditions (Cl.5.3)	11	07	07	61
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	00	62-63
EL 2129	Communicating connection	Protection of equipment users from overvoltages on telecommunication networks (Cl.6.2)	06	00	00	64

EL 2130	Communicating connection	Protection of the telecommunication wiring system from overheating (Cl.6.3)	05	00	00	65-66
EL 2131	Connection to cable distribution systems	Connection to cable distribution systems (Cl.7)	06	00	00	67
EL 2132	Fire safety	Tests for resistance to heat and fire (Annex A)	20	02	02	68-69
EL 2133	Insulating properties	Motor tests under abnormal conditions (Annex B)	19	00	00	70-71
EL 2134	Electrical Safety	Transformers (Annex C)	03	03	03	72
EL 2135	Insulating properties	Measuring Instruments For Touch-Current Tests (Annex D)	03	02	02	73
EL 2136	Thermal Properties	Temperature Rise Of A Winding(Annex E)	01	00	00	74
EL 2137	Electrical safety	Measurement Of Clearances And Creepage Distances (Annex F)	01	01	01	75
EL 2138	Electrical safety	Alternative Method For Determining Minimum Clearances(Annex G)	17	00	00	76-77
EL 2139	Radiation Safety	Ionizing Radiation (Annex H)	01	00	00	78
EL 2140	Electrical Safety	Table of electrochemical potentials (Annex J)	01	00	00	79
EL 2141	General Requirements	Thermal controls (Annex K)	07	00	00	80
EL 2142	General Requirements	Normal load conditions for some types of electrical business equipment (Annex L)	08	02	02	81
EL 2143	Electrical Safety	Criteria for telephone ringing signals (Annex M)	13	00	00	82

An ISO 9001 : 2015 Certified Laboratory

EL 2144	Electrical safety	Impulse Test Generators(Annex N)	03	00	00	83
EL 2145	General Requirements	Normative References(Annex P)	01	01	01	84
EL 2146	General Requirements	Voltage dependent resistors (VDRs) (Annex Q)	03	00	00	85-86
EL 2147	General Requirements	Examples Of Requirements For Quality Control Programmes(Annex R)	03	00	00	87
EL 2148	General Requirements	Procedure For Impulse Testing (Annex S)	04	00	00	88
EL 2149	Protection against Ingress of water	Guidance On Protection Against Ingress Of Water (Annex T)	01	00	00	89
EL 2150	Wiring	Insulated Winding Wires For Use Without Interleaved Insulation (Annex U)	17	01	01	90-91
EL 2151	Electrical Safety	Ac Power Distribution Systems(Annex V)	05	03	03	92
EL 2152	Electrical Safety	Summation Of Touch Currents (Annex W)	08	00	00	93
EL 2153	Electrical Safety	Maximum Heating Effect In Transformer Tests (Annex X)	03	00	00	94
EL 2154	Radiation safety	Ultraviolet light conditioning test (Annex Y)	05	00	00	95
EL 2155	Electrical Safety	Overvoltage Categories (Annex Z)	01	01	01	96
EL 2156	Mechanical properties	Mandrel Test(Annex AA)	01	00	00	97

Kailtech Test & Research ktrc INDORE Centre Pvt. Ltd.

EL 2158	Electrical Safety	Evaluation Of Integrated Circuit (IC) Current Limiters (Annex CC)	06	00	00	98
EL 2159	Mechanical properties	Requirements For The Mounting Means Of Rack-Mounted Equipment (Annex DD)	04	00	00	99
EL 2160	Electrical Safety	Household And Home/Office Document/Media Shredders (Annex EE)	06	00	00	100

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

.....

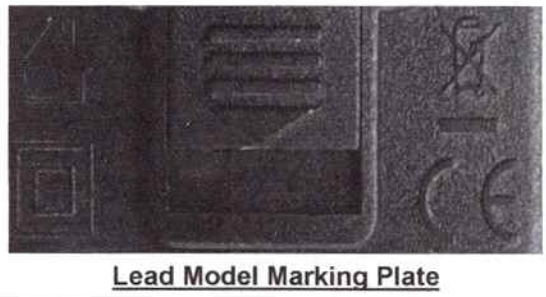
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

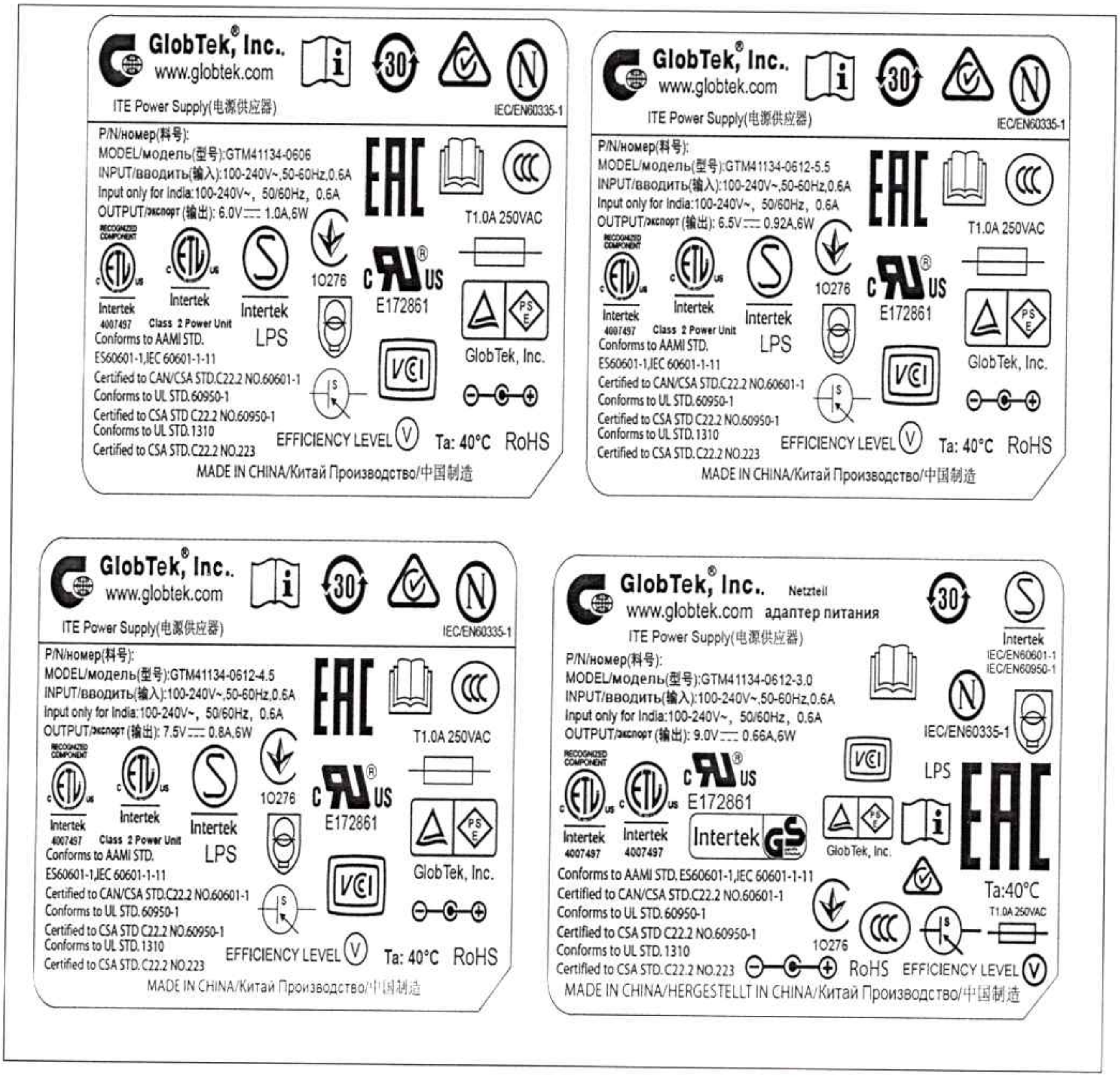
Copy of Trademark:

GlobTek, Inc.

Copy of marking label:

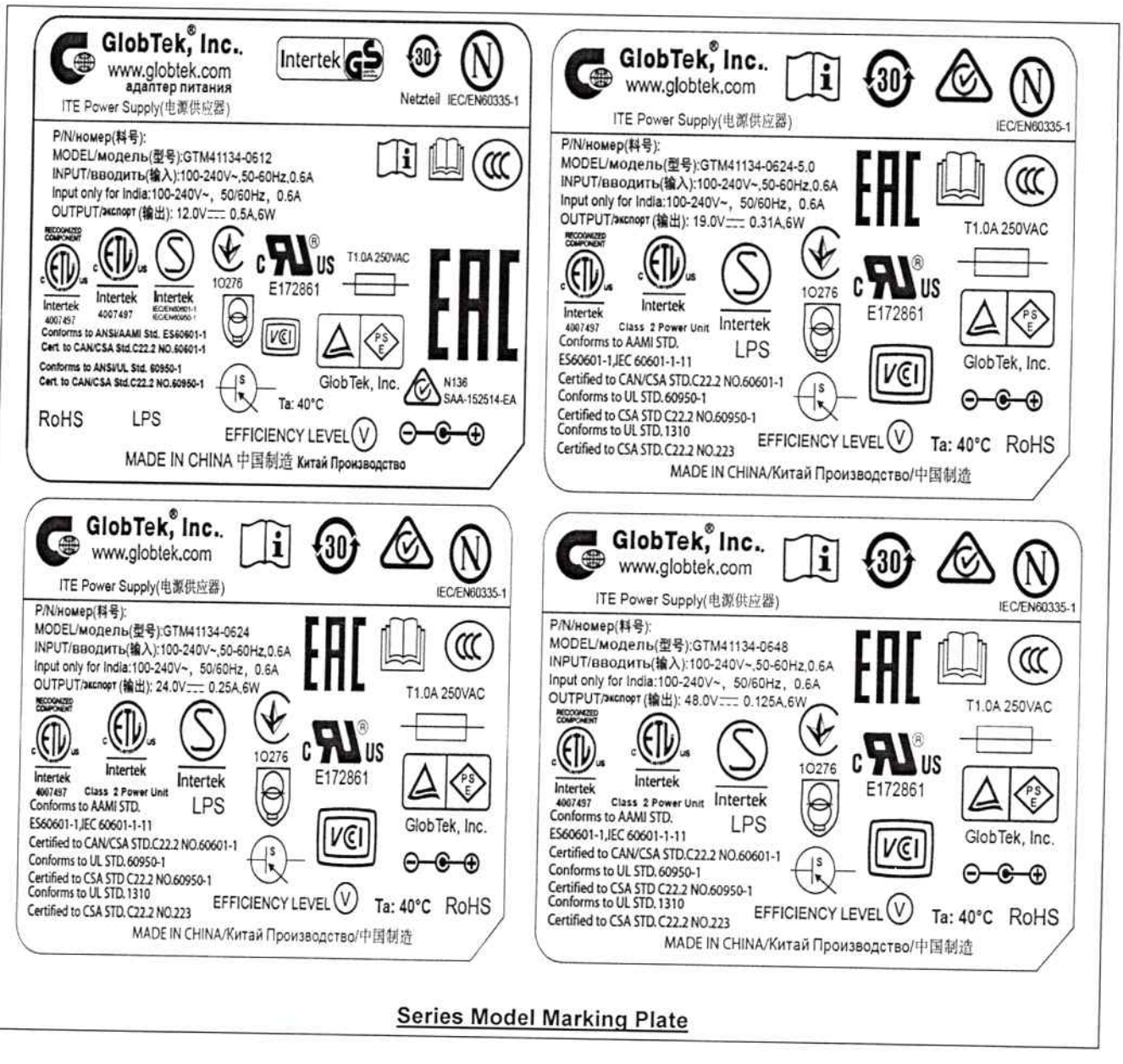


Lead Model Marking Plate



Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory



Series Model Marking Plate

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

List of Attachments

Attachment No.	Attachment Description	No. of pages in Attachment
Attachment – 1	Photo Document	02 pages (118-119)

General remarks:

The test results presented in this report relate only to the object tested.

This report shall not be reproduced, except in full, without the written approval of the issuing testing laboratory.

Possible test case verdicts:

- test case does not apply to the test object..... : N/A
- test object does meet the requirement..... : P (Pass)
- test object does not meet the requirement ..... : F (Fail)

Testing ..... :

Date of receipt of test item..... : 16.04.2021

Date(s) of performance of tests..... : 16.04.2021 to 14.05.2021

Laboratory conditions ..... :

Ambient Temperature ..... : (25±5)°C

Ambient Humidity..... : <70% RH

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Test item particulars ..... :	ITE Power Supply (Power Adaptor for IT Equipment)
Equipment mobility ..... :	☒ movable ☐ hand-held ☒ transportable ☐ stationary ☐ for building-in ☒ direct plug-in
Connection to the mains..... :	☒ pluggable equipment [X] 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%
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) ..... :	16 A (for India)
Pollution degree (PD) ..... :	☐ PD 1 ☒ PD 2 ☐ PD 3
IP protection class ..... :	IPX0
Altitude during operation (m) ..... :	Up to 5000
Altitude of test laboratory (m) ..... :	< 1000
Mass of equipment (kg) ..... :	0.10 Kg (Approx.)

Abbreviations that may be used throughout this test report:

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

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

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

General product information:

1) Application details / Description of the product:

The Equipment under tested is Class II ITE Power Supply (Power Adaptor for IT Equipment)

Lead Model: GTM41134-0606-1.0

Series Model: GTM41134-0606-0.8, GTM41134-0606, GTM41134-0612-5.5,GTM41134-0612-4.5, GTM41134-0612-3.0, GTM41134-0612, GTM41134-0624-5.0,GTM41134-0624, GTM41134-0648

Lead Model: Rating: Input:100-240Vac, 50/60Hz, 0.6A
Output: 5.0V ⎓ 1.2A, 6.0W

Series Model: See copy of marking plate

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

2) Similarities & Differences between the models:

Similarities: Same rated input voltage
Same class of construction
Same mains PCB design layout and transformer

Differences:

Model	Output Voltage (Vdc)	**Output Current(A)**	**Output Power(W)**
GTM41134-0606-1.0	**5.0**	**1.2**	**6.0**
GTM41134-0606-0.8	5.2	1.15	6.0
GTM41134-0606	6.0	1.0	6.0
GTM41134-0612-5.5	6.5	0.92	6.0
GTM41134-0612-4.5	7.5	0.8	6.0
GTM41134-0612-3.0	9.0	0.66	6.0
GTM41134-0612	12.0	0.5	6.0
GTM41134-0624-5.0	19.0	0.31	6.0
GTM41134-0624	24.0	0.25	6.0
GTM41134-0648	48.0	0.125	6.0

Model No. tested with-in the family series: GTM41134-0606-1.0

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.

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Tests relating to General Requirements

EL 2100 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
1.5	Components*	EL 2100-00	Verification of approvals 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 components used and the approval certificates submitted [Please see the table 1.5.1	P
	Components and subassemblies approved for IEC 62368-1 can be considered as complying with this standard		Components and subassemblies that comply with IEC 62368-1 are acceptable as part of an equipment covered by this standard without further evaluation other than to give consideration to the appropriate use of the component or subassembly in the end-product	P
1.5.2	Evaluation and testing of components	EL 2100-02	Components, which are certified for IEC and /or national standards are checked for correct applications and use in accordance with its rating (See table 1.5.1)	P
1.5.3	Thermal controls	EL 2100-03	No thermal controls	N/A
1.5.4	Transformers	EL 2100-04	See annex C	P
1.5.5	Interconnecting cables*	EL 2100-05	No cable used	N/A
1.5.6	Capacitors bridging insulation *	EL 2100-06	Certified Capacitor used (See table 1.5.1)	P
1.5.7	Resistors bridging insulation	EL 2100-07	See below	N/A
1.5.7.1	Resistors bridging functional, basic or supplementary insulation*	EL 2100-08	No such construction used	N/A
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits	EL 2100-09	As above	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	As above	N/A
1.5.8	Components in equipment for IT power distribution systems*	EL 2100-11	Not for IT power distribution systems	N/A
1.5.9	Surge suppressors	EL 2100-12	No such component used	N/A
1.5.9.1	General*	EL 2100-13	As above	N/A
1.5.9.2	Protection of VDRs*	EL 2100-14	As above	N/A
1.5.9.3	Bridging of functional insulation by a VDR*	EL 2100-15	As above	N/A
1.5.9.4	Bridging of basic insulation by a VDR*	EL 2100-16	As above	N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR*	EL 2100-17	As above	N/A

*- Total number of Requirements to be observed / inspected =10
Total No of applicable Requirement =02
No of Requirements for which the sample passed =02

Total number of tests to be conducted =08
Total No of applicable Tests =03
No. of tests for which the sample passed =03

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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 system considered	P
1.6.2	Input current	EL 2101-02	See table 1.6.2	P
1.6.3	Voltage limit of hand-held equipment*	EL 2101-03	Not a hand-held equipment	N/A
1.6.4	Neutral conductor *	EL 2101-04	Class II equipment. No exclusive terminal for neutral. Double or Reinforced insulation for rated voltage between accessible parts and primary phase	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/ ~~failing~~ in the requirement tested.

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	Complies	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	No multiple mains supply	N/A
	Symbol for nature of supply, for d.c. only*:	EL 2102-04	No DC supply	N/A
	Rated frequency or rated frequency range (Hz) *:	EL 2102-05	50/60 Hz	P
	Rated current (mA or A)*:	EL 2102-06	0.6A	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	Trade mark: GlobTek, Inc.®	P
	Model identification or type reference *:	EL 2102-09	GTM41134-0606-1.0	P
	Symbol for Class II equipment only* :	EL 2102-10	Marked on the marking plate	P
	Other markings and symbols*:	EL 2102-11	Other markings and symbols does not give rise to misunderstanding	P
1.7.1.3	Use of graphical symbols*	EL 2102-12	Graphical symbol marked	P
1.7.2	Safety instructions and marking*	EL 2102-13	Sufficient information provided to the user in user manual	P
1.7.2.1	General	EL 2102-14	Complies	P
1.7.2.2	Disconnect devices*	EL 2102-15	Plug is a part of direct plug in equipment considered as disconnect devices	P
1.7.2.3	Overcurrent protective devices*	EL 2102-16	Pluggable equipment type A	N/A
1.7.2.4	IT power distribution systems*	EL 2102-17	Not for IT power distribution systems	N/A

Kailtech Test & Research ktrc INDORE

1.7.2.5	Operator access with a tool*	EL 2102-18	No tool is required to operate	N/A
1.7.2.6	Ozone*	EL 2102-19	Ozone not produced	N/A
1.7.3	Short duty cycles*	EL 2102-20	Continuous operation	N/A
1.7.4	Supply voltage adjustment*	EL 2102-21	No Supply voltage adjustment	N/A
1.7.5	Power outlets on the equipment*	EL 2102-22	No standard Power outlets	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) Fuse(s) shall clearly and adequately marked with fuse number and rating*.	EL 2102-23	Marked	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	Direct Pluggable 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	See below	N/A
1.7.8.1	Identification, location and marking *:	EL 2102-29	No such controls	N/A
1.7.8.2	Colours*	EL 2102-30	No such colours used	N/A
1.7.8.3	Symbols according to IEC 60417*:	EL 2102-31	No such equipment	N/A
1.7.8.4	Markings using figures* :	EL 2102-32	No such figures used	N/A
1.7.9	Isolation of multiple power sources*	EL 2102-33	No multiple power sources	N/A
1.7.10	Thermostats and other regulating devices*	EL 2102-34	No thermostat or other regulating devices used	N/A
1.7.11	Durability	EL 2102-35	Marking is legible and durable after test	P
1.7.12	Removable parts*	EL 2102-36	No Marking placed on removable parts	N/A

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

1.7.13	Replaceable batteries*	EL 2102-37	No battery used	N/A
	Language(s)		As above	N/A
1.7.14	Equipment for restricted access locations*	EL 2102-38	Equipment is not intended for 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/~~failing~~ in the requirement tested.

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	See below	P
2.1.1	Protection in operator access areas*	EL 2103-01	Complies	P
2.1.1.1	Access to energized parts	EL 2103-02	See below	P
	Test by inspection :		No hazardous parts are accessible to user	P
	Test with test finger (Figure 2A)		No access to any parts at hazardous voltage with the test finger	P
	Test with test pin (Figure 2B):		The test pin cannot touch bare hazardous parts	P
	Test with test probe (Figure 2C)		No TNV circuits	N/A
2.1.1.2	Battery compartments *	EL 2103-03	No battery compartments used	N/A
2.1.1.3	Access to ELV wiring	EL 2103-04	No ELV wiring	N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		As above	N/A
2.1.1.4	Access to hazardous voltage circuit wiring	EL 2103-05	Not accessible to operator	P
2.1.1.5	Energy hazards :	EL 2103-06	No hazardous energy level (see table 2.1.1.5)	P
2.1.1.6	Manual controls	EL 2103-07	No such controls	N/A
2.1.1.7	Discharge of capacitors in equipment		Complies	P
	Measured voltage (V); time-constant (s):	EL 2103-08	See table 2.1.1.7	P
2.1.1.8	Energy hazards – d.c. mains supply		No dc mains supply	N/A

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

	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 such device	N/A
2.1.2	Protection in service access areas	EL 2103-12	Unintentional contact with hazardous bare parts during service operation is not likely	P
2.1.3	Protection in restricted access locations	EL 2103-13	Not for restricted access location	N/A

*-Total number of requirements to be observed/ inspected = 03
Total No. of applicable requirement = 02
No. of requirement for which the sample passed = 02

Total number of tests to be conducted = 11
Total number of applicable tests = 05
No. of tests for which the sample passed = 05

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

……………………………………………………………
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	In compliance	P
2.2.2	Voltages under normal conditions	EL 2104-01	Within SELV limit under normal operating conditions (see table 2.2.2)	P
2.2.3	Voltages under fault conditions	EL 2104-02	Within SELV limit under FAULT conditions (see table 2.2.3)	P
2.2.4	Connection of SELV circuits to other circuits* :	EL 2104-03	SELV to SELV connection only	P

*-Total number of requirements to be observed/ inspected = 02
Total No. of applicable requirement = 02
No. of requirement for which the sample passed = 02

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

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

....

(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Tests relating to Electrical Safety

EL 2105 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.3	TNV circuits*	EL 2105-00	No TNV Circuits	N/A
2.3.1	Type of TNV circuits: TNV-1 / TNV-2 / TNV-3	EL 2105-01	As Above	N/A
	a) Limits of TNV-1:	EL 2105-02	As Above	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	As Above	N/A
2.3.2	Separation from other circuits and from accessible parts*	EL 2105-04	As Above	N/A
2.3.2.1	General Requirements	EL 2105-05	As Above	N/A
2.3.2.2	Protection by basic insulation	EL 2105-06	As Above	N/A
2.3.2.3	Protection by earthing	EL 2105-07	As Above	N/A
2.3.2.4	Protection by other constructions :	EL 2105-08	As Above	N/A
2.3.3	Separation from hazardous voltages	EL 2105-09	As Above	N/A
2.3.4	Connection of TNV circuits to other circuits	EL 2105-10	As Above	N/A
2.3.5	Test for operating voltages generated externally	EL 2105-11	As Above	N/A

*-Total number of requirements to be observed/ inspected = 02
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

Total number of tests to be conducted = 09
Total number of applicable tests = 00
No. of tests for which the sample passed = 00

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

....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

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	No limited current circuits	N/A
2.4.1	General requirements *	EL 2106-01	As Above	N/A
2.4.2	Limit values	EL 2106-02	As Above	N/A
2.4.3	Connection of limited current circuits to other circuits*	EL 2106-03	As Above	N/A

*-Total number of requirements to be observed/ inspected = 03
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

Total number of tests to be conducted = 01
Total number of applicable tests = 00
No. of tests for which the sample passed = 00

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

....

(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	Output is limited by regulating network	P
	d) Overcurrent protective device limited output	EL 2107-04	No such part used	N/A
	Max. output voltage (V), Max. output current (A), Max. apparent power (VA)	EL 2107-05	See table 2.5	P
	Current rating of overcurrent protective device (A)	EL 2107-06	No such part used	N/A

*-Total number of requirements to be observed/ inspected = 01
Total No. of applicable requirement = 01
No. of requirement for which the sample passed = 01

Total number of tests to be conducted = 06
Total number of applicable tests = 02
No. of tests for which the sample passed = 02

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

……………………………………………………
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	N/A
2.6.1	Protective earthing	EL 2108-01	As Above	N/A
2.6.2	Functional earthing : The Functional earthing either separated from hazardous voltages by double or reinforced insulation or by protectively earthed screen or conductive part separated by at least basic insulation, or safely connected to Protective Bonding Conductor.*	EL 2108-02	As Above	N/A
	Use of symbol for functional earthing:*	EL 2108-03	As Above	N/A
2.6.3	Protective earthing and protective bonding conductors*	EL 2108-04	As Above	N/A
2.6.3.2	Size of protective earthing conductors	EL 2108-05	As Above	N/A
	Rated current (A), cross-sectional area (mm2),		As Above	N/A
2.6.3.3	Size of protective bonding conductors	EL 2108-06	As Above	N/A
	Protective current Rating (A), cross-sectional area (mm2)		As Above	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	As Above	N/A
2.6.3.5	Colour of insulation*:	EL 2108-08	As Above	N/A
2.6.4	Terminals		As Above	N/A
2.6.4.2	Protective earthing and bonding terminals : Rated current(A), Type, Nominal thread diameter (mm)	EL 2108-09	As Above	N/A

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors*	EL 2108-10	As Above	N/A
2.6.5	Integrity of protective earthing*		As Above	N/A
2.6.5.1	Interconnection of equipment*	EL 2108-11	As Above	N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors*	EL 2108-12	As Above	N/A
2.6.5.3	Disconnection of protective earth*	EL 2108-13	As Above	N/A
2.6.5.4	Parts that can be removed by an operator*	EL 2108-14	As Above	N/A
2.6.5.5	Parts removed during servicing*	EL 2108-15	As Above	N/A
2.6.5.6	Corrosion resistance*	EL 2108-16	As Above	N/A
2.6.5.7	Screws for protective bonding*	EL 2108-17	As Above	N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system*	EL 2108-18	As Above	N/A

*-Total number of requirements to be observed/ inspected = 14
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

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

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

……………………………………………………
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

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	A built 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	See below	P
2.7.3	Short-circuit backup protection	EL 2109-03	Pluggable equipment type A, the building installation is considered as providing short circuit protection	P
2.7.4	Number and location of protective devices :	EL 2109-04	Overcurrent protection by fusing resister (F1,F2)	P
2.7.5	Protection by several devices*	EL 2109-05	Protection provided by two fusing resister	P
2.7.6	Warning to service personnel* :	EL 2109-06	No such wiring required	N/A

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

*-Total number of requirements to be observed/ inspected	= 03
Total No. of applicable requirement	= 02
No. of requirement for which the sample passed	= 02

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

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

……………………………………………………………

(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Tests relating to Electrical Safety

EL 2110 – V1.4

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

*-Total number of requirements to be observed/ inspected = 03
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

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

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

....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	See below	P
2.9.1	Properties of insulating materials*	EL 2111-01	Natural rubber ,materials containing asbestos and hygroscopic materials are not used	P
2.9.2	Humidity conditioning	EL 2111-02	See below	P
	Relative Humidity : 93 ±3 %, Temperature: t at 40 ± 2°C Duration : 120 hours		Relative humidity : 93% Temperature : 40°C Tested for 120 hours	P
2.9.3	Grade of insulation*	EL 2111-03	Primary and secondary reinforced insulation Others: functional insulation	P
2.9.4	Separation from hazardous voltages*	EL 2111-04	See below	P
	Method(s) used		Method 1a used	P

*-Total number of requirements to be observed/ inspected	= 04
Total No. of applicable requirement	= 04
No. of requirement for which the sample passed	= 04
Total number of tests to be conducted	=01
Total number 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.

....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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 degrees 2	P
2.10.1.3	Reduced values for functional insulation	EL 2112-03	Functional insulation complies with the requirements of Cl.No.5.3.4 C)	P
2.10.1.4	Intervening unconnected conductive parts	EL 2112-04	No such construction	N/A
2.10.1.5	Insulation with varying dimensions	EL 2112-05	No such transformer	N/A
2.10.1.6	Special separation requirements	EL 2112-06	No TNV circuit used	N/A
2.10.1.7	Insulation in circuits generating starting pulses	EL 2112-07	No such circuits	N/A
2.10.2	Determination of working voltage	EL 2112-08	See table 2.10.2	P
2.10.2.2	RMS working voltage	EL 2112-09	See table 2.10.2	P
2.10.2.3	Peak working voltage	EL 2112-10	See table 2.10.2	P
2.10.3	Clearances	EL 2112-11	See table 2.10.3 and 2.10.4	P
2.10.3.1	General	EL 2112-12	See below	P
2.10.3.2	Mains transient voltages*		See below	P
	a) AC mains supply * :	EL 2112-13	Over voltage category II ,mains Transient voltages 2500V peak	P
	b) Earthed d.c. mains supplies*	EL 2112-14	No d.c. mains supply	N/A
	c) Unearthed d.c. mains supplies* :	EL 2112-15	No d.c. mains supply	N/A
	d) Battery operation* :	EL 2112-16	No battery used	N/A
2.10.3.3	Clearances in primary circuits	EL 2112-17	See table 2.10.3 and 2.10.4	P
2.10.3.4	Clearances in secondary circuits	EL 2112-18	Complies with Cl.No.5.3.4 (c)	P
2.10.3.5	Clearances in circuits having starting pulses	EL 2112-19	No such circuits	N/A

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

2.10.3.6	Transients from a.c. mains supply :	EL 2112-20	Considered mains Transient voltages 2500V peak	P
2.10.3.7	Transients from d.c. mains supply :	EL 2112-21	No. d.c. mains supply	N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems ....:	EL 2112-22	No telecommunication networks and cable distribution systems	N/A
2.10.3.9	Measurement of transient voltages		Not measured, only transient level considered	N/A
	a) Transients from a mains supply	EL 2112-23	As above	N/A
	For an a.c. mains supply		As above	N/A
	For a d.c. mains supply		No. d.c. mains supply	N/A
	b) Transients from a telecommunication network	EL 2112-24	No telecommunication networks	N/A
2.10.4	Creepage distances*	EL 2112-25	See table 2.10.3 and 2.10.4	P
2.10.4.1	General	EL 2112-26	See below	P
2.10.4.2	Material group and comparative tracking index : CTI tests*	EL 2112-27	Material group III b assumed	P
2.10.4.3	Minimum creepage distances	EL 2112-28	See table 2.10.3 and 2.10.4	P
2.10.5	Solid insulation	EL 2112-29	See below	P
2.10.5.1	General	EL 2112-30	considered	P
2.10.5.2	Distances through insulation	EL 2112-31	See table 2.10.5	P
2.10.5.3	Insulating compound as solid insulation	EL 2112-32	No such components used	N/A
2.10.5.4	Semiconductor devices	EL 2112-33	No such construction	N/A
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	No such construction	N/A

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

2.10.5.9	Thin sheet material – standard test procedure	EL 2112-38	Alternate method used	N/A
	Electric strength test as per Cl.5.2.2		As above	N/A
2.10.5.10	Thin sheet material – alternative test procedure	EL 2112-39	Complies	P
	Electric strength test as per Cl.5.2.2		See table 5.2.2	P
2.10.5.11	Insulation in wound components	EL 2112-40	Certified TIW used	P
2.10.5.12	Wire in wound components		As above	P
	If Peak Working voltage >71 V		See table 2.10.2	P
	a) Basic insulation not under stress	EL 2112-41	Complies	P
	b) Basic, supplementary, reinforced insulation	EL 2112-42	Reinforced insulation used	P
	c) Compliance with Annex U	EL 2112-43	Certified wire used See table 1.5.1	P
	d) Where two winding wires in contact inside wound component; angle between 45° and 90°	EL 2112-44	Adequate construction, insulation tape provided	P
2.10.5.13	Wire with solvent-based enamel in wound components		No such wound components 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 wound components	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

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

2.10.6.1	Uncoated printed boards	EL 2112-49	See table 2.10.3 and 2.10.4	P
2.10.6.2	Coated printed boards	EL 2112-50	Not used	N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board	EL 2112-51	No such construction	N/A
2.10.6.4	Insulation between conductors on different surfaces of a printed board*		As above	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 external terminations used	N/A
2.10.8	Tests on coated printed boards and coated components		Uncoated printed boards used	N/A
2.10.8.1	Sample preparation and preliminary inspection*	EL 2112-55	As above	N/A
2.10.8.2	Thermal conditioning	EL 2112-56	As above	N/A
2.10.8.3	Electric strength test	EL 2112-57	As above	N/A
2.10.8.4	Abrasion resistance test	EL 2112-58	As above	N/A
2.10.9	Thermal cycling	EL 2112-59	As above	N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound	EL 2112-60	Pollution degree 2	N/A
2.10.11	Tests for semiconductor devices and cemented joints	EL 2112-61	No such construction used	N/A
2.10.12	Enclosed and sealed parts	EL 2112-62	No enclosed and sealed parts	N/A

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

*-Total number of requirements to be observed/ inspected	= 10
Total No. of applicable requirement	= 06
No. of requirement for which the sample passed	= 06
Total number of tests to be conducted	= 53
Total number of applicable tests	= 23
No. of tests for which the sample passed	= 23

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

....

(Approving Authority)

Kailtech Test & Research Centre P. Ltd. ktrc INDORE

Tests relating to Wiring

EL 2113 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
3.0	Wiring, connections and supply*	EL 2113-00	See below	P
3.1.1	Current rating and overcurrent protection	EL 2113-01	Adequate cross sectional areas on internal wiring	P
3.1.2	Protection against mechanical damage*	EL 2113-02	Wire ways are smooth and free from sharp edges	P
3.1.3	Securing of internal wiring*	EL 2113-03	The wire are positioned in such a manner that prevents excessive strain ,loosening of terminal connection and damage of conductor insulation	P
3.1.4	Insulation of conductors	EL 2113-04	Insulation on internal conductors is considered to be of adequate quality and suitable for the application	P
3.1.5	Beads and ceramic insulators	EL 2113-05	No beads and ceramic insulators	N/A
3.1.6	Screws for electrical contact pressure*	EL 2113-06	No such screw used	N/A
3.1.7	Insulating materials in electrical connections*	EL 2113-07	Complies	P
3.1.8	Self-tapping and spaced thread screws*	EL 2113-08	Self – tapping and spaced thread screws not used	N/A
3.1.9	Termination of conductors : 10 N pull test	EL 2113-09	Conductors are reliably secured	P
3.1.10	Sleeving on wiring*	EL 2113-10	No such construction used	N/A

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

*-Total number of requirements to be observed/ inspected	= 07
Total No. of applicable requirement	= 04
No. of requirement for which the sample passed	= 04

Total number of tests to be conducted	= 04
Total number of applicable tests	= 03
No. of tests for which the sample passed	= 03

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

....

(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	Complies	P
3.2.1	Means of connection		See below	P
3.2.1.1	Connection to an a.c. mains supply*	EL 2114-01	The equipment is intended for direct plug in	P
3.2.1.2	Connection to a d.c. mains supply*	EL 2114-02	No d.c. mains supply	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	No permanently connected equipment	N/A
3.2.4	Appliance inlets: Are so Located that parts at hazardous voltage are not accessible during insertion or removal of the connector, connector can be inserted without difficulty and after insertion of the connector, the equipment is not supported by the connector for any position of normal use on a flat surface (appliance inlets complying with IEC 60309 or IEC 60320 considered to comply with this requirement.	EL 2114-05	Appliance inlet is not used	N/A
3.2.5	Power supply cords		Direct plug- in equipment	N/A
3.2.5.1	AC power supply cords*	EL 2114-06	As above	N/A
	Rated current (A), cross-sectional area (mm^2), AWG		As above	N/A
3.2.5.2	DC power supply cords*	EL 2114-07	No D.C mains supply	N/A
3.2.6	Cord anchorages and strain relief		As above	N/A
	Mass of the equipment: Pull Force (N):	EL 2114-08	As above	N/A
	b) Longitudinal displacement: 2 mm (Max)	EL 2114-09	As above	N/A

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

3.2.7	Protection against mechanical damage	EL 2114-10	Direct plug- in equipment	N/A
3.2.8	Cord guards		Direct plug- in equipment	N/A
	a) Diameter or minor dimension D (mm) : Test mass (g) :	EL 2114-11	As above	N/A
	b) Radius of curvature of cord : 1.5 D (Min)	EL 2114-12	As above	N/A
3.2.9	Supply wiring space	EL 2114-13	Direct plug- in equipment	N/A

*-Total number of requirements to be observed/ inspected = 05
Total No. of applicable requirement = 02
No. of requirement for which the sample passed = 02

Total number of tests to be conducted = 09
Total number of applicable tests = 00
No. of tests for which the sample passed = 00

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

....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

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	Direct plug-in equipment	N/A
3.3.1	Wiring terminals*	EL 2115-01	As above	N/A
3.3.2	Connection of non-detachable power supply cords	EL 2115-02	As above	N/A
3.3.3	Screw terminals*	EL 2115-03	As above	N/A
3.3.4	Conductor sizes to be connected	EL 2115-04	As above	N/A
	Rated current (A), cord/cable type, cross-sectional area (mm2)		As above	N/A
3.3.5	Wiring terminal sizes	EL 2115-05	As above	N/A
	Rated current (A), type, nominal thread diameter (mm)		As above	N/A
3.3.6	Wiring terminal design	EL 2115-06	As above	N/A
3.3.7	Grouping of wiring terminals*	EL 2115-07	As above	N/A
3.3.8	Stranded wire	EL 2115-08	As above	N/A

*-Total number of requirements to be observed/ inspected = 04
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

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

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

....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

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	Plug is a part of direct plug in equipment considered as disconnected device	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	Considered	P
3.4.2	Disconnect devices*	EL 2116-02	Plug used as disconnect device	P
3.4.3	Permanently connected equipment*	EL 2116-03	No permanently connected equipment	N/A
3.4.4	Parts which remain energized*	EL 2116-04	No such parts	N/A
3.4.5	Switches in flexible cords*	EL 2116-05	No switches in flexible cords	N/A
3.4.6	Number of poles – single-phase and d.c. equipment*	EL 2116-06	Disconnected device disconnects both poles simultaneously	P
3.4.7	Number of poles – three-phase equipment*	EL 2116-07	Single phase equipment	N/A
3.4.8	Switches as disconnect devices*	EL 2116-08	No such switches used	N/A
3.4.9	Plugs as disconnect devices*	EL 2116-09	Plug is a part of direct plug in equipment considered as disconnected device	P
3.4.10	Interconnected equipment*	EL 2116-10	No Interconnected 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 requirement for which the sample passed = 04

Total number of tests to be conducted = 01
Total number 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.

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	Complies	P
3.5.1	General requirements*	EL 2117-01	See below	P
3.5.2	Types of interconnection circuits*	EL 2117-02	SELV-SELV connection only	P
3.5.3	ELV circuits as interconnection circuits *	EL 2117-03	No ELV circuits	N/A
3.5.4	Data ports for additional equipment	EL 2117-04	No such data port	N/A

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

Total number of tests to be conducted = 01
Total number of applicable tests = 00
No. of tests for which the sample passed = 00

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	See below	N/A
4.1	Stability	EL 2118-01	Direct Plug-in equipment	N/A
	a) A unit having a mass of 7 kg or more shall not fall over when tilted to an angle of 10° from its normal upright position. Alternatively, the unit is placed in its intended position of use on a plane, inclined at an angle of 10° to the horizontal, and then rotated slowly through an angle of 360° about its normal vertical axis.	EL 2118-02	Mass <7kg	N/A
	b) A floor-standing unit having a mass of 25 kg or more shall not fall over when a force equal to 20 % of the weight of the unit, but not more than 250 N, is applied in any direction except upwards, at a height not exceeding 2 m from the floor.	EL 2118-03	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

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

*-Total number of requirements to be observed/ inspected	= 01
Total No. of applicable requirement	= 00
No. of requirement for which the sample passed	= 00
Total number of tests to be conducted	= 04
Total number of applicable tests	= 00
No. of tests for which the sample passed	= 00

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

....

(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	Complies	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	250N applied to outer enclosure Result: No damage, no hazards	P
4.2.5	Impact test	EL 2119-05	Direct plug in equipment	N/A
	a) Fall test as per Fig. 4A	EL 2119-06	See above Cl.No.4.2.5	N/A
	b) Swing test as per Fig. 4A	EL 2119-07	See above Cl.No.4.2.5	N/A
4.2.6	Drop test; height (mm) :	EL 2119-08	Dropped three times from a height of 1000mm. Result: No damage, no hazards	P
4.2.7	Stress relief test	EL 2119-09	Test performed at 70°C for 7 hours, No shrinkage , distortion or loosing of enclosure parts was noticeable on the unit	P
4.2.8	Cathode Ray Tubes	EL 2119-10	No cathode Ray Tubes	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 requirement for which the sample passed = 00

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

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

....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	All edges and corners accessible to operator are smooth	P
4.3.2	Handles and manual controls; force (N)	EL 2120-02	Handles and manual controls not used	N/A
4.3.3	Adjustable controls	EL 2120-03	No such controls used	N/A
4.3.4	Securing of parts	EL 2120-04	Internal parts are well secured against mechanical stresses occurring in normal use	P
4.3.5	Connections by Plugs and Sockets*	EL 2120-05	Considered , No hazards made during connection	P
4.3.6	Direct plug-in equipment	EL 2120-06	See below	P
	Torque	EL 2120-07	0.04Nm	P
	Compliance with the relevant mains plug standard	EL 2120-08	Plug dimension complies with IS 1293 (See Table 1.5.2/4.3.6)	P
4.3.7	Heating elements in earthed equipment*	EL 2120-09	No Heating elements in equipment	N/A
4.3.8	Batteries Portable secondary sealed cells and batteries (other than button) containing alkaline or other non-acid electrolyte shall comply with IEC 62133		No battery used	N/A
	a) Overcharging of a rechargeable battery	EL 2120-10	As above	N/A
	b) Unintentional charging of a non-rechargeable battery	EL 2120-11	As above	N/A
	c) Reverse charging of a rechargeable battery	EL 2120-12	As above	N/A
	d) Excessive discharging rate for any battery	EL 2120-13	As above	N/A
	e) Electric strength as per Cl.5.3.9.2	EL 2120-14	As above	N/A

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

4.3.9	Oil & grease*	EL 2120-15	No oil and grease	N/A
4.3.10	Dust, powders, liquids and gases	EL 2120-16	Equipment neither use nor produce them	N/A
4.3.11	Containers for liquids or gases	EL 2120-17	No containers for liquids or gases	N/A
4.3.12	Flammable liquids	EL 2120-18	No Flammable liquids	N/A
4.3.13	Radiation		See below	N/A
4.3.13.2	Ionizing radiation	EL 2120-19	No such radiation used	N/A
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	EL 2120-20	No UV radiation	N/A
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 laser, No 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 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 requirement for which the sample passed = 03

Total number of tests to be conducted = 19
Total number of applicable tests = 04
No. of tests for which the sample passed = 04

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

....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

Tests relating to Mechanical Properties

EL 2121 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4.4	Protection against hazardous moving parts	EL 2121-00	No hazardous moving parts within the equipment	N/A
4.4.1	General	EL 2121-01	As above	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	As above	N/A
4.4.4	Protection in service access areas*	EL 2121-04	As above	N/A
4.4.5	Protection against moving fan blades	EL 2121-05	As above	N/A
4.4.5.1	General*	EL 2121-06	As above	N/A
	Not considered likely to cause pain or injury. A).:	EL 2121-07	As above	N/A
	Is considered likely to cause pain, not injury. B)	EL 2121-08	As above	N/A
	Considered likely to cause injury. C).....:	EL 2121-09	As above	N/A
4.4.5.2	Protection for users*	EL 2121-10	As above	N/A
	Use of symbol or warning*	EL 2121-11	As above	N/A
4.4.5.3	Protection for service persons*	EL 2121-12	As above	N/A
	Use of symbol or warning *	EL 2121-13	As above	N/A

*-Total number of requirements to be observed/ inspected = 07
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

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

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	Complies	P
4.5.1	General	EL 2122-01	See below	P
4.5.2	Temperature tests	EL 2122-02	See table 4.5	P
4.5.3	Temperature limits for materials*	EL 2122-03	See table 4.5	P
4.5.4	Touch temperature limits*	EL 2122-04	See table 4.5	P
4.5.5	Resistance to abnormal heat	EL 2122-05	See table 4.5.5	P

*-Total number of requirements to be observed/ inspected = 03
Total No. of applicable requirement = 03
No. of requirement for which the sample passed =03

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

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

....

(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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

Kailtech Test & Research ktrc INDORE Centre Pvt. Ltd.

	d) Remove and allow the sample to come to any convenient temperature between 20 °C and 30 °C for 8 h;	EL 2123-12	As above	N/A
	e) Place the sample in a cabinet at 91 % to 95 % relative humidity for 72 h;	EL 2123-13	As above	N/A
	f) Remove the sample and leave it at any convenient temperature between 20 °C and 30 °C for 1 h;	EL 2123-14	As above	N/A
	g) Place the sample in an oven at the temperature used for the temperature conditioning for 4 h;	EL 2123-15	As above	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	As above	N/A
	i) The sample is then immediately subjected to the tests of Cl.4.2 as applicable.	EL 2123-17	As above	N/A

*-Total number of requirements to be observed/ inspected = 02
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

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

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

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	Complies	P
4.7.1	Reducing the risk of ignition and spread of flame		See below	P
	Method 1, selection and application of components wiring and materials	EL 2124-01	Method 1used (See table 1.5.1)	P
	Method 2, application of all of simulated fault condition tests	EL 2124-02	Method 2 not used	N/A
4.7.2	Conditions for a fire enclosure*		See below	P
4.7.2.1	Parts requiring a fire enclosure*	EL 2124-03	All parts covered in fire enclosure	P
4.7.2.2	Parts not requiring a fire enclosure	EL 2124-04	No such parts	N/A
4.7.3	Materials*	EL 2124-05	See below	P
4.7.3.1	General*	EL 2124-06	Components and materials have adequate flammability classification	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	See table 1.5.1	P
4.7.3.2	Materials for fire enclosures		See below	P

	a) For MOVABLE EQUIPMENT having a total mass not exceeding 18 kg, the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of V-1 CLASS MATERIAL or shall pass the test of Clause A.2.	EL 2124-10	Certified material used (see table 1.5.1)	P
	b) For MOVABLE EQUIPMENT having a total mass exceeding 18 kg and for all STATIONARY EQUIPMENT, the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of 5VB CLASS MATERIAL or shall pass the test of Clause A.1.	EL 2124-11	Mass of the equipment <18kg	N/A
	c) Materials for components that fill an opening in a FIRE ENCLOSURE, and that are intended to be mounted in this opening shall : be of V-1 CLASS MATERIAL; or pass the tests of Clause A.2; or comply with the flammability requirements of the relevant IEC component standard	EL 2124-12	No such openings	N/A
	d) Plastic materials of a FIRE ENCLOSURE shall be located more than 13 mm through air from arcing parts such as unenclosed commutators and unenclosed switch contacts.	EL 2124-13	No such arcing parts	N/A
	e) Plastic materials of a FIRE ENCLOSURE located less than 13mm through air from non-arcing parts which, under any condition of normal or abnormal operation,could attain a temperature sufficient to ignite the material, shall be capable of passing the test of IEC 60695-2-20. The average time to ignition of the samples shall be not less than 15sec. If the sample melts through without igniting, the time at which this occurs is not considered to be the time to ignition.	EL 2124-14	No such construction used	N/A

Kailtech Test & Research ktrc INDORE Centre Pvt. Ltd.

4.7.3.3	Materials for components and other parts outside fire enclosures *		No parts outside fire enclosure	N/A
	a) Materials shall be of : – HB75 CLASS MATERIAL if the thinnest significant thickness of this material is < 3mm, or – HB40 CLASS MATERIAL if the thinnest significant thickness of this material is ≥ 3mm, or – HBF CLASS FOAMED MAERIAL.*	EL 2124-15	As above	N/A
	b) Connectors shall comply with one of the following: – be made of V-2 CLASS MATERIAL; or – pass the tests of Clause A.2; or – comply with the flammability requirements of the relevant IEC component standard; or	EL 2124-16	As above	N/A
	– 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).		As above	N/A
4.7.3.4	Materials for components and other parts inside fire enclosures		Certified material used (see table 1.5.1)	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	As above	P

	Requirements for voltage dependent resistors (VDR's) are in Annex Q.*	EL 2124-18	No such component used	N/A
4.7.3.5	Materials for air filter assemblies : Air filter assemblies shall be constructed of V-2 CLASS MATERIAL, or HF-2 CLASS FOAMED MATERIAL.	EL 2124-19	No air filter assemblies	N/A
4.7.3.6	Materials used in high-voltage components		No High – voltage components used	N/A
	a) High-voltage components operating at peak-to-peak voltages exceeding 4 kV shall either be of V-2 CLASS MATERIAL, or HF-2 CLASS FOAMED MATERIAL, or comply with 14.4 of IEC 60065 or pass the needle flame test according to IEC 60695-11-5.	EL 2124-20	As above	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	As above	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	As above	N/A
	Clause 8 – Conditioning	EL 2124-23	As above	N/A
	Clause 11 – Evaluation of test results	EL 2124-24	As above	N/A

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

*-Total number of requirements to be observed/ inspected	= 07
Total No. of applicable requirement	= 05
No. of requirement for which the sample passed	= 05
Total number of tests to be conducted	= 18
Total number of applicable tests	= 04
No. of tests for which the sample passed	= 04

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

.....

(Approving Author

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	Complies	P
5.1	Touch current and protective conductor current*	EL 2125-01	Test conducted accordance with 5.1.2 to 5.1.6	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	The EUT has only Single mains connection	P
5.1.2.2	Redundant multiple connections to an a.c. mains supply*	EL 2125-04	No multiple connections	N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply	EL 2125-05	As above	N/A
5.1.3	Test circuit	EL 2125-06	As per figure 5A	P
5.1.4	Application of measuring instrument	EL 2125-07	Tested using figure D.1measurement of Annex D	P
5.1.5	Test procedure	EL 2125-08	Complies	P
5.1.6	Test measurements		See below	P
	a) r.m.s value of voltage, U2 measured using the instrument as per Fig. D.1 or r.m.s value of current measured using the instrument as per Fig. D.2 Alternatively, peak value of voltage, U2, is measured using the measuring instrument described in Clause D.1	EL 2125-09	See table 5.1.6	P
	b) Measured touch current (mA):	EL 2125-10	As above	P
	c) Calculated value of TOUCH CURRENT (mA) = U2 / 500	EL 2125-11	As above	P

Kailtech Test & Research ktrc INDORE Centre Pvt. Ltd.

	d) Measured protective conductor current(mA)	EL 2125-12	No such construction	N/A
	e) Max. protective conductor current =5% of Input current	EL 2125-13	No such equipment	N/A
5.1.7	Equipment with touch current exceeding 3.5 mA	EL 2125-14	Touch current does not exceed 3.5mA	N/A
5.1.7.1	General	EL 2125-15	pluggable equipment type A	N/A
5.1.7.2	Simultaneous multiple connections to the supply	EL 2125-16	Single supply connection	N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	EL 2125-17	No TNV circuit used	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system	EL 2125-18	As above	N/A
	Supply voltage (V)		As above	N/A
	Measured touch current (mA)		As above	N/A
	Max. allowed touch current (mA)		As above	N/A
5.1.8.2	Summation of touch currents from telecommunication networks	EL 2125-19	As above	N/A
	a) EUT with earthed telecommunication ports :		As above	N/A
	b) EUT whose telecommunication ports have no reference to protective earth		As above	N/A

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

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

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	Complies	P
5.2.1	General*	EL 2126-01	See table 5.2	P
5.2.2	Test procedure		See table 5.2	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	As above	P

*-Total number of requirements to be observed/ inspected : 02
Total No. of applicable requirement : 02
No. of requirement for which the sample passed : 02

Total number of tests to be conducted : 01
Total number 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.

.....
(Approving Authority)

Kailtech Testing Research Centre Pvt. Ltd. ktrc INDORE

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	Complies	P
5.3.1	Protection against overload and abnormal operation	EL 2127-01	See table 5.3	P
5.3.2	Motors	EL 2127-02	No Motors used	N/A
5.3.3	Transformers	EL 2127-03	See Annex C	P
5.3.4	Functional insulation:	EL 2127-04	Complies with cl.5.3.4(C)	P
5.3.5	Electromechanical components	EL 2127-05	No such components used	N/A
5.3.6	Audio amplifiers in ITE :	EL 2127-06	Not used	N/A
5.3.7	Simulation of faults	EL 2127-07	See table 5.3	P
5.3.8	Unattended equipment	EL 2127-08	No such equipment	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions*		See below	P
5.3.9.1	During the tests	EL 2127-09	No fire occurred, no molten metal emitted and no distortion of enclosure	P
5.3.9.2	After the tests	EL 2127-10	After the test The EUT still complies with the relevant requirements of this standard	P

*-Total number of requirements to be observed/ inspected = 00
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

Total number of tests to be conducted = 11
Total number of applicable tests = 07
No. of tests for which the sample passed = 07

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

.....
(Approving Authority)

Kailtech Test & Research Centre P. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

Tests relating to Communicating Connection

EL 2128 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment	EL 2128-00	Equipment is not for connection to telecommunication network	N/A
6.1.1	Protection from hazardous voltages	EL 2128-01	As above	N/A
6.1.2	Separation of the telecommunication network from earth*		As above	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)	EL 2128-02	As above	N/A

Kailtech Test & Research ktrc INDORE Centre Pvt. Ltd.

	-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.			
6.1.2.2	Exclusions	EL 2128-03	As above	N/A

*-Total number of requirements to be observed/ inspected = 00
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

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

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Tests relating to Communicating Connection

EL 2129 – V1.4

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

*-Total number of requirements to be observed/ inspected = 01
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

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

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Tests relating to Communicating Connection

EL 2130 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
6.3	Protection of the telecommunication wiring system from overheating	EL 2130-00	Equipment is not for connection to telecommunication wiring system	N/A
	a)If current limiting is due to the inherent impedance of the power source, the output current into any resistive load, including a short-circuit, is measured. The current limit shall not be exceeded after 60 s of test. Max. output current (A) :	EL 2130-01	As above	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	As above	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	As above	N/A

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

	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	As above	N/A

*-Total number of requirements to be observed/ inspected : 00
Total No. of applicable requirement : 00
No. of requirement for which the sample passed : 00

Total number of tests to be conducted : 05
Total number of applicable tests : 00
No. of tests for which the sample passed : 00

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Tests relating to Connection to cable distribution system

EL 2131 – V1.4

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

*-Total number of requirements to be observed/ inspected = 02
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

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

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. INDORE

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 <18kg	N/A
A.1.1	Samples:	EL 2132-02	As above	N/A
	Wall thickness (mm):		As above	N/A
A.1.2	Conditioning of samples; temperature (°C) :	EL 2132-03	As above	N/A
A.1.3	Mounting of samples :	EL 2132-04	As above	N/A
A.1.4	Test flame (see IEC 60695-11-3)	EL 2132-05	As above	N/A
	Flame A, B, C or D :		As above	N/A
A.1.5	Test procedure	EL 2132-06	As above	N/A
A.1.6	Compliance criteria	EL 2132-07	As above	N/A
	Sample 1 burning time (s):		As above	N/A
	Sample 2 burning time (s):		As above	N/A
	Sample 3 burning time (s):		As above	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	As above	N/A
	Wall thickness (mm):		As above	N/A
A.2.2	Conditioning of samples; temperature (°C) :	EL 2132-10	As above	N/A
A.2.3	Mounting of samples :	EL 2132-11	As above	N/A
A.2.4	Test flame (see IEC 60695-11-4)	EL 2132-12	As above	N/A
	Flame A, B or C :		As above	N/A

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

A.2.5	Test procedure	EL 2132-13	As above	N/A
A.2.6	Compliance criteria	EL 2132-14	As above	N/A
	Sample 1 burning time (s):		As above	N/A
	Sample 2 burning time (s):		As above	N/A
	Sample 3 burning time (s):		As above	N/A
A.2.7	Alternative test acc. To IEC 60695-11-5, cl. 5 and 9	EL 2132-15	As above	N/A
	Sample 1 burning time (s):		As above	N/A
	Sample 2 burning time (s):		As above	N/A
	Sample 3 burning time (s):		As above	N/A
A.3	Hot flaming oil test (see 4.6.2)	EL 2132-16	As above	N/A
A.3.1	Mounting of samples	EL 2132-17	As above	N/A
A.3.2	Test procedure	EL 2132-18	As above	N/A
A.3.3	Compliance criterion	EL 2132-19	As above	N/A

*-Total number of requirements to be observed/ inspected = 00
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

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

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Tests relating to Insulating Properties

EL 2133 – V1.4

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

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

B.9	Test for three-phase motors	EL 2133-17	As above	N/A
B.10	Test for series motors	EL 2133-18	As above	N/A
	Operating voltage (V) :		As above	N/A

*-Total number of requirements to be observed/ inspected = 00
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

Total number of tests to be conducted = 19
Total number of applicable tests = 00
No. of tests for which the sample passed = 00

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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 :		See table 1.5.1	P
	Manufacturer :		See table 1.5.1	P
	Type :		See table 1.5.1	P
	Rated values :		See table 1.5.1	P
	Method of protection:		By over current protection	P
C.1	Overload test	EL 2134-01	See table 5.3	P
C.2	Insulation	EL 2134-02	See table 5.2	P
	Protection from displacement of windings:		See table C.2	P

*-Total number of requirements to be observed/ inspected = 01
Total No. of applicable requirement = 01
No. of requirement for which the sample passed = 01

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

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

....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

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	See below	P
D.1	Measuring instrument	EL 2135-01	Measuring instruments D.1 used	P
D.2	Alternative measuring instrument	EL 2135-02	Alternative measuring instruments not used	N/A

*-Total number of requirements to be observed/ inspected = 00
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

Total number of tests to be conducted = 03
Total number of applicable tests = 02
No. of tests for which the sample passed = 02

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	Not used	N/A

*-Total number of requirements to be observed/ inspected : 00
Total No. of applicable requirement : 00
No. of requirement for which the sample passed : 00

Total number of tests to be conducted : 01
Total number of applicable tests : 00
No. of tests for which the sample passed : 00

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Tests relating to Electrical Safety

EL 2137 – V1.4

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

*-Total number of requirements to be observed/ inspected = 00
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

Total number of tests to be conducted = 01
Total number 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.

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. KTRC INDORE

Tests relating to Electrical safety

EL 2138 – V1.4

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

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

	For a d.c. mains supply		As above	N/A
	b) Transients from a telecommunication network		As above	N/A
G.6	Determination of minimum clearances	EL 2138-16	As above	N/A

*-Total number of requirements to be observed/ inspected : 00
Total No. of applicable requirement : 00
No. of requirement for which the sample passed : 00

Total number of tests to be conducted : 17
Total number of applicable tests : 00
No. of tests for which the sample passed : 00

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

....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	Ionizing radiation not generated	N/A

*-Total number of requirements to be observed/ inspected = 00
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

Total number of tests to be conducted = 01
Total number of applicable tests = 00
No. of tests for which the sample passed = 00

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Tests relating to Electrical Safety

EL 2140 – V1.4

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

*-Total number of requirements to be observed/ inspected = 01
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

Total number of tests to be conducted = 00
Total number of applicable tests = 00
No. of tests for which the sample passed = 00

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Tests relating to General Requirement

EL 2141 – V1.4

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

*-Total number of requirements to be observed/ inspected = 01
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

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

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

....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

Tests relating to General Requirement

EL 2142 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)*	EL 2142-00	See below	P
L.1	Typewriters*	EL 2142-01	Not a typewriter	N/A
L.2	Adding machines and cash registers*	EL 2142-02	Not adding machines and cash registers	N/A
L.3	Erasers*	EL 2142-03	Not an erasers	N/A
L.4	Pencil sharpeners*	EL 2142-04	Not a pencil sharpeners	N/A
L.5	Duplicators and copy machines*	EL 2142-05	Not a duplicators	N/A
L.6	Motor-operated files*	EL 2142-06	Not motor operated files	N/A
L.7	Other business equipment*	EL 2142-07	Maximum normal load applied	P

*-Total number of requirements to be observed/ inspected = 08
Total No. of applicable requirement = 02
No. of requirement for which the sample passed = 02

Total number of tests to be conducted = 00
Total number of applicable tests = 00
No. of tests for which the sample passed = 00

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

....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

Tests relating to Electrical Safety

EL 2143 – V1.4

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

*-Total number of requirements to be observed/ inspected = 01
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

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

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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 connections to telecommunication network and cable distribution system used	N/A
N.1	ITU-T impulse test generators	EL 2144-01	As above	N/A
N.2	IEC 60065 impulse test generator	EL 2144-02	As above	N/A

*-Total number of requirements to be observed/ inspected = 00
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

Total number of tests to be conducted = 03
Total number of applicable tests = 00
No. of tests for which the sample passed = 00

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

.....
(Approving Authority

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	Complies	P

*-Total number of requirements to be observed/ inspected = 00
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

Total number of tests to be conducted = 01
Total number 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.

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	No such component used	N/A
	A VDR shall comply with iec 61051-2, whether a fire enclosure is provided or not, taking into account all of the following:		As above	N/A
	a) Preferred climatic categories Lower category temperature: -10°C Upper category temperature: +85°C Duration of damp Test, steady state test:21 days		As above	N/A
	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		As above	N/A
	c) Combination pulse :	EL 2146-01	As above	N/A
	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	As above	N/A

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

*-Total number of requirements to be observed/ inspected	= 01
Total No. of applicable requirement	= 00
No. of requirement for which the sample passed	= 00
Total number of tests to be conducted	= 02
Total number of applicable tests	= 00
No. of tests for which the sample passed	= 00

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

.....

(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	Uncoated printed board used	N/A
R.2	Reduced clearances (see 2.10.3)*	EL 2147-02	As above	N/A

*-Total number of requirements to be observed/ inspected	= 03
Total No. of applicable requirement	= 00
No. of requirement for which the sample passed	= 00
Total number of tests to be conducted	= 00
Total number of applicable tests	= 00
No. of tests for which the sample passed	= 00

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

………………………………………………………………

(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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 connections to telecommunication network and cable distribution system used	N/A
S.1	Test equipment*	EL 2148-01	As above	N/A
S.2	Test procedure*	EL 2148-02	As above	N/A
S.3	Examples of waveforms during impulse testing*	EL 2148-03	As above	

*-Total number of requirements to be observed/ inspected = 04
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

Total number of tests to be conducted = 00
Total number of applicable tests = 00
No. of tests for which the sample passed = 00

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Tests relating to Protection against Ingress of water

EL 2149 – V1.4

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

*-Total number of requirements to be observed/ inspected	: 01
Total No. of applicable requirement	: 00
No. of requirement for which the sample passed	: 00
Total number of tests to be conducted	: 00
Total number of applicable tests	: 00
No. of tests for which the sample passed	: 00

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

....

(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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 TIW used (See table 1.5.1)	P
U.1	GENERAL	EL2150-01	As above	N/A
U.2	TYPE TESTS	EL2150-02	As above	N/A
U.2.1	GENERAL	EL2150-03	As above	N/A
U.2.2	ELECTRIC STRENGTH	EL2150-04	As above	N/A
U.2.2.1	SOLID ROUND WINDING WIRE AND STRANDED WINDING WIRES	EL2150-05	As above	N/A
U.2.2.1.1	WIRES WITH NOMINAL CONDUCTOR DIAMETER UPTO AND INCLUDING 0.100MM	EL2150-06	As above	N/A
U.2.2.1.2	WIRES WITH NOMINAL CONDUCTOR DIAMETER OVER 0.100MM AND INCLUDING 2.500MM	EL2150-07	As above	N/A
U.2.2.1.3	WIRES WITH NOMINAL CONDUCTOR DIAMETER OVER 2.500MM	EL2150-08	As above	N/A
U.2.2.2	SQUARE OR RECTANGULAR WIRES	EL2150-09	As above	N/A
U.2.3	FLEXIBILITY AND ADHERENCE	EL2150-10	As above	N/A
U.2.4	HEAT SHOCK	EL2150-11	As above	N/A
U.2.5	RETENTION OF ELECTRIC STRENGTH AFTER BENDING	EL2150-12	As above	N/A
U.3	TESTING DURING MANUFACTURING	EL2150-13	As above	N/A
U.3.1	GENERAL	EL2150-14	As above	N/A
U.3.2	ROUTINE TESTS	EL2150-15	As above	N/A
U.3.3	SAMPLING TEST	EL2150-16	As above	N/A

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Report No. KTRC/2104000616	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 /	Page 91 of 119
Dated: 14.05.2021	IEC 60950-1: 2005 + A1:2009 + A2 : 2013	

*-Total number of requirements to be observed/ inspected	= 00
Total No. of applicable requirement	= 00
No. of requirement for which the sample passed	= 00
Total number of tests to be conducted	= 17
Total number 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.

………………………………………………………………

(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

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	In compliance	P
V.1	Introduction*	EL 2151-01	As above	P
V.2	TN power distribution systems	EL 2151-02	Single phase TN power distribution system considered	P
V.3	TT Power Distribution systems	EL 2151-03	As above	N/A
V.4	IT Power Distribution systems	EL 2151-04	As above	N/A

*-Total number of requirements to be observed/ inspected = 02
Total No. of applicable requirement = 02
No. of requirement for which the sample passed = 02

Total number of tests to be conducted = 03
Total number 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.

(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

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 TNV circuit used	N/A
W.1	Touch current from electronic circuits*	EL 2152-01	As above	N/A
W.1.1	Floating circuits*	EL 2152-02	As above	N/A
W.1.2	Earthed circuits*	EL 2152-03	As above	N/A
W.2	Interconnection of several equipments*	EL 2152-04	As above	N/A
W.2.1	Isolation*	EL 2152-05	As above	N/A
W.2.2	Common return, isolated from earth*	EL 2152-06	As above	N/A
W.2.3	Common return, connected to protective earth*	EL 2152-07	As above	N/A

*-Total number of requirements to be observed/ inspected : 08
Total No. of applicable requirement : 00
No. of requirement for which the sample passed : 00

Total number of tests to be conducted : 00
Total number of applicable tests : 00
No. of tests for which the sample passed : 00

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

....

(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

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	Transformer tested as per Annex C	N/A
X.1	Determination of maximum input current*	EL 2153-01	As above	N/A
X.2	Overload test procedure*	EL 2153-02	As above	N/A

*-Total number of requirements to be observed/ inspected = 03
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

Total number of tests to be conducted = 00
Total number of applicable tests = 00
No. of tests for which the sample passed = 00

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

.....
(Approving Authority)

Kailtech Test & Research ktrc INDORE Centre Pvt. Ltd.

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	As above	N/A
Y.2	Mounting of test samples	EL 2154-02	As above	N/A
Y.3	Carbon-arc light-exposure apparatus	EL 2154-03	As above	N/A
Y.4	Xenon-arc light exposure apparatus	EL 2154-04	As above	N/A

*-Total number of requirements to be observed/ inspected = 00
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

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

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

....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	Overvoltage category II (2500 V_{Peak})considered	P

*-Total number of requirements to be observed/ inspected : 01
Total No. of applicable requirement : 01
No. of requirement for which the sample passed : 01

Total number of tests to be conducted : 00
Total number of applicable tests : 00
No. of tests for which the sample passed : 00

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	Non-separable thin sheet material not used	N/A

*-Total number of requirements to be observed/ inspected	: 00
Total No. of applicable requirement	: 00
No. of requirement for which the sample passed	: 00
Total number of tests to be conducted	: 01
Total number of applicable tests	: 00
No. of tests for which the sample passed	: 00

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

………………………………………………………
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Tests relating to Electrical Safety

EL 2158 – V1.4

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

*-Total number of requirements to be observed/ inspected = 02
Total No. of applicable requirement = 00
No. of requirement for which the sample passed = 00

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

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

....

(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Tests relating to Mechanical Properties

EL 2159 – V1.4

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

*-Total number of requirements to be observed/ inspected : 02
Total No. of applicable requirement : 00
No. of requirement for which the sample passed : 00

Total number of tests to be conducted : 02
Total number of applicable tests : 00
No. of tests for which the sample passed : 00

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

…………………………………………………………
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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	No such construction used	N/A
EE.1	General		As above	N/A
EE.2	Markings and instructions*	EL 2160-01	As above	N/A
	Use of markings or symbols*.....:		As above	N/A
	Information of user instructions, maintenance and/or servicing instructions*.....:		As above	N/A
EE.3	Inadvertent reactivation test.....:	EL 2160-02	As above	N/A
EE.4	Disconnection of power to hazardous moving parts*	EL 2160-03	As above	N/A
	Use of markings or symbols*.....:		As above	N/A
EE.5	Protection against hazardous moving parts		As above	N/A
	Test with test finger (Figure 2A) .....:	EL 2160-04	As above	N/A
	Test with wedge probe (Figure EE1 and EE2) .....:	EL 2160-05	As above	N/A

*-Total number of requirements to be observed/ inspected : 02
Total No. of applicable requirement : 00
No. of requirement for which the sample passed : 00

Total number of tests to be conducted : 04
Total number of applicable tests : 00
No. of tests for which the sample passed : 00

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

.....
(Approving Authority)

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

1.5.1	TABLE: List of components				P
Object/part no.	Manufacturer/ trademark	Type/model	Technical data	Standard	Mark(s) of conformity
Adaptor Enclosure	SABIC INNOVATIVE PLASTICS B V	SE1X(GG)(f1), SE1	PPE+PS, Min. V-1, Min. thickness: 2.0mm, 105°C	UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E45329
Alternate	SABIC INNOVATIVE PLASTICS B V	SE100	PPE+PS, Min. V-1, Min. thickness: 2.0mm, 95°C	UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E45329
Alternate	SABIC INNOVATIVE PLASTICS B V	C2950	PC/ABS, Min. V-0, Min. thickness: 2.0mm, 85°C	UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E45329
Alternate	SABIC INNOVATIVE PLASTICS B V	CX7211(GG)	PC/ABS, Min. V-1, Min. thickness: 2.0mm, 90°C	UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E45329
Alternate	SABIC INNOVATIVE PLASTICS B V	945(GG)	PC, Min.V-0, Min. thickness: 2.0mm, 120°C	UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E45329
Alternate	SABIC INNOVATIVE PLASTICS B V	HF500R(f2)	PC, V-0, Min. thickness: 2.0mm, 125°C	UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E45329
Alternate	SABIC JAPAN L L C	SE1X(GG)(c)(f1), SE1	PPE+PS, Min. V-1, Min. thickness: 2.0mm, 105°C	UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E207780
Alternate	SABIC JAPAN L L C	SE100	PPE+PS, Min. V-1, Min. thickness: 2.0mm, 95°C	UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E207780

Alternate	SABIC JAPAN L L C	C2950(GG)(c)	PC/ABS, Min.V-0, Min. thickness: 2.0mm, 85°C	UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E207780
Alternate	SABIC JAPAN L L C	CX7211(GG)	PC/ABS, Min. V-1, Min. thickness: 2.0mm, 90°C	UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E207780
Alternate	SABIC JAPAN L L C	945(GG)	PC, Min.V-0, Min. thickness: 2.0mm, 120°C	UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E207780
Alternate	TEIJIN LIMITED RESIN AND PLASTIC	LN-1250P LN-1250G	PC, Min. V-0, Min. thickness: 2.0mm, 115°C	UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E50075
Alternate	CHI MEI CORPORATION	PA-765A	ABS, Min. V-0, Min. thickness: 2.0mm, 85°C	UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E56070
Alternate	CHI MEI CORPORATION	PC-540(Y)(a)	PC/ABS, Min. V-0, Min. thickness: 2.0mm,85°C	UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E56070
PCB	DAFENG AREX ELECTRONICS TECHNOLOGY CO LTD	02V0	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796, UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E186016
Alternate	WALEX ELECTRONIC (WUXI) CO LTD	T2,T2A, T2B, T4	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796, UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E154355
Alternate	YUANMAN PRINTED CIRCUIT CO LTD	1V0	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796, UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E74757

Alternate	GUANGDE XINKE ELECTRONICS CO LTD	XK-2, XK-1	Min. 1,6 mm thickness, min. V-0, 130°C V-1, 130°C	UL 796, UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E231590
Alternate	Guangdong Hetong Technology Co Ltd	CEM1, 2V0, FR4	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796, UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E243157
Alternate	CHEERFUL PLASTIC ELECTRONIC PRODUCTS	02, 03, 03A	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796, UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E199724
Alternate	JIANGSU DIFEIDA ELECTRONICS CO LTD	DFD-1	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796, UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E213009
Alternate	DONGGUAN DAYSUN ELECTRONIC CO LTD	DS2	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796, UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E251754
Alternate	SUZHOU CITY YILIHUA ELECTRONICS CO LTD	YLH-1	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796, UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E251781
Alternate	DAFENG AREX ELECTRONICS TECHNOLOGY CO LTD	02V0, 03V0 04V0	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796, UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E186016

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Alternate	BRITE PLUS ELECTRONICS (SUZHOU) CO LTD	DKV0-3A DGV0-3A	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796, UL 94 (Flammability testequivalent to IEC 60695-11- 10)	UL E177671
Alternate	KUOTIANG ENT LTD	C-2, C-2A	Min. V-0, min 1.6 mm thickness, 130°C	UL 796, UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E227299
Alternate	PACIFIC WIN INDUSTRIAL LTD	PW-02, PW-03	Min. V-0, min 1.6 mm thickness, 130°C	UL 796, UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E228070
Alternate	SHENZHEN TONGCHUANGXIN ELECTRONICS CO LTD	TCX	Min. 1,6 mm thickness, min. V-0, 130°C	UL 796, UL 94 (Flammability test equivalent to IEC 60695-11- 10)	UL E250336
Fuse (F1, F2)	Conquer Electronics Co., Ltd.	MST series	T1A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL248-14	VDE 40017118 UL E82636
Alternate	Suzhou Walter Electronic Co. Ltd.	2010	T1A, 250V	IEC60127-1 IEC 60127-3	VDE 40018781
Alternate	Ever Island Electric Co., Ltd. And Walter Electric	2010	T1A, 250V	UL 248-1 UL248-14	UL E220181
Alternate	Suzhou Walter Electronic Co. Ltd.	ICP	T1A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL248-14	VDE 40012824
Alternate	Bel Fuse Ltd.	RST(For VDE), RSTA(For UL)	T1A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL248-14	VDE 40011144 UL E506667
Alternate	Bel Fuse Ltd.	MRT	T1A, 250V	IEC 60127-1 IEC 60127-3	VDE 139937
Alternate	Bel Fuse Ltd.	MRT, 5ST	T1A, 250V	UL 248-1 UL248-14	UL E20624
Alternate	Cooper Bussmann LLC	SS-5	T1A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL248-14	VDE 40015513 UL E19180

Alternate	Conquer Electronics Co., Ltd.	MET series	T1A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40017157 UL E82636
Alternate	Shenzhen Lanson Electronics Co. Ltd.	SMT	T1A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40012592 UL E221465
Alternate	ZhongshanLanbao Electrical Appliances Co., Ltd.	RTI-10 Serie(s)	T1A, 250V	IEC 60127-1 IEC 60127-3	VDE 40017009
Transformer (T1)	GlobTek	XF00714I	Class B	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 +A1:2009 + A2 : 2013	Tested with equipment
Alternate	BOAM	XF00714I	Class B	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 +A1:2009 + A2 : 2013	Tested with equipment
Alternate	GlobTek	XF00717	Class B	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 +A1:2009 + A2 : 2013	Tested with equipment

Alternate	BOAM	XF00717	Class B	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 +A1:2009 + A2 : 2013	Tested with equipment
Alternate	GlobTek	XF00719	Class B	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 +A1:2009 + A2 : 2013	Tested with equipment
Alternate	BOAM	XF00719	Class B	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 +A1:2009 + A2 : 2013	Tested with equipment
Alternate	GlobTek	XF00841	Class B	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 +A1:2009 + A2 : 2013	Tested with equipment
Insulation system used in T1	GLOBTEK INC	GTX-130-TM	Class 130 (B)	UL 1446(NO equivalent IEC standard)	UL E243347
Alternate	SHAN DONG BOAM ELECTRIC CO LTD	BOAM-01, B1	Class 130 (B)	UL 1446(NO equivalent IEC standard)	UL E252329

Bobbin	CHANG CHUN PLASTICS CO LTD	T375J(G3)(G6), T373J, T375HF	V-0, 150°C, thickness 0,45 mm min.	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E59481
Alternate	CHANG CHUN PLASTICS CO LTD	4130	V-0, 140°C, thickness 0,74 mm min.	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E59481
Alternate	SUMITOMO BAKELITE CO LTD	PM-9820, PM-9630	V-0, 150°C, thickness 0,45 mm min.	UL 94 (Flammability test equivalent to IEC 60695-11-10)	UL E41429
Triple-insulated wire (Secondary)	Great Leoflon Industrial Co., Ltd.	TRW (B) Serie(s)	Class B, reinforced insulation	EN 62368-1 UL 2353	VDE 136581 UL E211989
Alternate	KBI COSMOLINK CO.,LTD.	TIW-M Serie(s)	Class B, reinforced insulation	IEC/EN 62368-1 UL 2353 UL 60601-1	VDE 138053 UL E213764
Alternate	FURUKAWA ELECTRIC CO LTD	TEX-E	Class B, reinforced insulation	IEC/EN 62368-1 UL 2353 UL 60601-1	VDE 006735 UL E206440
Alternate	TOTOKU ELECTRIC CO LTD	TIW-2	Reinforced insulation, rated 130° C (ClassB)	IEC 61558-2-16	VDE 40044910
Alternate	TOTOKU ELECTRIC CO LTD	TIW-2SLZX$+, TIW-2SLZXY$+	Reinforced insulation, rated 130° C (ClassB)	UL 2353 UL 60601-1	UL E166483
Alternate	E&B TECHNOLOGY CO LTD	E&B-XXXB, E&B-XXXB-1	Reinforced insulation, Class B	IEC/EN 62368-1 UL 2353 UL 60601-1	VDE 40023473 UL E315265
Alternate	SHENZHEN JIUDING NEW MATERIAL CO LTD	DTFW-B	Class B	IEC/EN 62368-1 UL 2353 UL 60601-1	VDE 40037495 UL E357999
Insulating tape	3M COMPANY Electrical Markets DIV (EMD)	1350F-1 (b)	Min.130°C	UL 510A(No Equivalent IEC standard)	UL E17385
Alternate	BONDTEC PACIFIC CO LTD	370S (b)	Min.130°C	UL 510A(No Equivalent IEC standard)	UL E175868

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

Alternate	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ, CT, WF	Min.130°C	UL 510A(No Equivalent IEC standard)	UL E165111
Alternate	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	JY25-A (b)	Min.130°C	UL 510A(No Equivalent IEC standard)	UL E246950
Alternate	CHANG SHU LIANG YI TAPE INDUSTRY CO LTD	LY-XX	Min.130°C	UL 510A(No Equivalent IEC standard)	UL E246820
tubing	GREAT HOLDING INDUSTRIAL CO LTD	TFT,TFS, TFL	Min. 300V, 200°C	UL 224	UL E156256
Alternate	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	WF	600V, 200°C	UL 224	UL E203950
Alternate	CHANGYUAN ELECTRONICS GROUP CO LTD	CB-TT-T, CB-TT-S	Min. 300V, 200°C	UL 224	UL E180908
Choke (L1)	SUZHOU LYE ELECTRONICS CO., LTD	EAL0410ST-331K-NC	330uH, 6.5Ω, max. 165mA, Class B	IS 13252 (Part 1):2010 + A1: 2013 + A2 : 2015	Tested with equipment
Choke (L2)	WUXI HAOPUWEI ELECTRONICS CO.,LTD	RC00061	6uH, Class B	IS 13252 (Part 1):2010 + A1: 2013 + A2 : 2015	Tested with equipment
Supplementary information: Evidences provided by the manufacturer for the listed components are verified by us and the evidences are confirming to the requirement of relevant standard.					

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

1.5.2/4.3.6	TABLE: Plug dimensions (mm)					P
Type of plug(√) Two pin () Three pin						
Object/part no.	Ratings					
	(√)2.5 A		() 6A		() 16A	
	Limits	Measured	Limits	Measured	Limits	Measured
A	----	----	22.05-22.35	----	28.45-28.75	----
B	18.95-19.25	19.21	18.95-19.25	----	25.25-25.55	----
C	-	-	7.01-7.085	----	8.66-8.735	----
D	5.03 – 5.105	5.05	5.03 – 5.105	----	7.01-7.085	----
E	15.77-16.94	16.36	15.77- 16.94	----	20.47-21.64	----
F	----	----	20.47-21.64	----	28.47-29.64	----
G	7.94(min)	8.12	7.94(min)	----	9.52(min)	----
H	5.16 to 7.54	----	5.16 to 7.54	----	6.76 to 9.12	----
L	7.5	----	7.5	----	9	----
M	4.58 Max	----	4.58 Max	----	6.56 Max	----
Supplementary information: Above dimensions as per IS 1293:2019 in millimeter.						

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V)	I (A)	I rated (mA)	P (W)	Fuse #	I fuse (mA)	Condition/status
For AC Input: 100-240V, 50Hz						
90V	0.159	-	0.008	F1,F2	0.159	At Maximum normal load
100V	0.147	0.6	0.008	F1,F2	0.147	
240V	0.094	0.6	0.008	F1,F2	0.094	
254.4V	0.090	-	0.008	F1,F2	0.090	
For AC Input: 100-240V, 60Hz						
90V	0.154	-	0.008	F1,F2	0.154	At Maximum normal load
100V	0.143	0.6	0.008	F1,F2	0.143	
240V	0.089	0.6	0.008	F1,F2	0.089	
254.4V	0.087	-	0.008	F1,F2	0.087	
Supplementary information:						

2.1.1.5	TABLE: Energy hazard measurement				P
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
5.0Vdc	1.2	5.08	1.63	8.28	
Supplementary information:					

2.1.1.7	TABLE: Discharge test				P
Condition	t calculated (s)	t measured (s)	t u→ 0V (s)	Comments	
Plug of adaptor	--	--	--	Vmax=240V, 37% of voltage =88.8V After 1sec =29Vac	
Supplementary information:					

2.2.2	TABLE: SELV measurement (under normal conditions)			P
Transformer	Location	Voltage (max.) (V)		Voltage Limitation Component
		V peak	V d.c.	
--	Diode (D6)	--	5.08	--
--	Capacitor(C5)	--	5.08	--
--	Capacitor(C6)	--	5.08	--
--	Output 5V	--	5.08	--
Supplementary information:				

2.2.3	TABLE: SELV measurement (under fault conditions)		P
Location	Voltage (max.) (V)	Comments	
Capacitor(C5)	0	EUT shutdown immediately	
Capacitor(C6)	0	EUT shutdown immediately	
Output 5V	0	EUT shutdown immediately	
Supplementary information:			

2.4.2	TABLE: Limited current circuit measurement					N/A
Location	Voltage (V)	Current (mA)	Freq. (kHz)	Limit (mA)	Comments	
-	-	-	-	-	-	
Supplementary information:						

2.5	TABLE: Limited power source measurement		P
	Limits	Measured	Verdict
According to Table 2B/~~2C~~ (normal condition) USB Output Uoc=5.08V			
current (in A)	≤8	1.63	P
apparent power (in VA)	≤100	8.28	P
According to Table 2B/~~2C~~ (single fault condition) USB Output Short-Circuit			
current (in A)	≤8	0	P
apparent power (in VA)	≤100	0	P
Supplementary information:			

2.6.3.4	TABLE: Resistance of earthing measurement		NA
Location	Resistance measured (mΩ)	Comments	
--	--	--	
Supplementary information:			

2.10.2	Table: Working voltage measurement		P
Location	RMS voltage (V)	Peak voltage (V)	Comments
Transformer (T1)			
Pin 1 to Pin 2	20	60	--
Pin 1 to Pin 3	380	560	--
Pin 1 to Pin 4	20	80	--
Pin 1 to Pin 5	360	420	--
Pin 1 to Pin 8	120	180	--
Pin 1 to Pin 10	140	180	--
Pin 2 to Pin 3	**380**	**580**	**Max. Vrms and Vpeak**
Pin 2 to Pin 4	20	60	--
Pin 2 to Pin 5	360	400	--
Pin 2 to Pin 8	120	180	--
Pin 2 to Pin 10	120	180	--
Pin 3 to Pin 4	320	520	--
Pin 3 to Pin 5	120	380	--
Pin 3 to Pin 8	180	480	--
Pin 3 to Pin 10	180	460	--
Pin 4 to Pin 5	360	400	--
Pin 4 to Pin 8	120	160	--
Pin 4 to Pin 10	120	180	--
Pin 5 to Pin 8	120	180	--
Pin 5 to Pin 10	140	180	--
Pin 8 to Pin 10	20	60	--
Line-Neutral	**240**	**348**	**Max. Vrms and Vpeak**
Supplementary information:			

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements					P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Functional:						
Line – Neutral	348	240	2.3	4.18	2.4	4.18
Basic / supplementary:						
-	-	-	-	-	-	-
Reinforced:						
Transformer (T1)	580	380	6.9	8.85	7.6	8.85
Supplementary information:						

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

An ISO 9001 : 2015 Certified Laboratory

2.10.5	TABLE: Distance through insulation measurements					P
Distance through insulation (DTI) at/of:	U peak (V)	U r.m.s.(V)	Test voltage (V)	Required DTI (mm)	DTI(mm)	
Basic:						
---	---	---	---	---	---	
Supplementary:						
---	---	---	---	---	---	
Reinforced:						
Insulation tape of Transformer (T1)	580	380	3000	2 layer	3 layer verified by dielectric strength test	
Bobbin of Transformer (T1)	580	380	3000	0.4	1.10	
Supplementary information:						

4.3.8	TABLE: Batteries									N/A
The tests of 4.3.8 are applicable only when appropriate battery data is not available						**Battery not used**				**N/A**
Is it possible to install the battery in a reverse polarity position?						----				**N/A**
	Non-rechargeable batteries			Rechargeable batteries						
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging		
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	
Max. current during normal condition	---	---	---	---	---	---	---	---	---	
Max. current during fault condition	---	---	---	---	---	---	---	---	---	
Test results:										Verdict
- Chemical leaks							---			---
- Explosion of the battery							---			---
- Emission of flame or expulsion of molten metal							---			---
- Electric strength tests of equipment after completion of tests							---			---
Supplementary information:										

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: 90Vac,50Hz	B : 254.4Vac,50Hz
t_{amb1} (°C):	A: 27.7 B: 28.2	t_{amb2} (°C):	A: 29.1 B: 29.3

Temperature of part/at: (measured with thermocouples)	Measured temperature rise at T_{amb}		Calculated temperature at T_{ma}		Allowed T_{max} (°C)
	A dT (K)	B dT (K)	A T (°C)	B T (°C)	
PCB	27.2	26.5	67.2	66.5	130
Choke(L1)	25.4	21.1	65.4	61.1	110
Choke(L2)	28.1	24.4	68.1	64.4	110
Transformer (T1) (Manufacturer: GlobTek , Model: XF00714I)	39.6	36.1	79.6	76.1	110
Transformer (T1) (Manufacturer: BOAM , Model: XF00714I)	40.1	36.9	80.1	76.9	110
Transformer (T1) (Manufacturer: GlobTek , Model: XF00717)	40.8	37.2	80.8	77.2	110
Transformer (T1) (Manufacturer: BOAM , Model: XF00717)	38.4	35.8	78.4	75.8	110
Transformer (T1) (Manufacturer: GlobTek , Model: XF00719)	39.2	36.5	79.2	76.5	110
Transformer (T1) (Manufacturer: BOAM , Model: XF00719)	41.7	37.4	81.7	77.4	110
Transformer (T1) (Manufacturer: GlobTek , Model: XF00841)	42.1	37.8	82.1	77.8	110
Enclosure	14.2	11.8	54.2	51.8	95
Supplementary information:					

Temperatures measured with winding resistance method: Not used

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

Supplementary information:

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

Part	Test temperature (°C)	Impression diameter (mm)
Plug Holder	125	1.1
Supplementary information:		

4.6.1, 4.6.2	Table: Enclosure opening measurements	N/A
Location	Size (mm)	Comments
----	----	----
----	----	----
Supplementary information:		

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

5.1.6	TABLE: Touch current and protective conductor current measurement					P
	Test voltage (V):		AC 254.4V, 50Hz			—
Measurement location	Polarity (normal) [mA]		Polarity (reverse) [mA]		Limit (mA)	Comments
(Terminal A connected to...)	Switch: ON	Switch: OFF	Switch: ON	Switch: OFF		
Earth terminal ("e" = open)	-	-	-	-	-	-
Plastic enclosure ("e" = close)	0.004	-	0.004	-	0.25	Line/Neutral to external enclosure with metal foil wrapped
Supplementary information:						

Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

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 terminal to neutral (fuse open)		AC	1500	No
Basic / supplementary:				
--		--	--	--
Reinforced:				
Under Transformer (T1) (Primary to secondary winding) (Manufacturer: GlobTek , Model: XF00714I)		AC	3000	No
Under Transformer (T1) (Primary to secondary winding) (Manufacturer: BOAM , Model: XF00714I)		AC	3000	No
Under Transformer (T1) (Primary to secondary winding) (Manufacturer: GlobTek , Model: XF00717)		AC	3000	No
Under Transformer (T1) (Primary to secondary winding) (Manufacturer: BOAM , Model: XF00717)		AC	3000	No
Under Transformer (T1) (Primary to secondary winding) (Manufacturer: GlobTek , Model: XF00719)		AC	3000	No
Under Transformer (T1) (Primary to secondary winding) (Manufacturer: BOAM , Model: XF00719)		AC	3000	No
Under Transformer (T1) (Primary to secondary winding) (Manufacturer: GlobTek , Model: XF00841)		AC	3000	No
L/N to external plastic enclosure with metal foil wrapped		AC	3000	No
Insulation tape of Transformer (T1)		AC	3000	No
Supplementary information:				

5.3	TABLE: Fault condition tests		P
	Ambient temperature (°C) .....:	See sectional observation	—
	Power source for EUT: Manufacturer, model/type, output rating	See copy of marking plate	—

Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Transformer (T1)	Over load	240Vac	2hrs	-	-	EUT operated normally Ambient temperature: 27.1°C Maximum temperature of transformer T1= 69.7°C Result: No damage, no hazard
Capacitor (C5)	Short-circuit	240Vac	10min	-	-	EUT Shutdown immediately Result: No damage, no hazard
Capacitor (C6)	Short-circuit	240Vac	10min	-	-	EUT Shutdown immediately Result: No damage, no hazard
Transformer (T1) (Pin 8 to Pin 10) (Manufacturer: GlobTek , Model: XF00714I)	Short-circuit	240Vac	10min	-	-	EUT Shutdown immediately Result: No damage, no hazard

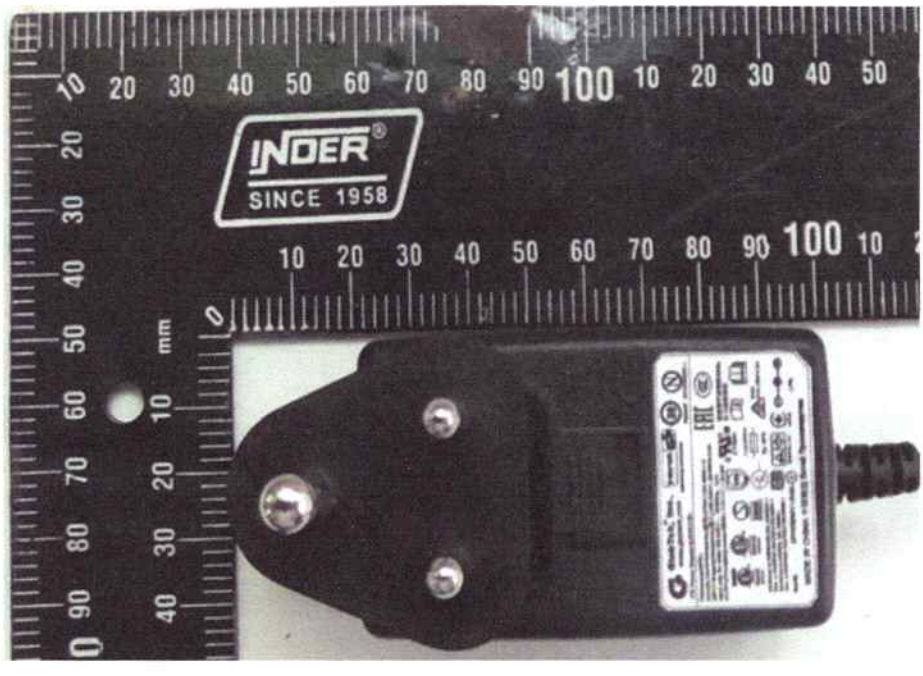
Transformer (T1) (Pin 8 to Pin 10) (Manufacturer: BOAM , Model: XF00714I)	Short-circuit	240Vac	10min	-	-	EUT Shutdown immediately Result: No damage, no hazard
Transformer (T1) (Pin 8 to Pin 10) (Manufacturer: GlobTek , Model: XF00717)	Short-circuit	240Vac	10min	-	-	EUT Shutdown immediately Result: No damage, no hazard
Transformer (T1) (Pin 8 to Pin 10) (Manufacturer: BOAM , Model: XF00717)	Short-circuit	240Vac	10min	-	-	EUT Shutdown immediately Result: No damage, no hazard
Transformer (T1) (Pin 8 to Pin 10) (Manufacturer: GlobTek , Model: XF00719)	Short-circuit	240Vac	10min	-	-	EUT Shutdown immediately Result: No damage, no hazard
Transformer (T1) (Pin 8 to Pin 10) (Manufacturer: BOAM , Model: XF00719)	Short-circuit	240Vac	10min	-	-	EUT Shutdown immediately Result: No damage, no hazard
Transformer (T1) (Pin 8 to Pin 10) (Manufacturer: GlobTek , Model: XF00841)	Short-circuit	240Vac	10min	-	-	EUT Shutdown immediately Result: No damage, no hazard
Output (5Vdc)	Short-circuit	240Vac	10min	-	-	EUT Shutdown immediately Result: No damage, no hazard
Supplementary information:						

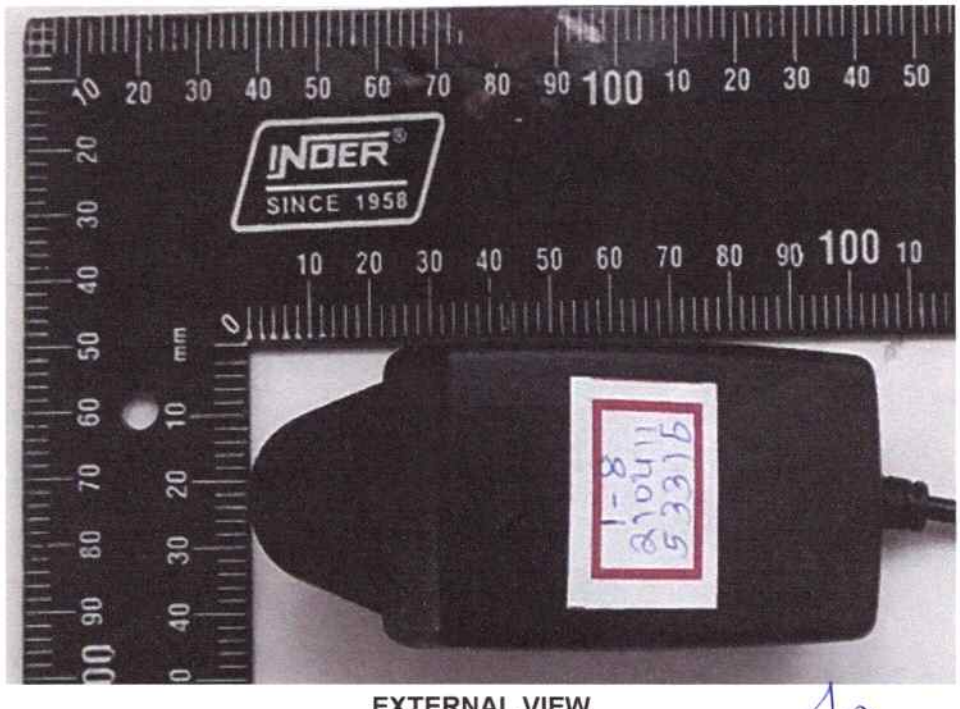
Kailtech Test & Research ktrc INDORE Centre Pvt. Ltd.

C.2	TABLE: Insulation of transformers						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)	580	380	Certified TIW used				
Primary/input winding and core (internal)			Certified TIW used				
Secondary/output winding and core (internal)			Certified TIW used				
Primary/input part and secondary/output part (external)			6.9	8.85	7.6	8.85	
Primary/input part and core (external)			6.9	Certified TIW used	7.6	Certified TIW used	
Primary/input part and secondary/output winding (external)			6.9	8.85	7.6	8.85	
Secondary/output part and core (external)			6.9	Certified TIW used	7.6	Certified TIW used	
Secondary/output part and primary/input winding (external)			6.9	8.85	7.6	8.85	
Description of design:							
(a) Bobbin							
Primary/input pins.....:	1,2,3,4,5						
Secondary/output pins.....:	8,10						
Material (manufacturer, type, ratings).....:	See table 1.5.1						
Thickness (mm).....:	See table 1.5.1						
(b) General							
Supplementary information:							

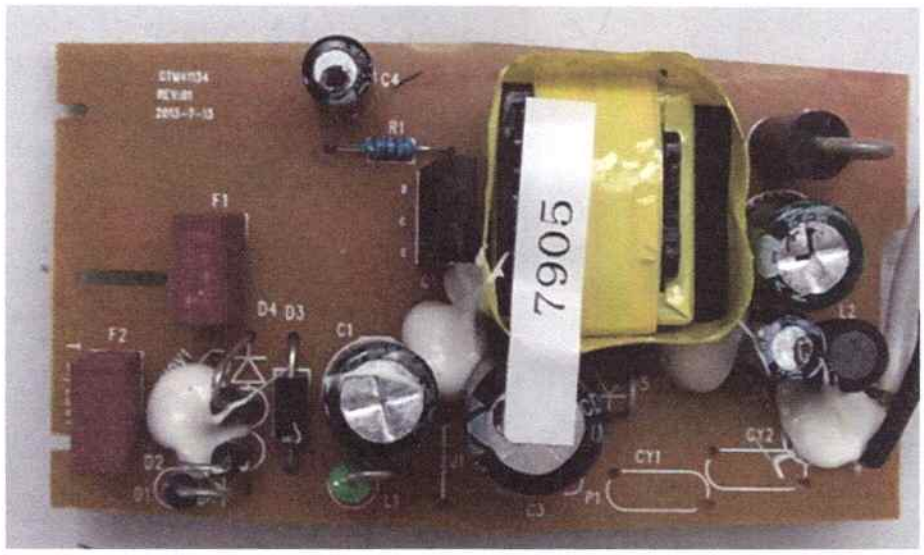
Kailtech Test & Research Centre Pvt. Ltd. ktrc INDORE

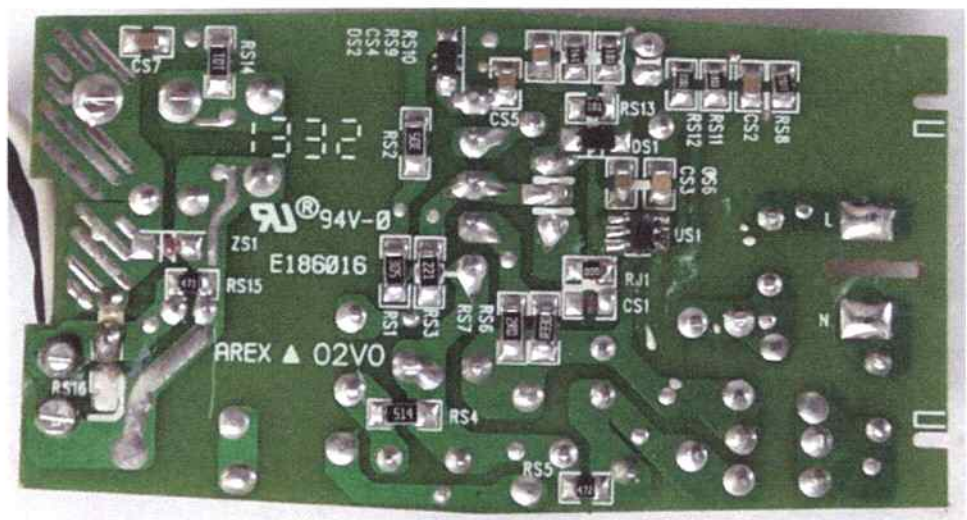
PHOTO DOCUMENT





EXTERNAL VIEW





PCB view