

**SUMMARY OF TEST REPORT**

TEST REPORT NO: SC21EPF21863\_1  
ULR: TC550821100001120F

DATE: 07/12/2021

(Number of Pages in Test Report: Page No. 1 to 105)

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

1. **Name of the Manufacturer:** Inventec (Chongqing) Corporation
2. **Product:** Notebook PC
3. **Model:** GX650RM
4. **Model differences provided (if applicable):** N/A
5. **Model differences verified as per MEITY Guidelines for series formulation:** N/A
6. **Test Results:** Refer below

**PART A: GENERAL**

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

**PART B: PROTECTION FROM HAZARDS**

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

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**PART C: WIRING, CONNECTIONS AND PHYSICAL REQUIREMENTS**

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

**PART D: ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**

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

**PART E: CONNECTION TO TELECOMMUNICATION NETWORK AND CABLE DISTRIBUTION SYSTEM**

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

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**GENERAL INFORMATION:**

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

**CONCLUSION:**

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

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


Date: 07/12/2021

(Signature of Authorized person with Stamp)

<b>Report No :</b>	<b>SC21EPF21863_1</b>	<b>Issue Date :</b> 07/12/2021
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<b>Manufacturer :</b>	<b>Inventec (Chongqing) Corporation</b> NO.66, WEST DISTRICT 2ND RD, SHAPINGBA DISTRICT, CHONGQING, 401331	
<b>Test Item :</b>	Notebook PC	
<b>Identification :</b>	GX650RM	<b>Serial No. :</b> NIL
<b>Receipt No. :</b>	811162256	<b>Date :</b> 22/11/2021
<b>Testing Laboratory :</b>	<b>ALPHA TEST HOUSE</b> 487/25, Near Prachin Shiv Mandir, Peeragarhi, New Delhi -110087	
<b>Test Specification :</b>	IS 13252 (Part 1): 2010 + A1: 2013 + A2 : 2015 / IEC 60950-1: 2005 + A1: 2009 + A2 : 2013	
<b>Test Result :</b>	The test item Passed the test specification	
<b>Other Aspects :</b>	This report consists of 105 pages.	

<b>Tested By</b>	<b>Approved By / Authorized Signatory</b>	<b>Issued By</b>
<b>Test Engineer :</b> MR.PRABHAT JHA	<b>Technical Manager :</b> MR.DHANANJAY KR. SHARMA	<b>IA :</b> MR.ASHISH RANA
<b>Date :</b> 07/12/2021	<b>Date :</b> 07/12/2021	<b>Date :</b> 07/12/2021

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<p><b>TEST REPORT</b>  <b>IS 13252 (Part 1): 2010 + A1: 2013+ A2: 2015 /</b>  <b>IEC 60950-1: 2005 + A1: 2009 + A2: 2013</b>  <b>Information technology equipment – Safety –</b>  <b>Part 1: General requirements</b>  <b>“Laptop, Notebook, Tablet”</b></p>			
<b>Report Number :</b>	SC21EPF21863_1	<b>Date of Issue :</b>	07/12/2021
<b>Total Pages :</b>	105		
<b>Manufacturer :</b>	<b>Inventec (Chongqing) Corporation</b>		
<b>Address :</b>	NO.66, WEST DISTRICT 2ND RD, SHAPINGBA DISTRICT, CHONGQING, 401331		
<b>Test Specification :</b>			
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		
<b>Test Report Form No. :</b>	<b>BIS_IT/LNT_IS13252_V1.4</b>		
Test Report Form(s) Originator :	Bureau of Indian Standards		
Master TRF :	03/06/2016		
<b>Test Item description :</b>	<b>Notebook PC</b>		
Trade Mark :			
Manufacturer :	Inventec (Chongqing) Corporation		
Model/Type reference :	GX650RM		
Ratings :	+20VDC, 12A, 240W		
Other Documents submitted :	Please Refer to Table - List of Attachments at Page No.9		

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<b>Test Engineer :</b> MR.PRABHAT JHA	<b>Technical Manager :</b> MR.DHANANJAY KR. SHARMA	<b>IA :</b> MR.ASHISH RANA
<b>Date :</b> 07/12/2021	<b>Date :</b> 07/12/2021	<b>Date :</b> 07/12/2021

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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	15	15	12-13
EL 2101	General Requirements	Power interface (Cl.1.6)	05	02	02	14
EL 2102	Marking Requirements	Marking & instructions(Cl.1.7)	39	18	18	15-17
EL 2103	Electrical safety	Protection from electric shock and energy hazards (Cl.2.1)	14	06	06	18-19
EL 2104	Electrical safety	SELV Circuits (Cl.2.2)	04	04	04	20
EL 2105	Electrical safety	TNV Circuits (Cl.2.3)	12	00	N/A	21
EL 2106	Electrical safety	Limited current circuits (Cl.2.4)	04	04	04	22
EL 2107	Electrical safety	Limited Power sources (Cl.2.5)	07	03	03	23
EL 2108	Electrical safety	Provisions for earthing and bonding (Cl.2.6)	19	00	N/A	24-25
EL 2109	Electrical safety	Overcurrent and earth fault protection in primary circuits (Cl.2.7)	07	06	06	26
EL 2110	Electrical safety	Safety Interlocks (Cl.2.8)	13	00	N/A	27
EL 2111	Electrical safety	Electrical Insulation (Cl.2.9)	05	04	04	28
EL 2112	Electrical safety	Clearances, Creepage distances and distances through insulation (Cl.2.10)	63	36	36	29-32
EL 2113	Wiring	Wiring, connections and supply (Cl.3)	11	05	05	33
EL 2114	Wiring	Connection to a main supply (Cl.3.2)	14	03	03	34-35
EL 2115	Wiring	Wiring terminals for connection of external conductors (Cl.3.3)	09	00	N/A	36
EL 2116	Wiring	Disconnection for the main supply (Cl.3.4)	12	02	02	37
EL 2117	Wiring	Interconnection of equipment (Cl.3.5)	05	04	04	38
EL 2118	Mechanical properties	Stability (Cl.4.1)	05	00	N/A	39
EL 2119	Mechanical properties	Mechanical strength (Cl.4.2)	13	05	05	40
EL 2120	Mechanical properties	Design and construction (Cl.4.3)	25	04	04	41-42

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## ALPHA TEST HOUSE

Address: 487/25, Near Prachin Shiv Mandir, Peeragarhi, New Delhi-110087 (India)

Contact No.: +91 48777888, +918527763108, Email: info@alphatesthouse.com &amp; electrical@alphatesthouse.com

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EL 2121	Mechanical properties	Protection against hazardous moving parts (Cl.4.4)	14	07	07	43
EL 2122	Thermal Properties	Thermal requirements (Cl.4.5)	06	06	06	44
EL 2123	Mechanical properties	Openings in Enclosures (Cl.4.6)	18	02	02	45-46
EL 2124	Fire Safety	Resistance to fire (Cl.4.7)	25	08	08	47-51
EL 2125	Insulating properties	Electrical requirements and simulated abnormal conditions(Cl.5),5.1	20	01	01	52-53
EL 2126	Insulating properties	Electric Strength (Cl.5.2)	03	00	N/A	54
EL 2127	Insulating properties	Abnormal operating and fault conditions (Cl.5.3)	11	07	07	55
EL 2128	Communicating connection	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment(Cl.6.1)	04	00	N/A	56-57
EL 2129	Communicating connection	Protection of equipment users from overvoltages on telecommunication networks (Cl.6.2)	06	00	N/A	58
EL 2130	Communicating connection	Protection of the telecommunication wiring system from overheating (Cl.6.3)	05	00	N/A	59-60
EL 2131	Connection to cable distribution systems	Connection to cable distribution systems (Cl.7)	08	00	N/A	61
EL 2132	Fire safety	Tests for resistance to heat and fire (Annex A)	20	00	N/A	62-63
EL 2133	Insulating properties	Motor tests under abnormal conditions (Annex B)	19	00	N/A	64-65
EL 2134	Electrical Safety	Transformers (Annex C)	03	03	03	66
EL 2135	Insulating properties	Measuring Instruments For Touch-Current Tests (Annex D)	03	00	N/A	67
EL 2136	Thermal Properties	Temperature Rise Of A Winding(Annex E)	01	00	N/A	68

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EL 2137	Electrical safety	Measurement Of Clearances And Creepage Distances (Annex F)	01	01	01	69
EL 2138	Electrical safety	Alternative Method For Determining Minimum Clearances(Annex G)	17	00	N/A	70-71
EL 2139	Radiation Safety	Ionizing Radiation(Annex H)	01	00	N/A	72
EL 2140	Electrical Safety	Table of electrochemical potentials (Annex J)	01	00	N/A	73
EL 2141	General Requirements	Thermal controls (Annex K)	07	00	N/A	74
EL 2142	General Requirements	Normal load conditions for some types of electrical business equipment (Annex L)	08	02	02	75
EL 2143	Electrical Safety	Criteria for telephone ringing signals (Annex M)	13	00	N/A	76
EL 2144	Electrical safety	Impulse Test Generators(Annex N)	03	00	N/A	77
EL 2145	General Requirements	Normative References(Annex P)	01	00	N/A	78
EL 2146	General Requirements	Voltage dependent resistors (VDRs) (Annex Q)	03	03	03	79
EL 2147	General Requirements	Examples Of Requirements For Quality Control Programmes(Annex R)	03	00	N/A	80
EL 2148	General Requirements	Procedure For Impulse Testing (Annex S)	04	00	N/A	81
EL 2149	Protection against Ingress of water	Guidance On Protection Against Ingress Of Water (Annex T)	01	00	N/A	82
EL 2150	Wiring	Insulated Winding Wires For Use Without Interleaved Insulation (Annex U)	17	00	N/A	83
EL 2151	Electrical Safety	Ac Power Distribution Systems(Annex V)	05	00	N/A	84
EL 2152	Electrical Safety	Summation Of Touch Currents (Annex W)	08	00	N/A	85
EL 2153	Electrical Safety	Maximum Heating Effect In Transformer Tests(Annex X)	03	00	N/A	86

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EL 2154	Radiation safety	Ultraviolet light conditioning test (Annex Y)	05	00	N/A	87
EL 2155	Electrical Safety	Overvoltage Categories (Annex Z)	01	00	N/A	88
EL 2156	Mechanical properties	Mandrel Test(Annex AA)	01	00	N/A	89
EL 2158	Electrical Safety	Evaluation Of Integrated Circuit (IC) Current Limiters (Annex CC)	06	00	N/A	90
EL 2159	Mechanical properties	Requirements For The Mounting Means Of Rack-Mounted Equipment (Annex DD)	04	00	N/A	91
EL 2160	Electrical Safety	Household And Home/Office Document/Media Shredders (Annex EE)	06	00	N/A	92

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

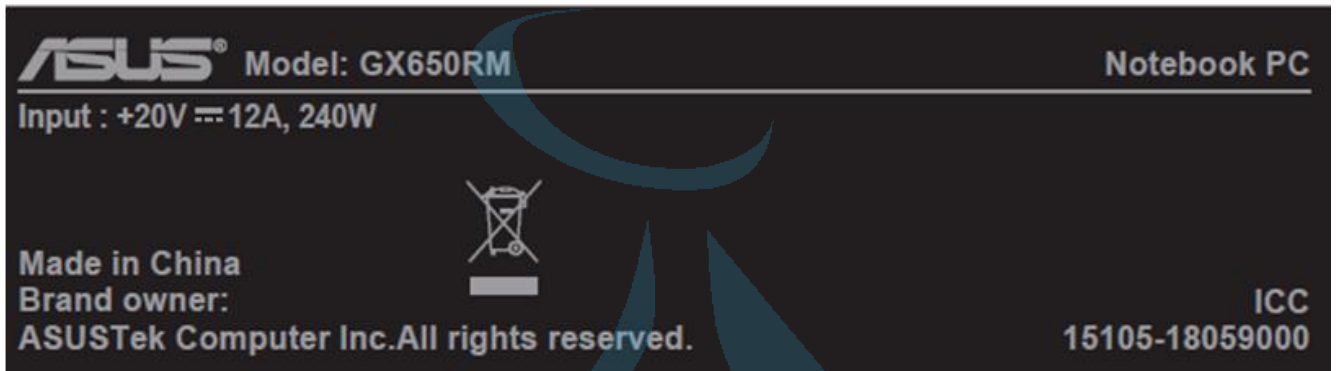
.....  
(Approving Authority)

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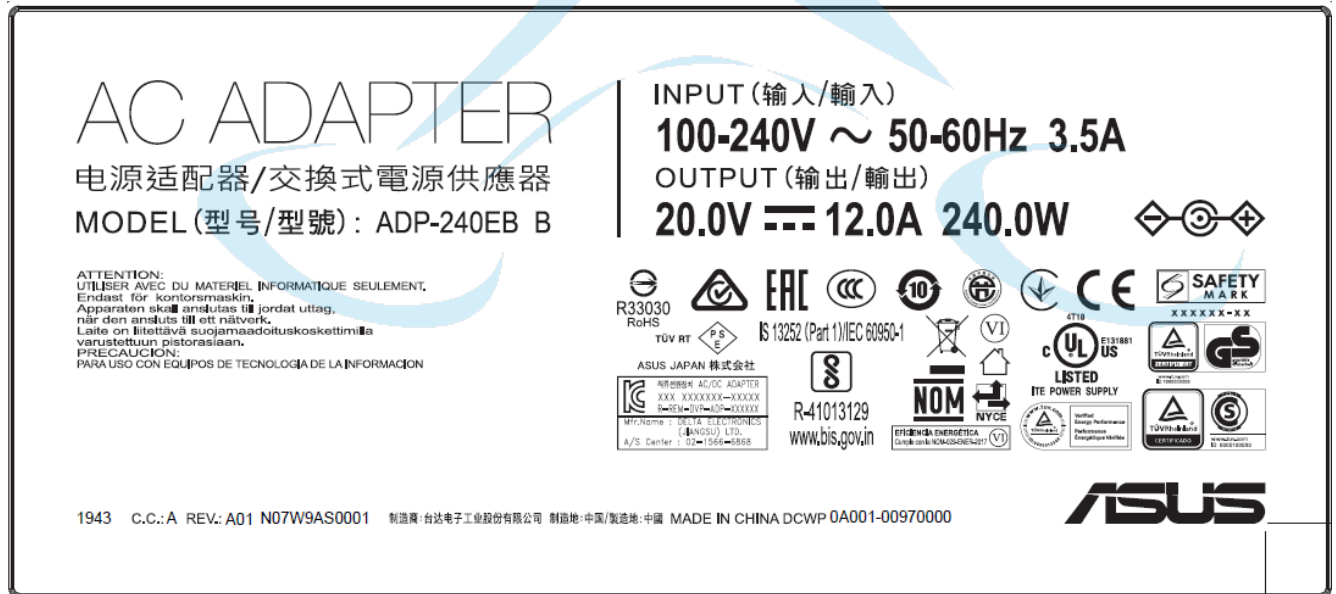
**Copy of marking plate:**



**TRADE MARK**



**COPY OF MARKING PLATE**



**MARKING PLATE OF AC ADAPTER**



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Table – List of Attachments		
Attachment No.	Attachment Description	No. of pages in Attachment
Attachment-1	Photo Documents	104-105
<b>General remarks:</b> 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.		
<b>Possible test case verdicts:</b> - 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)		
<b>Testing</b> ..... : Date of receipt of test item ..... : 22/11/2021 Date(s) of performance of tests ..... : 22/11/2021 to 07/12/2021		
<b>Laboratory conditions</b> ..... : Ambient Temperature ..... : (25±3)°C Ambient Humidity ..... : <70% RH		




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<b>Test item particulars</b> .....	<b>Notebook PC</b>
Equipment mobility.....	<input checked="" type="checkbox"/> movable <input type="checkbox"/> hand-held <input checked="" type="checkbox"/> transportable <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in
Connection to the mains .....	<input type="checkbox"/> pluggable equipment <input type="checkbox"/> type A <input type="checkbox"/> type B <input type="checkbox"/> permanent connection <input type="checkbox"/> detachable power supply cord <input type="checkbox"/> non-detachable power supply cord <input checked="" type="checkbox"/> not directly connected to the mains
Operating condition .....	<input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time:
Access location .....	<input checked="" type="checkbox"/> operator accessible <input type="checkbox"/> restricted access location
Over voltage category (OVC) .....	<input type="checkbox"/> OVC I <input type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input checked="" type="checkbox"/> other: SELV
Mains supply tolerance (%) or absolute mains supply values .....	N/A
Class of equipment .....	<input type="checkbox"/> Class I <input type="checkbox"/> Class II <input checked="" type="checkbox"/> Class III <input type="checkbox"/> Not classified
Considered current rating of protective device as a part of the building installation (A) .....	N/A
Pollution degree (PD) .....	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
IP protection class .....	IPX0
Altitude during operation (m) .....	Up to 2000
Altitude of test laboratory (m) .....	< 1000
Mass of equipment (kg) .....	2.500Kg

**Abbreviations that may be used throughout this test report:**

PE/PB.....: protective earth/protective bonding	Pri.....: primary
CB.....: circuit breaker	sec.....: secondary
(SW)PS.....: (switching) power supply	gnd.....: ground
HV.....: high voltage	I/O.....: input/output
PCB.....: printed circuit (wiring) board	ii.....: installation instruction
TIW.....: triple insulated wire	PSU.....: Power Supply Unit
B/I.....: built-in application (compliance shall be guarantee in host equipment)	
F/B/S/R: Functional/Basic/Supplementary/Reinforced Insulation	

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<b>General product information:</b>	
<b>1) Application details / Description of the product:</b>	
<p>Equipment under test is <b>Notebook PC</b> of Model: <b>GX650RM</b> having rated input:+ 20V  12A, 240W which as supported through certified AC ADAPTER having rated INPUT: 100-240V~ 50-60Hz 3.5A &amp; OUTPUT: 20.0V  12.0A 240.0W, having Certified Rechargeable Li-polymer Battery pack of rating: +15.4V  90Wh, Capacity: 5845mAh(Typical )/5675mAh(Rated)</p> <p>The equipment has been tested by giving input of 20Vdc through DC source available in the lab.</p>	
<b>Max. Specified ambient temperature (°C).....:</b>	35°C
<b>2) Similarities.....:</b>	N/A
<b>3) Differences between the models.....:</b>	N/A
<b>Model No. tested with-in the family series.....:</b>	N/A
<b>4) Options:</b>	
<p>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.</p>	

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Tests relating to General Requirements

**EL 2100 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
1.5	Components*	EL 2100-00	Verification of approvals with due correlation between the components used and the approval certificates submitted (See table 1.5.1)	P
1.5.1	General:	EL 2100-01	See below	P
	Components shall be complying with IEC 60950-1 or relevant component standard.		Complied	P
	Components and subassemblies approved for IEC 62368-1 can be considered as complying with this standard			P
1.5.2	Evaluation and testing of components	EL 2100-02	Component certified to IEC standard and/or their harmonized standards are used within their ratings. (See table 1.5.1)	P
1.5.3	Thermal controls	EL 2100-03	No thermal controls	N/A
1.5.4	Transformers	EL 2100-04	Certified adapter used	P
1.5.5	Interconnecting cables*	EL 2100-05	Interconnecting cables used	P
1.5.6	Capacitors bridging insulation *	EL 2100-06	Certified adapter used	P
1.5.7	Resistors bridging insulation	EL 2100-07	Certified adapter used	P
1.5.7.1	Resistors bridging functional, basic or supplementary insulation*	EL 2100-08	See above Cl.No.1.5.7	P
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits	EL 2100-09	See above Cl.No.1.5.7	P
1.5.7.3	Resistors bridging double insulation or reinforced insulation between the a.c. mains supply and circuits connected to an antenna or coaxial cable	EL 2100-10	No such circuits	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	Certified adapter used	P

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Tests relating to General Requirements

**EL 2100 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
1.5.9.1	General*	EL 2100-13	See above Cl.No.1.5.9	P
1.5.9.2	Protection of VDRs*	EL 2100-14	See above Cl.No.1.5.9	P
1.5.9.3	Bridging of functional insulation by a VDR*	EL 2100-15	See above Cl.No.1.5.9	P
1.5.9.4	Bridging of basic insulation by a VDR*	EL 2100-16	See above Cl.No.1.5.9	P
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR*	EL 2100-17	See above Cl.No.1.5.9	P

\*-Total number of Requirements to be observed / inspected =10  
 Total No of applicable Requirement =09  
 No of Requirements for which the sample passed =09

Total number of tests to be conducted =08  
 Total No of applicable Tests =06  
 No. of tests for which the sample passed =06

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

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Tests relating to Electrical Safety

**EL 2101 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
1.6	Power interface*	EL 2101-00		P
1.6.1	AC power distribution systems*	EL 2101-01	Equipment not directly connected to mains	N/A
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 III equipment	N/A

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

Total No of applicable Requirement =01

No of Requirements for which the sample passed =01

Total number of tests to be conducted =01

Total No of applicable Tests =01

No. of tests for which the sample passed =01




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

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Tests relating to Marking Requirements

**EL 2102 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
1.7	Marking and instructions*	EL 2102-00		P
1.7.1	Power rating and identification markings		See below	P
1.7.1.1	Power rating marking*	EL 2102-01	See below	P
	Rated voltage(s) or voltage ranges(s) (V)*.	EL 2102-02	+20V 	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	DC  Symbol used	P
	Rated frequency or rated frequency range (Hz) *:	EL 2102-05	DC supply used	N/A
	Rated current (mA or A)*:	EL 2102-06	12A	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		P
	Model identification or type reference *:	EL 2102-09	<b>GX650RM</b>	P
	Symbol for Class II equipment only*:	EL 2102-10	Class III equipment	N/A
	Other markings and symbols*:	EL 2102-11	Other markings and symbols do not give rise to misunderstandings	P
1.7.1.3	Use of graphical symbols*	EL 2102-12		P
1.7.2	Safety instructions and marking*	EL 2102-13	Instructions manual provided	P
1.7.2.1	General	EL 2102-14	See above	P
1.7.2.2	Disconnect devices*	EL 2102-15	Not directly connected to mains	N/A
1.7.2.3	Over current protective devices*	EL 2102-16	No such protective devices used	N/A
1.7.2.4	IT power distribution systems*	EL 2102-17	Not for IT power distribution systems	N/A
1.7.2.5	Operator access with a tool*	EL 2102-18	No tools required	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 such voltage adjustment	N/A

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Tests relating to Marking Requirements

**EL 2102 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
1.7.5	Power outlets on the equipment*	EL 2102-22	No such power outlets	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) Fuse(s) shall clearly and adequately marked with fuse number and rating*.	EL 2102-23	Certified adapter used	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 III equipment	N/A
1.7.7.2	Terminals for a.c. mains supply conductors*	EL 2102-26	Not directly connected to mains	N/A
1.7.7.3	Terminals for d.c. mains supply conductors*	EL 2102-27	No dc mains supply	N/A
1.7.8	Controls and indicators	EL 2102-28	See below	P
1.7.8.1	Identification, location and marking*:	EL 2102-29	Functions of controls affecting safety are obvious regardless of language	P
1.7.8.2	Colors*	EL 2102-30	Only functional indicators are color	P
1.7.8.3	Symbols according to IEC 60417*:	EL 2102-31	Stand-by symbol used	P
1.7.8.4	Markings using figures* :	EL 2102-32	No 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 such components	N/A
1.7.11	Durability	EL 2102-35	Markings were legible and durable after test	P
1.7.12	Removable parts*	EL 2102-36	No such removable parts	N/A
1.7.13	Replaceable batteries*	EL 2102-37		N/A
	Language(s)			N/A
1.7.14	Equipment for restricted access locations*	EL 2102-38	Not for restricted access locations	N/A

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*-Total number of Requirements to be observed / inspected	=35
Total No of applicable Requirement	=15
No of Requirements for which the sample passed	=15
Total number of tests to be conducted	=04
Total No of applicable Tests	=03
No. of tests for which the sample passed	=03

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

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(Approving Authority)

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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	Equipment powered by SELV only	P
2.1.1.1	Access to energized parts	EL 2103-02	See above Cl.No.2.1.1	P
	Test by inspection :		See above Cl.No.2.1.1	P
	Test with test finger (Figure 2A)		See above Cl.No.2.1.1	N/A
	Test with test pin (Figure 2B):		See above Cl.No.2.1.1	N/A
	Test with test probe (Figure 2C)		No TNV circuits	N/A
2.1.1.2	Battery compartments *	EL 2103-03	No battery compartments	N/A
2.1.1.3	Access to ELV wiring	EL 2103-04	No ELV wiring	N/A
	Working voltage (V <sub>peak</sub> or V <sub>rms</sub> ); minimum distance through insulation (mm)		See above Cl.No.2.1.1.3	N/A
2.1.1.4	Access to hazardous voltage circuit wiring	EL 2103-05	No hazardous voltage circuit wiring	N/A
2.1.1.5	Energy hazards :	EL 2103-06	Powered by SELV only	P
2.1.1.6	Manual controls	EL 2103-07	No manual controls	N/A
2.1.1.7	Discharge of capacitors in equipment		Certified adapter used	P
	Measured voltage (V); time-constant (s):	EL 2103-08	See above Cl.No.2.1.1.7	P
2.1.1.8	Energy hazards – d.c. mains supply		No dc mains supply	N/A
	a) Capacitor connected to the d.c. mains supply :	EL 2103-09	See above Cl.No.2.1.1.8	N/A
	b) Internal battery connected to the d.c. mains supply :	EL 2103-10	See above Cl.No.2.1.1.8	N/A
2.1.1.9	Audio amplifiers to be tested according to IEC 60065, cl. 9.1.1.:	EL 2103-11	Complies	P
2.1.2	Protection in service access areas	EL 2103-12	Class III equipment	N/A
2.1.3	Protection in restricted access locations	EL 2103-13	Not for restricted access locations	N/A

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\*-Total number of Requirements to be observed / inspected =03  
Total No of applicable Requirement =02  
No of Requirements for which the sample passed =02  
  
Total number of tests to be conducted =11  
Total No of applicable Tests =04  
No. of tests for which the sample passed =04

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

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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	Class III equipment supplied by separately certified adapter	P
2.2.2	Voltages under normal conditions	EL 2104-01	See above cl. no. 2.2	P
2.2.3	Voltages under fault conditions	EL 2104-02	See above cl. no. 2.2	P
2.2.4	Connection of SELV circuits to other circuits* :	EL 2104-03	See above cl. no. 2.2	P

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

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

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Tests relating to Electrical Safety

EL 2105 – V1.4

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

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

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

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

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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	Certified adapter used	P
2.4.1	General requirements *	EL 2106-01	See above Cl.No.2.4	P
2.4.2	Limit values	EL 2106-02	See above Cl.No.2.4	P
2.4.3	Connection of limited current circuits to other circuits*	EL 2106-03	See above Cl.No.2.4	P

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

Total No of applicable Requirement =03

No of Requirements for which the sample passed =03

Total number of tests to be conducted =01

Total No of applicable Tests =01

No. of tests for which the sample passed =01

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

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Tests relating to Electrical Safety

**EL 2107 – V1.4**

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

*-Total number of Requirements to be observed / inspected	=01
Total No of applicable Requirement	=01
No of Requirements for which the sample passed	=01
Total number of tests to be conducted	=06
Total No of applicable Tests	=02
No. of tests for which the sample passed	=02

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

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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 III equipment	N/A
2.6.1	Protective earthing	EL 2108-01	See above Cl.No.2.6	N/A
2.6.2	Functional earthing : The Functional earthing either separated from hazardous voltages by double or reinforced insulation or by protectively earthed screen or conductive part separated by at least basic insulation, or safely connected to Protective Bonding Conductor.*	EL 2108-02	See above Cl.No.2.6	N/A
	Use of symbol for functional earthing:*	EL 2108-03	See above Cl.No.2.6	N/A
2.6.3	Protective earthing and protective bonding conductors*	EL 2108-04	See above Cl.No.2.6	N/A
2.6.3.2	Size of protective earthing conductors	EL 2108-05	See above Cl.No.2.6	N/A
	Rated current (A), cross-sectional area (mm <sup>2</sup> ),		See above Cl.No.2.6	N/A
2.6.3.3	Size of protective bonding conductors	EL 2108-06	See above Cl.No.2.6	N/A
	Protective current Rating (A), cross-sectional area (mm <sup>2</sup> )		See above Cl.No.2.6	N/A
2.6.3.4	Resistance of earthing conductors and their terminations; resistance ( $\Omega$ ), voltage drop (V), test current (A), duration (min):	EL 2108-07	See above Cl.No.2.6	N/A
2.6.3.5	Colour of insulation*:	EL 2108-08	See above Cl.No.2.6	N/A
2.6.4	Terminals		See above Cl.No.2.6	N/A
2.6.4.2	Protective earthing and bonding terminals : Rated current(A), Type, Nominal thread diameter (mm)	EL 2108-09	See above Cl.No.2.6	N/A
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors*	EL 2108-10	See above Cl.No.2.6	N/A
2.6.5	Integrity of protective earthing*		See above Cl.No.2.6	N/A
2.6.5.1	Interconnection of equipment*	EL 2108-11	See above Cl.No.2.6	N/A

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

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

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

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

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 (Approving Authority)

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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	Certified adapter used	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.		Class III equipment powered by Certified adapter and battery	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	Certified adapter used	P
2.7.3	Short-circuit backup protection	EL 2109-03	See above Cl.No.2.7.2	P
2.7.4	Number and location of protective devices :	EL 2109-04	See above Cl.No.2.7.2	P
2.7.5	Protection by several devices*	EL 2109-05	See above Cl.No.2.7.2	P
2.7.6	Warning to service personnel* :	EL 2109-06	No warning to service personnel required	N/A

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

Total No of applicable Requirement =03

No of Requirements for which the sample passed =03

Total number of tests to be conducted =03

Total No of applicable Tests =03

No. of tests for which the sample passed =03

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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		N/A
2.8.1	General principles*	EL 2110-01		N/A
2.8.2	Protection requirements	EL 2110-02		N/A
2.8.3	Inadvertent reactivation	EL 2110-03		N/A
2.8.4	Fail-safe operation	EL 2110-04		N/A
2.8.5	Moving parts	EL 2110-05		N/A
2.8.6	Overriding*	EL 2110-06		N/A
2.8.7	Switches, relays and their related circuits	EL 2110-07		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits`	EL 2110-08		N/A
2.8.7.2	Overload test	EL 2110-09		N/A
2.8.7.3	Endurance test	EL 2110-10		N/A
2.8.7.4	Electric strength test	EL 2110-11		N/A
2.8.8	Mechanical actuators	EL 2110-12		N/A

*-Total number of Requirements to be observed / inspected	=03
Total No of applicable Requirement	=00
No of Requirements for which the sample passed	=N/A
Total number of tests to be conducted	=10
Total No of applicable Tests	=00
No. of tests for which the sample passed	=N/A

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

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(Approving Authority)

TRF No. BIS\_IT/LNT\_IS13252\_V1.4

**ALPHA TEST HOUSE**

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Tests relating to Electrical Safety

**EL 2111 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
2.9	Electrical insulation*	EL 2111-00	See below	P
2.9.1	Properties of insulating materials*	EL 2111-01	Natural rubber, materials containing asbestos and hygroscopic materials are not used as insulation	P
2.9.2	Humidity conditioning	EL 2111-02	Class III equipment	N/A
	Relative Humidity : 93 ±3 %, Temperature: t at 40 ± 2°C Duration : 120 hours		Class III equipment	N/A
2.9.3	Grade of insulation*	EL 2111-03	Functional insulation	P
2.9.4	Separation from hazardous voltages*	EL 2111-04	Certified adapter used	P
	Method(s) used		See above Cl.No.2.9.4	P

*-Total number of Requirements to be observed / inspected	=04
Total No of applicable Requirement	=04
No of Requirements for which the sample passed	=04
Total number of tests to be conducted	=01
Total No of applicable Tests	=00
No. of tests for which the sample passed	=N/A

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

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Tests relating to Electrical Safety

**EL 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	DC supply	N/A
2.10.1.2	Pollution degrees*	EL 2112-02	Pollution degree 2	P
2.10.1.3	Reduced values for functional insulation	EL 2112-03	Complies with Cl.No.5.3.4c)	P
2.10.1.4	Intervening unconnected conductive parts	EL 2112-04	Certified adapter used	P
2.10.1.5	Insulation with varying dimensions	EL 2112-05	Certified adapter used	P
2.10.1.6	Special separation requirements	EL 2112-06	Certified adapter used	P
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	Certified adapter used	P
2.10.2.2	RMS working voltage	EL 2112-09	See above Cl.No.2.10.2	P
2.10.2.3	Peak working voltage	EL 2112-10	See above Cl.No.2.10.2	P
2.10.3	Clearances	EL 2112-11	Certified adapter used	P
2.10.3.1	General	EL 2112-12	Certified adapter used	P
2.10.3.2	Mains transient voltages*		See below	P
	a) AC mains supply * :	EL 2112-13	Certified adapter used	P
	b) Earthed d.c. mains supplies* .....	EL 2112-14	No dc mains supply	N/A
	c) Unearthed d.c. mains supplies* :	EL 2112-15	No dc mains supply	N/A
	d) Battery operation* :	EL 2112-16		N/A
2.10.3.3	Clearances in primary circuits	EL 2112-17	See above Cl.No.2.10.3	P
2.10.3.4	Clearances in secondary circuits	EL 2112-18	See above Cl.No.2.10.3	P
2.10.3.5	Clearances in circuits having starting pulses	EL 2112-19	No such circuits	N/A
2.10.3.6	Transients from a.c. mains supply :	EL 2112-20	Certified adapter used	P
2.10.3.7	Transients from d.c. mains supply :	EL 2112-21	No dc mains supply	N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems .....	EL 2112-22	No telecommunication networks and cable distribution systems	N/A
2.10.3.9	Measurement of transient voltages			N/A
	a) Transients from a mains supply	EL 2112-23		N/A

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	For an a.c. mains supply			N/A
	For a d.c. mains supply			N/A
	b) Transients from a telecommunication network	EL 2112-24		N/A
2.10.4	Creepage distances*	EL 2112-25	Certified adapter used	P
2.10.4.1	General	EL 2112-26	Certified adapter used	P
2.10.4.2	Material group and comparative tracking index : CTI tests*	EL 2112-27	Material group IIIb assumed	P
2.10.4.3	Minimum creepage distances	EL 2112-28	See above Cl.No.2.10.4	P
2.10.5	Solid insulation	EL 2112-29	Certified adapter used	P
2.10.5.1	General	EL 2112-30	See above Cl.No.2.10.5	P
2.10.5.2	Distances through insulation	EL 2112-31	See above Cl.No.2.10.5	P
2.10.5.3	Insulating compound as solid insulation	EL 2112-32	See above Cl.No.2.10.5	P
2.10.5.4	Semiconductor devices	EL 2112-33		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	See above Cl.No.2.10.5	P
2.10.5.7	Separable thin sheet material	EL 2112-36	See above Cl.No.2.10.5	P
2.10.5.8	Non-separable thin sheet material	EL 2112-37	See above Cl.No.2.10.5	P
2.10.5.9	Thin sheet material – standard test procedure	EL 2112-38	Certified adapter used	P
	Electric strength test as per Cl.5.2.2		See above Cl.No.2.10.5.9	P
2.10.5.10	Thin sheet material – alternative test procedure	EL 2112-39	Certified adapter used	P
	Electric strength test as per Cl.5.2.2		See above Cl.No.2.10.5.10	P
2.10.5.11	Insulation in wound components	EL 2112-40	Certified adapter used	P
2.10.5.12	Wire in wound components		Certified adapter used	P
	If Peak Working voltage >71 V		See above Cl.No.2.10.5.12	P
	a) Basic insulation not under stress	EL 2112-41	See above Cl.No.2.10.5.12	P
	b) Basic, supplementary, reinforced insulation	EL 2112-42	See above Cl.No.2.10.5.12	P
	c) Compliance with Annex U	EL 2112-43		N/A
	d) Where two winding wires in contact inside wound component; angle between 45° and 90°	EL 2112-44	Certified adapter used	P
2.10.5.13	Wire with solvent-based enamel in wound components		No such construction	N/A

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	a) Electric strength test (Type test as per Cl.5.2.2)	EL 2112-45	See above Cl.No.2.10.5.13	N/A
	b) Electric Strength test (Routine test as per Cl.5.2.2)	EL 2112-46	See above Cl.No.2.10.5.13	N/A
2.10.5.14	Additional insulation in wound components		Certified adapter used	P
	If Peak Working Voltage >71V		See above Cl.No.2.10.5.14	P
	a) Basic insulation not under stress	EL 2112-47	See above Cl.No.2.10.5.14	P
	b) Supplementary, reinforced insulation	EL 2112-48	See above Cl.No.2.10.5.14	P
2.10.6	Construction of printed boards*		uncoated printed board used	P
2.10.6.1	Uncoated printed boards	EL 2112-49	See above Cl.No.2.10.6	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*		No such construction	N/A
	a) Minimum Thickness of insulation: 0.4mm or	EL 2112-52	See above Cl.No.2.10.6.4	N/A
	b) Confirm with one of the specification and pass the relevant tests as per Table 2R	EL 2112-53	See above Cl.No.2.10.6.4	N/A
2.10.7	Component external terminations	EL 2112-54	No such external terminations	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	See above Cl.No.2.10.8	N/A
2.10.8.2	Thermal conditioning	EL 2112-56	See above Cl.No.2.10.8	N/A
2.10.8.3	Electric strength test	EL 2112-57	See above Cl.No.2.10.8	N/A
2.10.8.4	Abrasion resistance test	EL 2112-58	See above Cl.No.2.10.8	N/A
2.10.9	Thermal cycling	EL 2112-59	Certified adapter used	P
2.10.10	Test for Pollution Degree 1 environment and insulating compound	EL 2112-60	Pollution degree 2	N/A
2.10.11	Tests for semiconductor devices and cemented joints	EL 2112-61		N/A
2.10.12	Enclosed and sealed parts	EL 2112-62	No enclosed and sealed parts	N/A

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

Total No of applicable Requirement =05

No of Requirements for which the sample passed =05

Total number of tests to be conducted =53

Total No of applicable Tests =31

No. of tests for which the sample passed =31

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

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Tests relating to 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	Internal wiring used in secondary circuit	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	Complies	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 such construction	N/A
3.1.6	Screws for electrical contact pressure*	EL 2113-06	See above cl. no. 3.1.5	N/A
3.1.7	Insulating materials in electrical connections*	EL 2113-07	See above cl. no. 3.1.5	N/A
3.1.8	Self-tapping and spaced thread screws*	EL 2113-08	See above cl. no. 3.1.5	N/A
3.1.9	Termination of conductors : 10 N pull test	EL 2113-09	See above cl. no. 3.1.5	N/A
3.1.10	Sleeving on wiring*	EL 2113-10	See above cl. no. 3.1.5	N/A

*-Total number of Requirements to be observed / inspected	= 07
Total No of applicable Requirement	= 03
No of Requirements for which the sample passed	= 03
Total number of tests to be conducted	= 04
Total No of applicable Tests	= 02
No. of tests for which the sample passed	= 02

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Tests relating to Wiring

**EL 2114 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
3.2	Connection to a mains supply*	EL 2114-00		P
3.2.1	Means of connection		See below	P
3.2.1.1	Connection to an a.c. mains supply*	EL 2114-01	Certified adapter used (Equipment not directly connected to mains)	P
	As per IS 13252 (Part 1): 2010 Cl.No.3.2.1.1,  Note: It is a legal requirement to provide a plug that complies with the national wiring rules.		ISI marked plug used (See table 1.5.1)	P
3.2.1.2	Connection to a d.c. mains supply*	EL 2114-02	No dc mains supply	N/A
3.2.2	Multiple supply connections	EL 2114-03	No multiple supply connection	N/A
3.2.3	Permanently connected equipment	EL 2114-04	Not a permanently connected equipment	N/A
3.2.4	Appliance inlets: Are so Located that parts at hazardous voltage are not accessible during insertion or removal of the connector, connector can be inserted without difficulty and after insertion of the connector, the equipment is not supported by the connector for any position of normal use on a flat surface ( appliance inlets complying with IEC 60309 or IEC 60320 considered to comply with this requirement.	EL 2114-05		N/A
3.2.5	Power supply cords		Certified power supply cord used	P
3.2.5.1	AC power supply cords*	EL 2114-06	See above Cl. No. 3.2.5	P
	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG		See above Cl. No. 3.2.5	P
3.2.5.2	DC power supply cords*	EL 2114-07	No DC power supply cord	N/A
3.2.6	Cord anchorages and strain relief			N/A
	Mass of the equipment: Pull Force (N):	EL 2114-08		N/A

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	b) Longitudinal displacement: 2 mm (Max)	EL 2114-09		N/A
3.2.7	Protection against mechanical damage	EL 2114-10		N/A
3.2.8	Cord guards			N/A
	a) Diameter or minor dimension D (mm) : Test mass (g) :	EL 2114-11		N/A
	b) Radius of curvature of cord : 1.5 D (Min)	EL 2114-12		N/A
3.2.9	Supply wiring space	EL 2114-13		N/A

\*-Total number of Requirements to be observed / inspected =05  
 Total No of applicable Requirement =03  
 No of Requirements for which the sample passed =03  
  
 Total number of tests to be conducted =09  
 Total No of applicable Tests =00  
 No. of tests for which the sample passed =N/A

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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		N/A
3.3.1	Wiring terminals*	EL 2115-01		N/A
3.3.2	Connection of non-detachable power supply cords	EL 2115-02		N/A
3.3.3	Screw terminals*	EL 2115-03		N/A
3.3.4	Conductor sizes to be connected	EL 2115-04		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm <sup>2</sup> )			N/A
3.3.5	Wiring terminal sizes	EL 2115-05		N/A
	Rated current (A), type, nominal thread diameter (mm)			N/A
3.3.6	Wiring terminal design	EL 2115-06		N/A
3.3.7	Grouping of wiring terminals*	EL 2115-07		N/A
3.3.8	Stranded wire	EL 2115-08		N/A

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

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

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Tests relating to Wiring

**EL 2116 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
3.4	Disconnection from the mains supply*	EL 2116-00	See below	P
3.4.1	General Requirement A disconnect device or devices shall be provided to disconnect the equipment from the mains supply for servicing.	EL 2116-01	Equipment not directly connected to mains (Connected through certified adapter)	N/A
3.4.2	Disconnect devices*	EL 2116-02	See above	N/A
3.4.3	Permanently connected equipment*	EL 2116-03	Not a permanently connected equipment	N/A
3.4.4	Parts which remain energized*	EL 2116-04	No such parts	N/A
3.4.5	Switches in flexible cords*	EL 2116-05	No such flexible cords	N/A
3.4.6	Number of poles - single-phase and d.c. equipment*	EL 2116-06	Certified adapter used	P
3.4.7	Number of poles - three-phase equipment*	EL 2116-07	No such 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	Class III equipment	N/A
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 =02  
 No of Requirements for which the sample passed =02

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

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Tests relating to Wiring

EL 2117 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
3.5	Interconnection of equipment*	EL 2117-00		P
3.5.1	General requirements*	EL 2117-01	See below	P
3.5.2	Types of interconnection circuits*	EL 2117-02	SELV to SELV connections only	P
3.5.3	ELV circuits as interconnection circuits *	EL 2117-03	No ELV circuit	N/A
3.5.4	Data ports for additional equipment	EL 2117-04	Complies with 2.5	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

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Tests relating to Mechanical Properties

**EL 2118 – V1.4**

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

*-Total number of Requirements to be observed / inspected	=01
Total No of applicable Requirement	=01
No of Requirements for which the sample passed	=01
Total number of tests to be conducted	=04
Total No of applicable Tests	=00
No. of tests for which the sample passed	=N/A

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Tests relating to Mechanical Properties

EL 2119 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4.2	Mechanical Strength	EL 2119-00		P
4.2.1	General	EL 2119-01	See below	P
4.2.2	Steady force test, 10 N	EL 2119-02	Force applied on keypad button Result: No damage, No hazards	P
4.2.3	Steady force test, 30 N	EL 2119-03	No such parts	N/A
4.2.4	Steady force test, 250 N	EL 2119-04	Force applied on each side of the enclosure Result: No damage, No hazardous	P
4.2.5	Impact test	EL 2119-05	Transportable equipment	N/A
	a) Fall test as per Fig. 4A	EL 2119-06	See above Cl.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 from a height of 1000mm. Result: No damage, no hazards	P
4.2.7	Stress relief test	EL 2119-09	Metallic Enclosure used	N/A
4.2.8	Cathode Ray Tubes	EL 2119-10		N/A
4.2.9	High Pressure Lamps*	EL 2119-11	No high pressure lamps used	N/A
4.2.10	Wall or ceiling mounted equipment; force(N)	EL 2119-12	Not a wall or ceiling mounted equipment	N/A

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

Total number of tests to be conducted =12  
 Total No of applicable Tests =05  
 No. of tests for which the sample passed =05

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

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TRF No. BIS\_IT/LNT\_IS13252\_V1.4

**ALPHA TEST HOUSE**

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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 or corners accessible to operators are rounded and smoothed	P
4.3.2	Handles and manual controls; force (N)	EL 2120-02	Handles and manual controls are not used	N/A
4.3.3	Adjustable controls	EL 2120-03	No such controls used	N/A
4.3.4	Securing of parts	EL 2120-04	Parts are secured against mechanical stresses occurring in normal use	P
4.3.5	Connections by Plugs and Sockets*	EL 2120-05	No misconnection to create hazards	P
4.3.6	Direct plug-in equipment	EL 2120-06	No direct plug in equipment	N/A
	Torque	EL 2120-07	See above Cl.No.4.3.6	N/A
	Compliance with the relevant mains plug standard	EL 2120-08	See above Cl.No.4.3.6	N/A
4.3.7	Heating elements in earthed equipment*	EL 2120-09	No heating elements used	N/A
4.3.8	Batteries Portable secondary sealed cells and batteries (other than button) containing alkaline or other non-acid electrolyte shall comply with IEC 62133			N/A
	a) Overcharging of a rechargeable battery	EL 2120-10		N/A
	b) Unintentional charging of a non-rechargeable battery	EL 2120-11		N/A
	c) Reverse charging of a rechargeable battery	EL 2120-12		N/A
	d) Excessive discharging rate for any battery	EL 2120-13		N/A
	e) Electric strength as per Cl.5.3.9.2	EL 2120-14		N/A
4.3.9	Oil & grease*	EL 2120-15		N/A
4.3.10	Dust, powders, liquids and gases	EL 2120-16		N/A
4.3.11	Containers for liquids or gases	EL 2120-17		N/A
4.3.12	Flammable liquids	EL 2120-18		N/A
4.3.13	Radiation			N/A
4.3.13.2	Ionizing radiation	EL 2120-19		N/A

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4.3.13.3	Effect of ultraviolet (UV) radiation on materials	EL 2120-20	N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation	EL 2120-21	N/A
4.3.13.5	Lasers (including laser diodes) and LED's:		N/A
4.3.13.5.1	Lasers (including laser diodes) For laser see IEC 60825-1, respective part as applicable.	EL 2120-22	N/A
	Laser class .....		N/A
4.3.13.5.2	Light emitting diodes (LED's)	EL 2120-23	N/A
4.3.13.6	Other types*	EL 2120-24	N/A

\*-Total number of Requirements to be observed / inspected =06  
 Total No of applicable Requirement =03  
 No of Requirements for which the sample passed =03

Total number of tests to be conducted =19  
 Total No of applicable Tests =01  
 No. of tests for which the sample passed =01

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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		P
4.4.1	General	EL 2121-01		P
4.4.2	Protection in operator access areas	EL 2121-02	The equipment enclosure prevents to access the blades of DC fan	P
4.4.3	Protection in restricted access locations *	EL 2121-03	The equipment is not intended to be used in restricted locations	N/A
4.4.4	Protection in service access areas*	EL 2121-04	Unintentional contact to moving part is not possible during service operation	P
4.4.5	Protection against moving fan blades	EL 2121-05	The equipment enclosure prevents to access the blades of DC fan.	P
4.4.5.1	General*	EL 2121-06	See above cl.no.4.4.5	P
	Not considered likely to cause pain or injury. a).....:	EL 2121-07	See above cl.no.4.4.5	P
	Is considered likely to cause pain, not injury. b)	EL 2121-08	See above cl.no.4.4.5	N/A
	Considered likely to cause injury. c).....:	EL 2121-09	See above cl.no.4.4.5	N/A
4.4.5.2	Protection for users*	EL 2121-10	See above cl.no.4.4.5	N/A
	Use of symbol or warning*	EL 2121-11	See above cl.no.4.4.5	N/A
4.4.5.3	Protection for service persons*	EL 2121-12	See above cl.no.4.4.5	N/A
	Use of symbol or warning *	EL 2121-13	See above cl.no.4.4.5	N/A

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

Total number of tests to be conducted =07  
 Total No of applicable Tests =05  
 No. of tests for which the sample passed =05

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

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Tests relating to Thermal Properties

**EL 2122 – V1.4**

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

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

Total No of applicable Requirement =03

No of Requirements for which the sample passed =03

Total number of tests to be conducted =03

Total No of applicable Tests =03

No. of tests for which the sample passed =03

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Tests relating to Mechanical Properties

EL 2123 – V1.4

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4.6	Openings in enclosures*	EL 2123-00	See below	P
4.6.1	Top and side openings	EL 2123-01	No such construction	N/A
	Dimensions (mm) :			N/A
4.6.2	Bottoms of fire enclosures :	EL 2123-02		N/A
	Construction of the bottom, dimensions (mm) :			N/A
4.6.3	Doors or covers in fire enclosures*	EL 2123-03		N/A
4.6.4	Openings in transportable equipment	EL 2123-04	Complies	P
4.6.4.1	Constructional design measures	EL 2123-05		P
	Dimensions (mm)		29.26x0.98	P
4.6.4.2	Evaluation measures for larger openings	EL 2123-06		N/A
4.6.4.3	Use of metallized parts	EL 2123-07	No metallized parts	N/A
4.6.5	Adhesives for constructional purposes: Compliance is checked by examination of the construction and of the available data. If such data is not available, compliance is checked by the following tests.	EL 2123-08	No adhesives used	N/A
	a) Temperature Conditioning at : 100 °C ± 2 °C for one week; or 90 °C ± 2 °C for three weeks; or 82 °C ± 2 °C for eight weeks.	EL 2123-09	See above Cl. No. 4.6.5	N/A
	After temperature conditioning b) Leave the sample between 20°C to 30°C for 1 hour	EL 2123-10	See above Cl. No. 4.6.5	N/A
	c) Place the sample at - 40°C±2°C for 4 hours	EL 2123-11	See above Cl. No. 4.6.5	N/A
	d) Remove and allow the sample to come to any convenient temperature between 20 °C and 30 °C for 8 h;	EL 2123-12	See above Cl. No. 4.6.5	N/A

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

\*-Total number of Requirements to be observed / inspected =02  
 Total No of applicable Requirement =01  
 No of Requirements for which the sample passed =01  
  
 Total number of tests to be conducted =16  
 Total No of applicable Tests =01  
 No. of tests for which the sample passed =01

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Tests relating to Fire Safety

**EL 2124 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
4.7	Resistance to fire*	EL 2124-00	See below	P
4.7.1	Reducing the risk of ignition and spread of flame		See below	P
	Method 1, selection and application of components wiring and materials OR	EL 2124-01	Method 1 used (see table 1.5.1)	P
	Method 2, application of all of simulated fault condition tests	EL 2124-02	Method 2 not used	N/A
4.7.2	Conditions for a fire enclosure*		See below	P
4.7.2.1	Parts requiring a fire enclosure*	EL 2124-03	Class III equipment powered by SELV only	P
4.7.2.2	Parts not requiring a fire enclosure	EL 2124-04	The fire enclosure required to covers all parts	N/A
4.7.3	Materials*	EL 2124-05	Certified materials used (See table 1.5.1)	P
4.7.3.1	General*	EL 2124-06	See below	P
	a)Class of material used*	EL 2124-07	Certified material used (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		N/A
	c) Where it is not practical to protect components against overheating under fault conditions, the components shall be mounted on V-1 CLASS MATERIAL. Additionally, such components shall be separated from material of a class lower than V-1 CLASS MATERIAL by at least 13 mm of air, or by a solid barrier of V-1 CLASS MATERIAL.	EL 2124-09	Certified material used (See table 1.5.1)	P

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4.7.3.2	Materials for fire enclosures		Metallic Enclosure used	N/A
	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	See above cl. no. 4.7.3.2	N/A
	b) For MOVABLE EQUIPMENT having a total mass exceeding 18 kg and for all STATIONARY EQUIPMENT, the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of 5VB CLASS MATERIAL or shall pass the test of Clause A.1.	EL 2124-11	See above cl. no. 4.7.3.2	N/A
	c) Materials for components that fill an opening in a FIRE ENCLOSURE, and that are intended to be mounted in this opening shall : be of V-1 CLASS MATERIAL; or pass the tests of Clause A.2; or comply with the flammability requirements of the relevant IEC component standard	EL 2124-12		N/A
	d) Plastic materials of a FIRE ENCLOSURE shall be located more than 13 mm through air from arcing parts such as unenclosed commutators and unenclosed switch contacts.	EL 2124-13	No such arcing parts	N/A
	e) Plastic materials of a FIRE ENCLOSURE located less than 13mm through air from non-arcing parts which, under any condition of normal or abnormal operation, could attain a temperature sufficient to ignite the material, shall be capable of passing the test of IEC 60695-2-20.  The average time to ignition of the samples shall be not less than 15sec. If the sample melts through without igniting, the time at which this occurs is not considered to be the time to ignition.	EL 2124-14	No such construction	N/A

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4.7.3.3	Materials for components and other parts outside fire enclosures *		See below	P
	a) Materials shall be of : - HB75 CLASS MATERIAL if the thinnest significant thickness of this material is < 3 mm, or - HB40 CLASS MATERIAL if the thinnest significant thickness of this material is ≥ 3 mm, or - HBF CLASS FOAMED MATERIAL.*	EL 2124-15		N/A
	b) Connectors shall comply with one of the following: - be made of V-2 CLASS MATERIAL; or - pass the tests of Clause A.2; or - comply with the flammability requirements of the relevant IEC component standard; or - be mounted on V-1 CLASS MATERIAL and be of a small size; or - be located in a SECONDARY CIRCUIT supplied by a power source that is limited to a maximum of 15 VA (see 1.4.11) under normal operating conditions and after a single fault in the equipment (see 1.4.14).	EL 2124-16	Connectors mounted on V-0 class material	P
4.7.3.4	Materials for components and other parts inside fire enclosures		See below	P

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	a) Inside FIRE ENCLOSURES, materials for components and other parts shall comply with one of the following: - be of V-2 CLASS MATERIAL or HF-2 CLASS FOAMED MATERIAL; or - pass the flammability test described in Clause A.2; or - meet the flammability requirements of a relevant IEC component standard that includes such requirements.	EL 2124-17	Certified material used (See table 1.5.1)	P
	Requirements for voltage dependent resistors (VDR's) are in Annex Q.*	EL 2124-18	Certified adapter used	P
4.7.3.5	Materials for air filter assemblies : Air filter assemblies shall be constructed of V-2 CLASS MATERIAL, or HF-2 CLASS FOAMED MATERIAL.	EL 2124-19	No air filter assemblies	N/A
4.7.3.6	Materials used in high-voltage components		No high voltage components used	N/A
	a) High-voltage components operating at peak-to-peak voltages exceeding 4 kV shall either be of V-2 CLASS MATERIAL, or HF-2 CLASS FOAMED MATERIAL, or comply with 14.4 of IEC 60065 or pass the needle flame test according to IEC 60695-11-5.	EL 2124-20	See above cl. no. 4.7.3.6	N/A

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b) Compliance is checked by inspection of the equipment and material data sheets and, if necessary, by - the tests for V-2 CLASS MATERIAL or HF-2 CLASS FOAMED MATERIAL; or - the test described in 14.4 of IEC 60065; or - the needle flame test according to IEC 60695-11-5.	EL 2124-21	See above cl. no. 4.7.3.6	N/A
c) In addition to above, the following details apply, referring to clauses of IEC 60695-11-5: Clause 7 - Severities	EL 2124-22	See above cl. no. 4.7.3.6	N/A
Clause 8 - Conditioning	EL 2124-23	See above cl. no. 4.7.3.6	N/A
Clause 11 - Evaluation of test results	EL 2124-24	See above cl. no. 4.7.3.6	N/A

*-Total number of Requirements to be observed / inspected	=07
Total No of applicable Requirement	=05
No of Requirements for which the sample passed	=05
Total number of tests to be conducted	=18
Total No of applicable Tests	=03
No. of tests for which the sample passed	=03

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

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Tests relating to Insulating Properties

**EL 2125 – V1.4**

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

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5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	EL 2125-17	See above Cl.No.5.1	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system	EL 2125-18	See above Cl.No.5.1	N/A
	Supply voltage (V)		See above Cl.No.5.1	N/A
	Measured touch current (mA)		See above Cl.No.5.1	N/A
	Max. allowed touch current (mA)		See above Cl.No.5.1	N/A
5.1.8.2	Summation of touch currents from telecommunication networks	EL 2125-19	See above Cl.No.5.1	N/A
	a) EUT with earthed telecommunication ports :		See above Cl.No.5.1	N/A
	b) EUT whose telecommunication ports have no reference to protective earth		See above Cl.No.5.1	N/A

\*-Total number of Requirements to be observed / inspected =05  
 Total No of applicable Requirement =01  
 No of Requirements for which the sample passed =01  
  
 Total number of tests to be conducted =15  
 Total No of applicable Tests =00  
 No. of tests for which the sample passed =N/A

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

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Tests relating to Insulating Properties

**EL 2126 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
5.2	Electric strength*	EL 2126-00	Class III equipment	N/A
5.2.1	General*	EL 2126-01	See above Cl.No.5.2	N/A
5.2.2	Test procedure		See above Cl.No.5.2	N/A
	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	See above Cl.No.5.2	N/A

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

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

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

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Tests relating to Insulating Properties

**EL 2127 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
5.3	Abnormal operating and fault conditions	EL 2127-00	See below	P
5.3.1	Protection against overload and abnormal operation	EL 2127-01	See table 5.3	P
5.3.2	Motors	EL 2127-02	Motor used in certified DC fan	P
5.3.3	Transformers	EL 2127-03	Certified adapter used	P
5.3.4	Functional insulation:	EL 2127-04	Complies with Cl.No.5.3.4c)	P
5.3.5	Electromechanical components	EL 2127-05	No electromechanical components	N/A
5.3.6	Audio amplifiers in ITE :	EL 2127-06		P
5.3.7	Simulation of faults	EL 2127-07	See table 5.3	P
5.3.8	Unattended equipment	EL 2127-08	No unattended equipment	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions*		See table 5.3	P
5.3.9.1	During the tests	EL 2127-09	No fire occurred, no molten metal emitted and no distortion of enclosure	P
5.3.9.2	After the tests	EL 2127-10	No test required	N/A

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

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

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

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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	Not for connection to telecommunication network	N/A
6.1.1	Protection from hazardous voltages	EL 2128-01	See above Cl. No. 6.1	N/A
6.1.2	Separation of the telecommunication network from earth*		See above Cl. No. 6.1	N/A
6.1.2.1	<p>Requirements:</p> <ul style="list-style-type: none"> <li>- Surge suppressors that bridge the insulation shall have a minimum rated operating voltage <math>U_{op}</math> of <math>U_{op} = U_{peak} + \Delta U_{sp} + \Delta U_{sa}</math></li> <li>Where <math>U_{peak}</math> is 360V or 180V</li> <li><math>\Delta U_{sp}</math> 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)</li> <li><math>\Delta U_{sa}</math> 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)</li> <li>-Insulation is subjected to electric strength test according to 5.2.2. The a.c test voltage is 1.5kV or 1.0kV</li> <li>- 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.</li> </ul>	EL 2128-02	See above Cl. No. 6.1	N/A
6.1.2.2	Exclusions	EL 2128-03	See above Cl. No. 6.1	N/A

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

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

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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	Not for connection to telecommunication network	N/A
6.2.1	Separation requirements	EL 2129-01	See above Cl.No.6.2	N/A
6.2.2	Electric strength test procedure	EL 2129-02	See above Cl.No.6.2	N/A
6.2.2.1	Impulse test	EL 2129-03	See above Cl.No.6.2	N/A
6.2.2.2	Steady-state test	EL 2129-04	See above Cl.No.6.2	N/A
6.2.2.3	Compliance criteria	EL 2129-05	See above Cl.No.6.2	N/A

\*-Total number of Requirements to be observed / inspected =01  
 Total No of applicable Requirement =00  
 No of Requirements for which the sample passed =N/A  
  
 Total number of tests to be conducted =05  
 Total No of applicable Tests =00  
 No. of tests for which the sample passed =N/A

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

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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	Not for connection to telecommunication wiring system	N/A
	a) If current limiting is due to the inherent impedance of the power source, the output current into any resistive load, including a short-circuit, is measured. The current limit shall not be exceeded after 60 s of test. Max. output current (A) :	EL 2130-01	See above Cl.No.6.3	N/A
	b) If current limiting is provided by an overcurrent protective device having a specified time/current characteristic: – the time/current characteristic shall show that a current equal to 110 % of the current limit will be interrupted within 60 min; and	EL 2130-02	See above Cl.No.6.3	N/A
	c) the output current into any resistive load, including a short-circuit, with the overcurrent protective device bypassed, measured after 60 s of test, shall not exceed $1000/U$ , where U is the output voltage measured in accordance with 1.4.5 with all load circuits disconnected.	EL 2130-03	See above Cl.No.6.3	N/A

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<p>d) If current limiting is provided by an overcurrent protective device that does not have a specified time/current characteristic:</p> <ul style="list-style-type: none"> <li>– the output current into any resistive load, including a short-circuit, shall not exceed the current limit after 60 s of test; and</li> <li>– 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.</li> </ul>	EL 2130-04	See above Cl.No.6.3	N/A
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\*-Total number of Requirements to be observed / inspected =00  
 Total No of applicable Requirement =00  
 No of Requirements for which the sample passed =N/A

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

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

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

*-Total number of Requirements to be observed / inspected	=02
Total No of applicable Requirement	=00
No of Requirements for which the sample passed	=N/A
Total number of tests to be conducted	=06
Total No of applicable Tests	=00
No. of tests for which the sample passed	=N/A

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

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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	Metallic Enclosure Used	N/A
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		N/A
A.1.1	Samples:	EL 2132-02		N/A
	Wall thickness (mm):			N/A
A.1.2	Conditioning of samples; temperature (°C) :	EL 2132-03		N/A
A.1.3	Mounting of samples :	EL 2132-04		N/A
A.1.4	Test flame (see IEC 60695-11-3)	EL 2132-05		N/A
	Flame A, B, C or D :			N/A
A.1.5	Test procedure	EL 2132-06		N/A
A.1.6	Compliance criteria	EL 2132-07		N/A
	Sample 1 burning time (s):			N/A
	Sample 2 burning time (s):			N/A
	Sample 3 burning time (s):			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		N/A
A.2.1	Samples, material:	EL 2132-09		N/A
	Wall thickness (mm):			N/A
A.2.2	Conditioning of samples; temperature (°C) :	EL 2132-10		N/A
A.2.3	Mounting of samples :	EL 2132-11		N/A
A.2.4	Test flame (see IEC 60695-11-4)	EL 2132-12		N/A
	Flame A, B or C :			N/A

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Tests relating to Fire Safety

EL 2132 – V1.4

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

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

Total number of tests to be conducted =20  
 Total No of applicable Tests =00  
 No. of tests for which the sample passed =N/A

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

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Tests relating to 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	Motor used in certified DC fan	N/A
B.1	General requirements	EL 2133-01	See above B	N/A
	Position :		See above B	N/A
	Manufacturer :		See above B	N/A
	Type :		See above B	N/A
	Rated values :		See above B	N/A
B.2	Test conditions	EL 2133-02	See above B	N/A
B.3	Maximum temperatures	EL 2133-03	See above B	N/A
B.4	Running overload test	EL 2133-04	See above B	N/A
B.5	Locked-rotor overload test	EL 2133-05	See above B	N/A
	Test duration (days):		See above B	N/A
	Electric strength test: test voltage (V) :		See above B	N/A
B.6	Running overload test for d.c. motors in secondary circuits	EL 2133-06	See above B	N/A
B.6.1	General	EL 2133-07	See above B	N/A
B.6.2	Test procedure	EL 2133-08	See above B	N/A
B.6.3	Alternative test procedure	EL 2133-09	See above B	N/A
B.6.4	Electric strength test; test voltage (V):	EL 2133-10	See above B	N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits	EL 2133-11	See above B	N/A
B.7.1	General	EL 2133-12	See above B	N/A
B.7.2	Test procedure	EL 2133-13	See above B	N/A
B.7.3	Alternative test procedure	EL 2133-14	See above B	N/A
B.7.4	Electric strength test; test voltage (V) :	EL 2133-15	See above B	N/A

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Tests relating to Insulating Properties

**EL 2133 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
B.8	Test for motors with capacitors	EL 2133-16	See above B	N/A
B.9	Test for three-phase motors	EL 2133-17	See above B	N/A
B.10	Test for series motors	EL 2133-18	See above B	N/A
	Operating voltage (V) :		See above B	N/A

\*-Total number of Requirements to be observed / inspected =00  
 Total No of applicable Requirement =00  
 No of Requirements for which the sample passed =N/A  
  
 Total number of tests to be conducted =19  
 Total No of applicable Tests =00  
 No. of tests for which the sample passed =N/A

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

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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	Certified adapter used	P
	Position :		See above C	P
	Manufacturer :		See above C	P
	Type :		See above C	P
	Rated values :		See above C	P
	Method of protection:		See above C	P
C.1	Overload test	EL 2134-01	See above C	P
C.2	Insulation	EL 2134-02	See above C	P
	Protection from displacement of windings:		See above C	P

*-Total number of Requirements to be observed / inspected	=01
Total No of applicable Requirement	=01
No of Requirements for which the sample passed	=01
Total number of tests to be conducted	=02
Total No of applicable Tests	=02
No. of tests for which the sample passed	=02

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

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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	Class III equipment	N/A
D.1	Measuring instrument	EL 2135-01	See above D	N/A
D.2	Alternative measuring instrument	EL 2135-02	See above D	N/A

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

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

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

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Tests relating to Thermal Properties

**EL 2136- V1.4**

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

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

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

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

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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	Certified adapter used	P

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

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

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

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Tests relating to Electrical safety

**EL 2138 – V1.4**

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

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

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

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

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Tests relating to Radiation Safety

**EL 2139 – V1.4**

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

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

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

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

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Tests relating to Electrical Safety

**EL 2140 – V1.4**

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

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

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

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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 used	N/A
K.1	Making and breaking capacity	EL 2141-01	See above K	N/A
K.2	Thermostat reliability; operating voltage (V) :	EL 2141-02	See above K	N/A
K.3	Thermostat endurance test; operating voltage (V) :	EL 2141-03	See above K	N/A
K.4	Temperature limiter endurance; operating voltage (V) :	EL 2141-04	See above K	N/A
K.5	Thermal cut-out reliability	EL 2141-05	See above K	N/A
K.6	Stability of operation	EL 2141-06	See above K	N/A

\*-Total number of Requirements to be observed / inspected =01  
 Total No of applicable Requirement =00  
 No of Requirements for which the sample passed =N/A  
  
 Total number of tests to be conducted =06  
 Total No of applicable Tests =00  
 No. of tests for which the sample passed =N/A

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

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Tests relating to General Requirement

**EL 2142 – V1.4**

Cl. No.	Test / Requirement name	Test Code	Test result/ observation	Verdict
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)*	EL 2142-00	See below	P
L.1	Typewriters*	EL 2142-01	See below L.7	N/A
L.2	Adding machines and cash registers*	EL 2142-02	See below L.7	N/A
L.3	Erasers*	EL 2142-03	See below L.7	N/A
L.4	Pencil sharpeners*	EL 2142-04	See below L.7	N/A
L.5	Duplicators and copy machines*	EL 2142-05	See below L.7	N/A
L.6	Motor-operated files*	EL 2142-06	See below L.7	N/A
L.7	Other business equipment*	EL 2142-07	See table 1.6.2	P

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

Total No of applicable Requirement =02

No of Requirements for which the sample passed =02

Total number of tests to be conducted =00

Total No of applicable Tests =00

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

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

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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	N/A
M.1	Introduction*	EL 2143-01	See above M	N/A
M.2	Method A	EL 2143-02	See above M	N/A
M.3	Method B	EL 2143-03	See above M	N/A
M.3.1	Ringling signal	EL 2143-04	See above M	N/A
M.3.1.1	Frequency (Hz) .....	EL 2143-05	See above M	N/A
M.3.1.2	Voltage (V) .....	EL 2143-06	See above M	N/A
M.3.1.3	Cadence; time (s), voltage (V) .....	EL 2143-07	See above M	N/A
M.3.1.4	Single fault current (mA) .....	EL 2143-08	See above M	N/A
M.3.2	Tripping device and monitoring voltage .....	EL 2143-09	See above M	N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage	EL 2143-10	See above M	N/A
M.3.2.2	Tripping device	EL 2143-11	See above M	N/A
M.3.2.3	Monitoring voltage (V) .....	EL 2143-12	See above M	N/A

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

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

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

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Tests relating to Electrical safety

**EL 2144 – V1.4**

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

\*-Total number of Requirements to be observed / inspected =00  
 Total No of applicable Requirement =00  
 No of Requirements for which the sample passed =N/A  
  
 Total number of tests to be conducted =03  
 Total No of applicable Tests =00  
 No. of tests for which the sample passed =N/A

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

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Tests relating to General Requirements

EL 2145- V1.4

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

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

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

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Tests relating to General Requirements

EL 2146 – V1.4

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

\*-Total number of Requirements to be observed / inspected =00  
 Total No of applicable Requirement =00  
 No of Requirements for which the sample passed =N/A  
  
 Total number of tests to be conducted =03  
 Total No of applicable Tests =03  
 No. of tests for which the sample passed =03

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

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Tests relating to General Requirement

EL 2147- V1.4

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

\*-Total number of Requirements to be observed / inspected =03  
 Total No of applicable Requirement =00  
 No of Requirements for which the sample passed =N/A  
  
 Total number of tests to be conducted =00  
 Total No of applicable Tests =00  
 No. of tests for which the sample passed =N/A

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

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Tests relating to General Requirement

**EL 2148 – V1.4**

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

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

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

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Tests relating to Protection against Ingress of water

EL 2149 – V1.4

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

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

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

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

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Tests relating to Wiring

**EL 2150 – V1.4**

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

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

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

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

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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	Equipment not directly connected to mains	N/A
V.1	Introduction*	EL 2151-01	See above V	N/A
V.2	TN power distribution systems	EL 2151-02	See above V	N/A
V.3	TT Power Distribution systems	EL 2151-03	See above V	N/A
V.4	IT Power Distribution systems	EL 2151-04	See above V	N/A

\*-Total number of Requirements to be observed / inspected =02  
 Total No of applicable Requirement =00  
 No of Requirements for which the sample passed =N/A  
  
 Total number of tests to be conducted =03  
 Total No of applicable Tests =00  
 No. of tests for which the sample passed =N/A

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

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

*-Total number of Requirements to be observed / inspected	=08
Total No of applicable Requirement	=00
No of Requirements for which the sample passed	=N/A
Total number of tests to be conducted	=00
Total No of applicable Tests	=00
No. of tests for which the sample passed	=N/A

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

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Tests relating to Electrical Safety

**EL 2153- V1.4**

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

\*-Total number of Requirements to be observed / inspected =03  
 Total No of applicable Requirement =00  
 No of Requirements for which the sample passed =N/A  
  
 Total number of tests to be conducted =00  
 Total No of applicable Tests =00  
 No. of tests for which the sample passed =N/A

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Tests relating to Radiation Safety

**EL 2154- V1.4**

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

\*-Total number of Requirements to be observed / inspected =00  
 Total No of applicable Requirement =00  
 No of Requirements for which the sample passed =N/A  
  
 Total number of tests to be conducted =05  
 Total No of applicable Tests =00  
 No. of tests for which the sample passed =N/A

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

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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	Class III equipment	N/A

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

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

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Tests relating to Mechanical Properties

**EL 2156 – V1.4**

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

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

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

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

.....  
 (Approving Authority)

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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 IC current limiters used	N/A
CC.1	Integrated circuit (IC) current limiters*	EL 2158-01	See above CC	N/A
CC.2	Test program 1	EL 2158-02	See above CC	N/A
CC.3	Test program 2	EL 2158-03	See above CC	N/A
CC.4	Test program 3	EL 2158-04	See above CC	N/A
CC.5	Compliance	EL 2158-05	See above CC	N/A

\*-Total number of Requirements to be observed / inspected =02  
 Total No of applicable Requirement =00  
 No of Requirements for which the sample passed =N/A  
  
 Total number of tests to be conducted =04  
 Total No of applicable Tests =00  
 No. of tests for which the sample passed =N/A

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

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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	Not a rack mounted equipment	N/A
DD.1	General		See above DD	N/A
DD.2	Mechanical strength test, variable N.....:	EL 2159-01	See above DD	N/A
DD.3	Mechanical strength test, 250N, including end stops.....:	EL 2159-02	See above DD	N/A
DD.4	Compliance*.....:	EL 2159-03	See above DD	N/A

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

Total No of applicable Requirement =00

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

Total number of tests to be conducted =02

Total No of applicable Tests =00

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

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

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Tests relating to Mechanical Properties

**EL 2160 – V1.4**

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

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

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

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

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Contact No.: +91 48777888, +918527763108, Email: info@alphatesthouse.com & electrical@alphatesthouse.com

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1.5.1	TABLE: List of components					P
Object/part no.	Manufacturer/ trademark	Type/model	Technical data	Standard	Mark(s) of conformity <sup>1</sup> .	
LCD Panel	CHONGQING BOE OPTOELECTRONICS TECHNOLOGY CO LTD	NE160QAM-NX1	16 inch, TFT type (LED Backlight)	UL 62368-1 (Harmonized with IEC 62368-1)	UL E478784	
Alternate	NANJING BOE DISPLAY TECHNOLOGY CO., LTD.	**16****-*** (where * could be any letter of 0 to 9 or A to Z or blank, denotes only non-safety related parts or name difference)	16 inch, TFT type (LED Backlight)	UL 62368-1 (Harmonized with IEC 62368-1)	UL E479353	
Alternate	CHONGQING BOE OPTOELECTRONICS TECHNOLOGY CO LTD	NV160WUM NX	16 inch, TFT type (LED Backlight)	UL 62368-1 (Harmonized with IEC 62368-1)	UL E478784	
Alternate	AU OPTRONICS CORP	B160QANZZZZ (where Z may be any alphanumeric character or a dot or blank)	16 inch, TFT type (LED Backlight)	UL 62368-1 (Harmonized with IEC 62368-1)	UL E204356	
Alternate	AU OPTRONICS CORP	B160QAN0	16 inch, TFT type (LED Backlight)	UL 62368-1 (Harmonized with IEC 62368-1)	UL E204356	
Alternate	INNOLUX Corp	N160JME-GXX	16 inch, TFT type (LED Backlight)	UL 62368-1 (Harmonized with IEC 62368-1)	UL E207943	
AC ADAPTER	DELTA ELECTRONICS (JIANGSU) LTD	ADP-240EB B	I/P:100-240V~, 50-60Hz,3.5A Output:20.0Vdc, 12.0A, 240.0W	IS 13252(PART 1):2010/ IEC 60950-1 : 2005	BIS R-41013129	
Alternate	Chicony Power Technology (Chongqing) Co.,Ltd.	A20-240P1A	I/P:100-240V~, 50-60Hz,3.5A Output:20.0Vdc, 12.0A, 240W	IS 13252(PART 1):2010/ IEC 60950-1 : 2005	BIS R-41014214	

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Enclosure (Decorative)	Covestro Deutschland AG [PC Resins]	FR3008 + (+ - Material designations may be followed by a six digit numerical code denoting color.)	V-1, thickness 1.0 mm min	UL 94 (Harmonized with IEC 60695-11-10)	UL E41613
Alternate	Covestro Deutschland AG [PC Resins]	FR6765 + (z) + - Material designations may be followed by a six digit numerical code denoting color.	V-0, thickness 1.0 mm min	UL 94 (Harmonized with IEC 60695-11-10)	UL E41613
Rechargeable Li-Polymer Battery Pack	SIMPLO TECHNOLOGY (CHONGQING) INC.	C41N2103	+15.4V  90Wh	IS 16046 (PART 2) : 2018 / IEC 62133-2 : 2017	BIS R-41141178
PCB	NAN YA P C B CORP PCB DIV	NM10	V-0, 130°C	UL 94 (Harmonized with IEC 60695-11-10)	UL E96193
Alternate	CHUAN YI COMPUTER (SHENZHEN) CO LTD	CM-4	V-0, 130°C	UL 94 (Harmonized with IEC 60695-11-10)	UL E162264
Alternate	WUS PRINTED CIRCUIT CO LTD	MV11	V-0, 130°C	UL 94 (Harmonized with IEC 60695-11-10)	UL E69282
Alternate	VICTORY GIANT TECHNOLOGY (HUIZHOU) CO LTD	SH, SH14, SH10	V-0, 130°C	UL 94 (Harmonized with IEC 60695-11-10)	UL E248779
<b>POWER CORD SET</b>					
a). Cord	I-Sheng Electronics (KunShan) Co. Ltd	PVC Insulated	3*0.75mm <sup>2</sup> 1100V	IS 694:2010	CM/L-4035746
Alternate	I-Sheng Manufacturing (Song Gang) Factory	PVC Insulated	3*0.75mm <sup>2</sup> 1100V	IS 694:2010	CM/L-4035948

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Alternate	Well Shin Electronic (KunShan) Co. Ltd	PVC Insulated	3*0.75mm <sup>2</sup> 1100V	IS 694:2010	CM/L-4044848
Alternate	Weihai Honglin Electronic Co. Ltd	PVC Insulated	3*0.75mm <sup>2</sup> 1100V	IS 694:2010	CM/L-4034643
Alternate	ASAP Technology (Jiangxi) Co. Ltd	PVC Insulated	3*0.75mm <sup>2</sup> 1100V	IS 694:2010	CM/L-4036849
Alternate	Unirise Electric Wire & Cable Co. Ltd.,	PVC Insulated	3*0.75mm <sup>2</sup> 1100V	IS 694:2010	CM/L-4100008358
b). Plug	I-Sheng Electronics (KunShan) Co. Ltd	SP-81A	10A, 250V~	IS 1293:2005	CM/L-4035847
Alternate	I-Sheng Manufacturing (Song Gang) Factory	SP-81A	10A, 250V~	IS 1293:2005	CM/L-4036041
Alternate	I-Sheng Electronics (KunShan) Co. Ltd	SP-81A	6A, 250V~	IS 1293:2019	CM/L-4035847
Alternate	I-Sheng Manufacturing (Song Gang) Factory	SP-81A	6A, 250V~	IS 1293:2019	CM/L-4036041
Alternate	I-Sheng Electric Wire & Cable(Vietnam)	SP-81A	6A, 250V~	IS 1293:2019	CM/L-4100069378
Alternate	Well Shin Electronic (KunShan) Co. Ltd	WS-018-1	10A, 250V~	IS 1293:2005	CM/L-4040537
Alternate	Well Shin Electronic (KunShan) Co. Ltd	WS-018-1	6A, 250V~	IS 1293:2019	CM/L-4040537

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Alternate	Weihai Honglin Electronic Co. Ltd	HL-030S	6A, 250V	IS 1293:2019	CM/L-4054548
Alternate	Weihai Honglin Electronic Co. Ltd	HL-030	6A, 250V	IS 1293:2019	CM/L-4054548
Alternate	ASAP Technology (Jiangxi) Co. Ltd	A12-0046-AC2	10A, 250V	IS 1293:2005	CM/L-4038449
Alternate	ASAP Technology (Jiangxi) Co. Ltd	A12-0046-AC2	6A, 250V	IS 1293:2019	CM/L-4038449
Alternate	Unirise Electric Wire & Cable Co. Ltd.,	UE-350	6A, 250V~	IS 1293:2019	CM/L-4100011347
Alternate	Unirise Electric Wire & Cable Co. Ltd.,	UE-350	10A, 250V~	IS 1293:2005	CM/L-4100011347
C) Connector	I-Sheng Electric Wire & Cable Co., Ltd.	IS-14	10A,250V~	IEC 60320-1:2015	VDE 40037879
Alternate	I-Sheng Electric Wire & Cable Co., Ltd.	IS-14N	10A, 250V~	EN 60320-1:2015 (Harmonized with IEC 60320-1)	ENEC/FI 2017045
Alternate	Weihai Honglin Electronic Co. Ltd	HL-026	10A,250V~	EN 60320-1:2015 (Harmonized with IEC 60320-1)	ENEC 35-101702

**Supplementary information:**

<sup>1</sup>Evidences provided by the manufacturer for the listed components are verified by us and the evidences are conforming to the requirements of the relevant standard

2. Metallic Enclosure used

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1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
20Vdc	6.8	12	136	--	--	Maximum normal load
Supplementary information: Powered through DC source						

2.1.1.5	TABLE: Energy hazard measurement				P
Voltage (rated)(V)	Current (rated)(A)	Voltage (max.)(V)	Current (max.)(A)	VA (max.)(VA)	
--	--	--	--	--	
Supplementary information: Powered by SELV only					

2.1.1.7	TABLE: Discharge test				P
Condition	$\tau$ calculated(s)	$\tau$ measured(s)	t u $\rightarrow$ 0V(s)	Comments	
--	--	--	--	--	
Supplementary information: Certified adapter used					

2.2.2	TABLE: SELV measurement (under normal conditions)				P
Transformer	Location	Voltage (max.) (V)		Voltage Limitation Component	
		V peak	V d.c.		
--	--	--	--	--	
Supplementary information: Class III equipment supplied by separately certified adapter					

2.2.3	TABLE: SELV measurement (under fault conditions)			P
Location	Voltage (max.) (V)	Comments		
--	--	--		
Supplementary information: Class III equipment supplied by separately certified adapter				

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2.4.2	TABLE: Limited current circuit measurement					P
Location	Voltage (V)	Current (mA)	Freq. (kHz)	Limit (mA)	Comments	
--	--	--	--	--	--	
Supplementary information: Certified adapter used						

2.5	TABLE: Limited power source measurement			P
	Limits	Measured	Verdict	
According to Table 2B/2G (Normal condition) USB port (Uoc=5.101Vdc)				
current (in A)	8	3.103	P	
apparent power (in VA)	100	14.12	P	
According to Table 2B/2G (Normal condition) Type C port (Uoc=5.173Vdc)				
current (in A)	8	3.357	P	
apparent power (in VA)	100	14.87	P	
According to Table 2B/2G (Single Fault condition) USB port (Pin 1 to GND ) S-C, Uoc=5.101Vdc				
current (in A)	8	0.0	P	
apparent power (in VA)	100	0.0	P	
According to Table 2B/2G (Single Fault condition) Type C port (Pin 1 to GND ) S-C, Uoc=5.173Vdc				
current (in A)	8	0.0	P	
apparent power (in VA)	100	0.0	P	
According to Table 2B/2G (Normal condition) HDMI Port (Uoc=1.42Vdc)				
current (in A)	8	0.0	P	
apparent power (in VA)	100	0.0	P	
According to Table 2B/2G (Single Fault condition) HDMI Port S-C (Uoc=1.42Vdc)				
current (in A)	8	0.0	P	
apparent power (in VA)	100	0.0	P	
According to Table 2B/2G (Normal condition) LAN port (Uoc=0.052Vdc)				
current (in A)	8	0.0	P	
apparent power (in VA)	100	0.0	P	
According to Table 2B/2G (Single Fault condition) LAN port S-C (Uoc=0.052Vdc)				
current (in A)	8	0.0	P	
apparent power (in VA)	100	0.0	P	
Supplementary information: S-C= Short-Circuit				

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2.6.3.4	TABLE: Resistance of earthing measurement		N/A
Location	Resistance measured ( $\Omega$ )	Comments	
--	--	--	
Supplementary information: Tested current 32A.			

<OR>

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

2.10.2	Table: Working voltage measurement			P
Location	RMS voltage (V)	Peak voltage (V)	Comments	
--	--	--	--	
Supplementary information: Certified adapter used				

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:	--	--	--	--	--	--	
Basic / supplementary:	--	--	--	--	--	--	
Reinforced:	--	--	--	--	--	--	
Supplementary information: Certified adapter used							

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:	--	--	--	--	--	
Supplementary information: Certified adapter used						

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4.3.8	TABLE: Batteries								N/A		
The tests of 4.3.8 are applicable only when appropriate battery data is not available								--		--	
Is it possible to install the battery in a reverse polarity position?								--		--	
		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 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 35°C (T <sub>ma</sub> ), as specified by the manufacturer.											
test voltage(s) (V):				A: 20Vdc				B: --			
t <sub>amb1</sub> (°C):		A:25°C B: --		t <sub>amb2</sub> (°C):		A: 25°C B:--					
Temperature of part/at: (measured with thermocouples)				Measured temperature rise at T <sub>amb</sub>		Calculated temperature at T <sub>ma</sub>		Allowed T <sub>max</sub> (°C)			
				A dT (K)	B dT (K)	A T (°C)	B T (°C)				
Metallic Enclosure				07	--	42	--	70			
USB Port				22	--	57	--	70			
Type C Port				21	--	56	--	70			
LCD Panel (glass)				08	--	43	--	80			
PCB				18	--	53	--	130			
Supplementary information:											
Temperatures measured with winding resistance method: Not used											
temperature T of winding: (winding resistance method)		(V)	R <sub>1</sub> (Ω)	R <sub>2</sub> (Ω)	T (°C)	allowed T <sub>max</sub> (°C)	insulation class				
--		--	--	--	--	--	--		--		
Supplementary information: nil											

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4.5.5	TABLE: Ball pressure test of thermoplastic parts			P
	Allowed impression diameter (mm)	:	≤ 2 mm	--
	Part	Test temperature (°C)	Impression diameter (mm)	
	--	--	--	
Supplementary information: Certified adapter used				

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

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

5.1.6	TABLE: Touch current and protective conductor current measurement					N/A	
	Test voltage (V):		AC .....V, .....Hz		--		
Measurement location		Polarity (normal) [mA]		Polarity (reverse) [mA]		Limit (mA)	Comments
(Terminal A connected to...)		Switch: ON	Switch: OFF	Switch: ON	Switch: OFF		
--		--	--	--	--	--	--
--		--	--	--	--	--	--
Supplementary information: Class III equipment							

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5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			N/A
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Functional:				
	--	--	--	--
Basic / supplementary:				
	--	--	--	--
Reinforced:				
	--	--	--	--
Supplementary information: Class III equipment				

5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C) .....			25°C		P
	Power source for EUT: Manufacturer, model/type, output rating.....:			See table 1.5.1		P
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Ventilation opening	Blocked	20Vdc	1.30hours	--	--	Unit operated normally Temperature on enclosure: 38°C Result: no fire, no hazards
Diode	Short-circuit	20Vdc	40 Seconds	--	--	Unit shut down immediately Result: no fire, no hazards
Connector (J3402)	Short-circuit	20Vdc	35 Seconds	--	--	Unit shut down immediately Result: no fire, no hazards
Battery Connector	Short-circuit	20Vdc	50 Seconds	--	--	Unit shut down immediately Result: no fire, no hazards
Battery Connector	Disconnection	20Vdc	50 Seconds	--	--	Unit shut down immediately Result: no fire, no hazards
Speaker terminals	Short circuit	20Vdc	40 Seconds.	--	--	Audio drop Result: No fire No hazard
Supplementary information:						

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**ALPHA TEST HOUSE**

Address: 487/25, Near Prachin Shiv Mandir, Peeragarhi, New Delhi-110087 (India)

Contact No.: +91 48777888, +918527763108, Email: info@alphatesthouse.com & electrical@alphatesthouse.com

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C.2	TABLE: Insulation of transformers						P
	Transformer part name :	Certified adapter used				--	
	Manufacturer :	See above				--	
	Type :	See above				--	
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
Primary /input winding and secondary/output winding (internal)	--	--	--	--	--	--	
Primary/input winding and core (internal)			--	--	--	--	
Secondary/output winding and core (internal)			--	--	--	--	
Primary/input part and secondary/output part (external)			--	--	--	--	
Primary/input part and core (external)			--	--	--	--	
Primary/input part and secondary/output winding (external)			--	--	--	--	
Secondary/output part and core (external)			--	--	--	--	
Secondary/output part and primary/input winding (external)			--	--	--	--	
Description of design:							
(a) Bobbin							
	Primary/input pins :	Certified adapter used					
	Secondary/output pins :	See above					
	Material (manufacturer, type, ratings) :	See above					
	Thickness (mm):	See above					
(b) General							
Supplementary information: Certified adapter used							

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Dated: 07/12/2021

ULR: TC550821100001120F

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

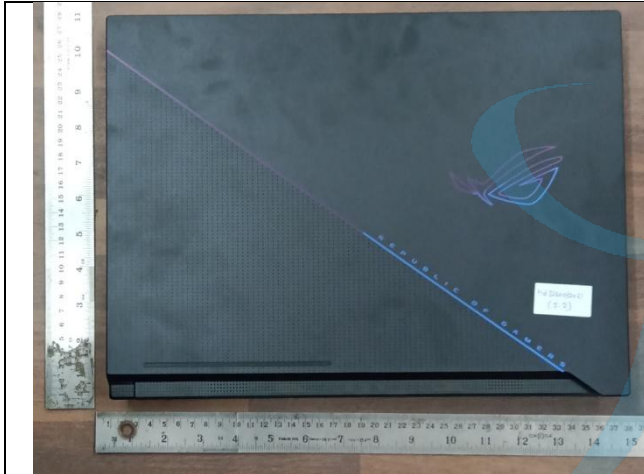
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**Attachment – 1**

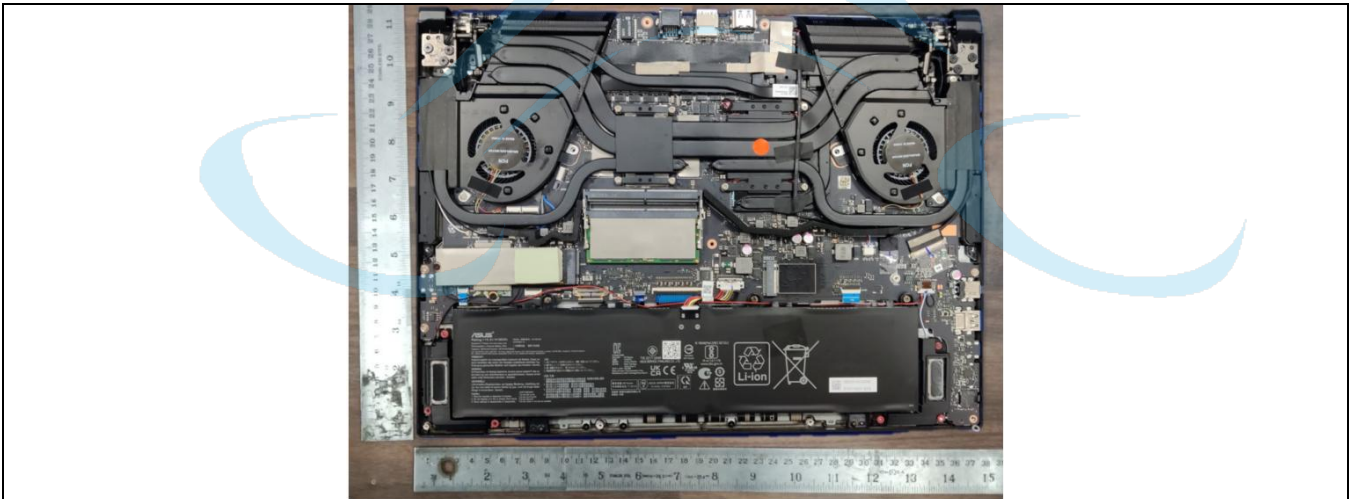
**PHOTOGRAPHS**



**TOP VIEW**



**BOTTOM VIEW**



**INTERNAL VIEW**

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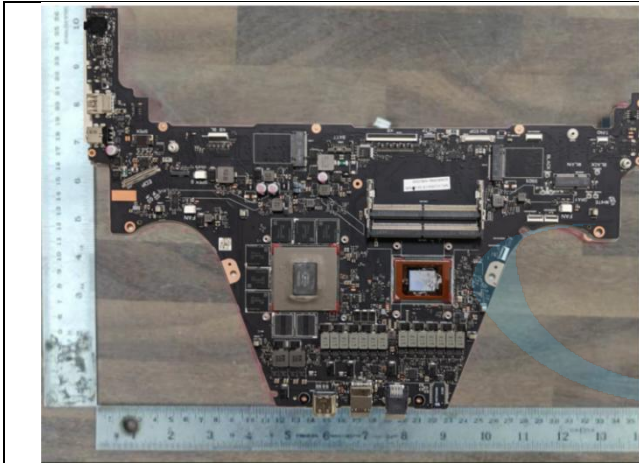
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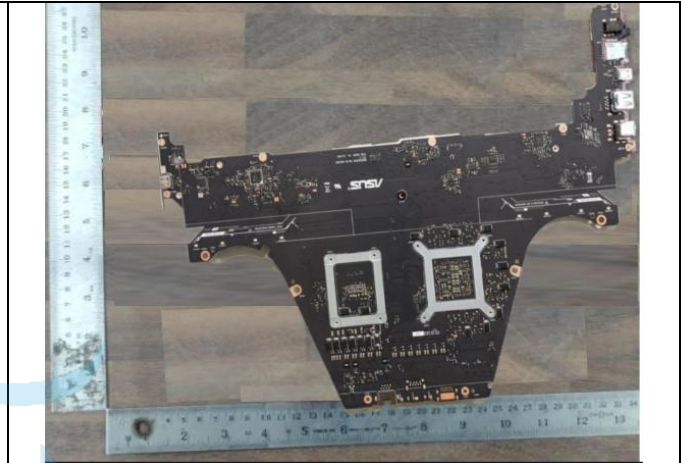
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PCB TOP VIEW



PCB BOTTOM VIEW



AC ADAPTER VIEW



BATTERY VIEW

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

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