

UL TEST REPORT AND PROCEDURE

Standard:	UL 60950-1, 2nd Edition, 2007-03-27 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-07, 2nd Edition, 2007-03 (Information Technology Equipment - Safety - Part 1: General Requirements)
Certification Type:	Component Recognition
CCN:	QQGQ2, QQGQ8 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
Product:	Power Supply
Model:	GTM91120-WWVV-X.X-P series, GT-91120-WWVV-X.X-P series
Rating:	<p>WW is the rated output wattage designation, with a maximum value of "30"; VV is the standard rated output voltage designation,</p> <p>-X.X denotes the optional deviation, subtracted or added from standard output voltage in 0.1 volt increments or blank to indicate the no voltage different;</p> <p>VV-X.X together denotes the voltage range from 9.1V to 10.5V; Input: 100-240Vac, 50-60HZ, 1.5A</p> <p>Output: 9.1Vdc-10.5Vdc, 3.3A-2.857A, Max.30W</p>
Applicant Name and Address:	GLOBTEK (SUZHOU) CO LTD BLDG 4, #76 JINLING EAST RD SUZHOU PARK SUZHOU JIANGSU 215021 CHINA

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of Underwriters Laboratories Inc. ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

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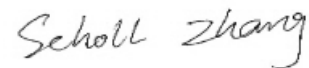
UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

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Underwriters Laboratories Inc.



Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

- A. Authorization - The Authorization page may include additional Factory Identification Code markings.
- B. Generic Inspection Instructions -
 - i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
 - ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
 - iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

Switching power supply, component mounted on V-1 PWB and housed in plastic enclosure and sealed with compound material.

Model Differences

All Models in GTM91120-WWVV-X.X-P series are similar to each other except for the rating of R19 and R20.

Models GTM91120-WWVV-X.X-P series are identical to Models GT-91120-WWVV-X.X-P series respectively except for Model designations,

Technical Considerations

- Equipment mobility : for building-in
- Connection to the mains : pluggable A
- Operating condition : continuous
- Access location : operator accessible
- Over voltage category (OVC) : OVC II
- Mains supply tolerance (%) or absolute mains supply values : +10%, -10% (declared by manufacture)
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A

- Class of equipment : Class II (double insulated)
- Considered current rating (A) : 20A
- Pollution degree (PD) : PD 2
- IP protection class : IP X0
- Altitude of operation (m) : No more than 2000m
- Altitude of test laboratory (m) : No more than 2000m
- Mass of equipment (kg) : 0.21kg
- The product was submitted and evaluated for use at the maximum ambient temperature (T_{ma}) permitted by the manufacturer's specification of: 40 Degree. C
- The means of connection to the mains supply is: Pluggable A
- The product is intended for use on the following power systems: TN
- The following accessible locations (with circuit/schematic designation) are within a limited current circuit: CY1 load side to earth
- The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual

Engineering Conditions of Acceptability

For use only in or with complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc. When installed in an end-product, consideration must be given to the following:


- The following Production-Line tests are conducted for this product: Electric Strength
- The end-product Electric Strength Test is to be based upon a maximum working voltage of: Primary-SELV: 544V_{peak}, 243V_{rms}
- The following secondary output circuits are SELV: All secondary outputs.
- The following secondary output circuits are at non-hazardous energy levels: All secondary outputs.

- The following secondary output circuits are Limited Current Circuits: CY1 load side to earth
- The power supply terminals and/or connectors are: Suitable for factory wiring only
- The maximum investigated branch circuit rating is: 20 A
- The investigated Pollution Degree is: 2
- The following magnetic devices (e.g. transformers or inductor) are provided with an OBJY2 insulation system with the indicated rating greater than Class A (105°C): T1(Class B)
- The following end-product enclosures are required: Electrical, Fire
- The equipment is suitable for direct connection to: AC mains supply
- The protection for the MOV should be considered in the end product.

Additional Information

N/A

Markings and instructions

Clause Title	Marking or Instruction Details
Power rating - Ratings	Ratings (voltage, frequency/dc, current)
Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
Power rating - Model	Model Number
Power rating - Class II symbol	Symbol for Class II construction  (60417-2-IEC-5172)
Fuses - Rating	Rated current and voltage and type located on or adjacent to fuse or fuseholder.

Special Instructions to UL Representative

Inspect the transformer(s) listed in table "Electric Strength Test Special Constructions" per AA1.1– (C): When the tests are conducted at other location, inspect test record and specification sheet provided by the component manufacturer. Verify the specification sheet indicates 100% routine test specified in the table be conducted at the component manufacturer.

Production-Line Testing Requirements

Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.

Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
All Models	Transformer T1	-	Primary Pin to Secondary Pin	300 0	4242	1

Earthing Continuity Test Exemptions - This test is not required for the following models:

All models in this report

Electric Strength Test Exemptions - This test is not required for the following models:

Electric Strength Test Component Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test:

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Sample and Test Specifics for Follow-Up Tests at UL

Model	Component	Material	Test	Sample(s)	Test Specifics
-	-	-	-	-	-

TABLE: List of Critical Components

Object/part No.	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
01. Plastic Enclosure	SABIC INNOVATIVE PLASTICS B V	HF500R	Rate V-1, minimum 1.9mm thick, minimum 125 Degree C. Overall 95mm by 44mm by 32mm, covered 5 sides of the power board.	QMFZ2	UL E45329
02. Glue	Various	Various	Minimum V-2	QMFZ2	UL
03. Primary Lead Wire	Various	Various	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1 or FT-1, 22 AWG, 300V, Min. 80 Degree C.	AVLV2	UL
03a. Primary Lead Wire (alternate)	Various	Various	18AWG min, Type SVT or SJT or SPT-2 or NISPT- 2 flexible cord, rated minimum 250 V	ZJCZ2	UL
04. PCB	Various	Various	Min.V-1, Min.105 Degree C	ZPMV2	UL
05. Fuse (F1, F2)	WALTER ELECTRONIC CO LTD	ICP	T3.15A 250Vac	JDYX	UL E56092
05a. Fuse (F1, F2) (Alternate)	Various	Various	T3.15A 250Vac	JDYX	UL
06. Varistor (VR1)	JOYIN CO LTD	7N471K	Normal voltage 470V, Voltage Protection Rating 1000V.	VZCA2	UL E325508
06b. Varistor (VR1) (Alternate)	CENTRA SCIENCE CORP	CNRV-07D471K	Normal voltage 470V, Voltage Protection Rating 1200V.	VZCA2	UL E316325
06c. Varistor (VR1) (Alternate)	CENTRA SCIENCE CORP	CNRV-10D471K	Normal voltage 470V, Voltage Protection Rating 1500V.	VZCA2	UL E316325
06d. Varistor (VR1) (Alternate)	THINKING ELECTRONIC INDUSTRIAL CO LTD	TVR10471K	Normal voltage 470V, Voltage Protection Rating 2000V.	VZCA2	UL E314979
06e. Varistor (VR1) (Alternate)	THINKING ELECTRONIC INDUSTRIAL CO LTD	TVR07471K	Normal voltage 470V, Voltage Protection Rating 1500V.	VZCA2	UL E314979
06f. Varistor (VR1) (Alternate)	SUCCESS ELECTRONICS CO	SVR-10D471K	Normal voltage 470V, Voltage Protection Rating 1200V.	VZCA2	UL E330256

Object/part No.	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
	LTD				
06g. Varistor (VR1) (Alternate)	SUCCESS ELECTRONICS CO LTD	SVR-07D471K	Normal voltage 470V, Voltage Protection Rating 1000V.	VZCA2	UL E330256
06h. Varistor (VR1) (Alternate)	WALSIN TECHNOLOGY CORP	VZ07D471K	Normal voltage 470V, Voltage Protection Rating 1200V.	VZCA2	UL E309297
06i. Varistor (VR1) (Alternate)	WALSIN TECHNOLOGY CORP	VZ10D471K	Normal voltage 470V, Voltage Protection Rating 1500V.	VZCA2	UL E309297
06j. Varistor (VR1) (Alternate)	BRIGHTKING (SHENZHEN) CO LTD	07D471K	Normal voltage 470V, Voltage Protection Rating 1000V.	VZCA2	UL E327997
06k. Varistor (VR1) (Alternate)	BRIGHTKING (SHENZHEN) CO LTD	10D471K	Normal voltage 470V, Voltage Protection Rating 1500V.	VZCA2	UL E327997
07. X-Cap (X1)	ULTRA TECH XIPHI ENTERPRISE CO LTD	HQX	0.33UF, 250Vac, 100 Degree C, X2 type.	FOWX2	UL, VDE E183780
07a. X-Cap (X1) (Alternate)	OKAYA ELECTRIC INDUSTRIES CO LTD	RE+	0.33UF, 250Vac, 100 Degree C, X2 type.	FOWX2	UL, VDE E47474
07b. X-Cap (X1) (Alternate)	VISHAY CAPACITORS BELGIUM N V	F1772	0.33UF, 250Vac, 100 Degree C, X2 type.	FOWX2	UL, VDE E100682
07c. X-Cap (X1) (Alternate)	DAIN ELECTRONICS CO LTD	MPX	0.33UF, 250Vac, 100 Degree C, X2 type.	FOWX2	UL, VDE E147776
07d. X-Cap (X1) (Alternate)	SINHUA ELECTRONICS (HUZHOU) CO LTD	MPX	0.33UF, 250Vac, 100 Degree C, X1 type.	FOWX2	UL, VDE E237560
07e. X-Cap (X1)	CHENG TUNG	CTX	0.33UF, 250Vac, 100 Degree C, X1 type.	FOWX2	UL, VDE

Object/part No.	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
(Alternate)	INDUSTRIAL CO LTD				E193049
08. Bleeding resistor (R1, R2)	--	--	In series, each rated 1Mohm, 2.5W	--	--
09. Line Filter (LF1)	--	--	130 Degree C, see enclosure 4-01 for construction details.	--	--
09-1. Bobbin (L1)	Various	Various	Phenolic, minimum V-2, minimum 130 Degree C	QMFZ2	UL
09-02. Coil	Various	Various	Minimum 130 Degree C	OBMW2	UL
09-03. Core	--	--	Ferrite, see enclosure 4-01 for dimension details.	--	--
10. Diode (D1, D2, D3, D4)	--	--	2A, 1000V	--	--
11. Electrolytic Capacitor (C2)	--	--	Max 68uF, Min. 400V, min.105Degree C.	--	--
12. Transistor (Q1)	--	--	600V, 7A	--	--
13. Transformer (T1)	Top Nation Electronic Ltd	BY-EE2230W01- 0F1	See Enclosure 4-02 for details	--	--
13-01. Insulation system	Top Nation Electronic Ltd	M7A90	Class B	OBJY2	UL E212542
13-02. Magnetic Wire	Various	Various	MW 75 or 130 C Degree.	OBMW2	UL
13-03. Core	--	--	Ferrite, Overall 22.6 mm by 17.4 mm by 8.5 mm	--	--
13-04. Bobbin	HITACHI CHEMICAL CO LTD	CP-J-8800	Phenolic, V-0, 130 Degree C	QMFZ2	UL 42956
13-05. Triple insulated wire	Furukawa Electric Co Ltd	TEX-E	130 Degree C	OBJT2	UL E206440
13-06. Insulation Tape	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	1350F-1	130 Degree C	OANZ2	UL E17385
13-07. Varnish	KYOCERA CHEMICAL CORP	TVB2180T++	130 Degree C	OBOR2	UL E83702
13-07. Varnish	HITACHI CHEMICAL	WP-2952F-2G	130 Degree C	OBOR2	UL

Object/part No.	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
	CO LTD				E72979
13-08. Insulation Tape wrapping over transformer	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	1350F-1	Min. two layers, minimum 22mm width, 130 Degree C	OANZ2	UL E17385
13-10. Tube	NIKKAN INDUSTRIES CO LTD	S-693-600	Rated 300V, 200 Degree C,	YDPU2	UL E72406
13-10a. Tube(Alternte)	NIKKAN INDUSTRIES CO LTD	S-693F-1, S- 693VF-1	Rated 300V, 200 Degree C,	YDPU2	UL E55258
14. Bridge Capacitor (CY1)	SUCCESS ELECTRONICS CO LTD	SE	Rated max. 470pF, min. 250 V. Class Y1, 85 Degree C min.	FOWX2	UL, VDE E114280
14a. Bridge Capacitor (CY1) (Alternate)	WELSON INDUSTRIAL CO LTD	WD	Rated max. 470pF, min. 250 V. Class Y1 , 85 Degree C min.	FOWX2	UL, VDE E104572
14b. Bridge Capacitor (CY1) (Alternate)	TDK-EPC CORP	CD	Rated max. 470pF, min. 250 V. Class Y1 , 85 Degree C min.	FOWX2	UL, VDE E37861
14c. Bridge Capacitor (CY1) (Alternate)	MURATA MFG CO LTD	KS, KX	Rated max. 470pF, min. 250 V. Class Y1 , 85 Degree C min.	FOWX2	UL, VDE E37921
14d. Bridge Capacitor (CY1) (Alternate)	WALSIN TECHNOLOGY CORP	AH	Rated max. 470pF, min. 250 V. Class Y1 , 85 Degree C min.	FOWX2	UL, VDE E146544
14e. Bridge Capacitor (CY1) (Alternate)	JYH CHUNG ELECTRONICS CO LTD	JD	Rated max. 470pF, min. 250 V. Class Y1 , 85 Degree C min.	FOWX2	UL, VDE E187963
14f. Bridge Capacitor (CY1) (Alternate)	HAOHUA ELECTRONIC CO	CT 7	Rated max. 470pF, min. 250 V. Class Y1 , 85 Degree C min.	FOWX2	UL, VDE E233106
14g. Bridge Capacitor (CY1) (Alternate)	JYA-NAY CO LTD	JN	Rated max. 470pF, min. 250 V. Class Y1 , 85 Degree C min.	FOWX2	UL, VDE E201384
15a. Optocoupler (U2)	SHARP CORP	PC817, PC123	Isolation voltage minimum 3000 Vac	FPQU2	UL

Object/part No.	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
	ELECTRONIC COMPONENTS AND DEVICES GROUP				E64380
15a. Optocoupler (U2) (Alternate)	Lite-On Technology Corp.	LTV-357T LTV- 817	Isolation voltage minimum 3000 Vac minimum.	FPQU2	UL E113898
15c. Optocoupler (U2) (Alternate)	COSMO ELECTRONICS CORP	K1010; KP1010	Isolation voltage minimum 3000 Vac	FPQU2	UL E169586
15d. Optocoupler (U2) (Alternate)	FAIRCHILD SEMICONDUCTOR CORP	H11A817B	Isolation voltage minimum 3000 Vac	FPQU2	UL E90700
15e. Optocoupler (U2) (Alternate)	EVERLIGHT ELECTRONICS CO LTD	EL817	Isolation voltage minimum 3000 Vac	FPQU2	UL E214129
15f. Optocoupler (U2) (Alternate)	BRIGHT LED ELECTRONICS CORP	BPC-817 BPC- 817M BPC-817S	Isolation voltage minimum 3000 Vac	FPQU2	UL E236324
16. Internal plastic part	Various	Various	Minimum V-2	QMFZ2	UL
17. Output Wire	Various	Various	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1 or FT-1, Min. 80 Degree C, max 3.05 m long	AVLV2	UL
17a. Output Wire (Alternate)	Various	Various	22AWG min, Type SPT-1, or SPT-2, rated minimum 80 degree C, minimum 30V.	ZJCZ2	UL
18. Label	Various	Various	Application to plastic surface, min.80 Degree C.	PGDQ2 or PGJI2	UL
19. Sensing resistor (R11,12,13,14)	--	--	In parallel, each rated 3ohm, 1/4W	--	--
20. Heatsink for Q1(HS1)	--	--	Aluminum or steel, see enclosure 4-03 for dimension details.	--	--
21. Heatsink for D7 (HS2)	--	--	See enclosure 4-04 for dimension details.	--	--
21-01. Tape for HS2	3M COMPANY	1350F-1	Min. two layers, see enclosure 4-05 for dimension details.	OANZ2	UL E17385

Object/part No.	Manufacturer/ trademark	type/model	technical data	CCN	Marks of Conformity
	ELECTRICAL MARKETS DIV (EMD)				

Enclosures

<u>Type</u>	<u>Supplement Id</u>	<u>Description</u>
Photographs	3-01	Overall view1
Photographs	3-02	Overall view2
Photographs	3-03	Internal view without compound material
Photographs	3-04	Component side view
Photographs	3-05	Trace side view
Diagrams	4-01	LF1 spec
Diagrams	4-02	T1 sepc
Diagrams	4-03	HS1 Spec
Diagrams	4-04	HS2 Spec
Diagrams	4-05	Tape spec for HS2
Schematics + PWB		
Manuals		
Miscellaneous		

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1	GENERAL		Pass
1.5	Components		Pass
1.5.1	General		Pass
	Comply with IEC 60950-1 or relevant component standard	(see appended table 1.5.1)	Pass
1.5.2	Evaluation and testing of components	Components certified to IEC harmonized standard and checked for correct application. Components, for which no relevant IEC-Standard exist, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950. Components not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950 and the relevant component Standard.	Pass
1.5.3	Thermal controls	No thermostats, temperature limiters, or thermal cut-outs which functioned during the Heating Test.	N/A
1.5.4	Transformers	See Annex C	Pass
1.5.5	Interconnecting cables	No interconnecting cables provided as part of the equipment.	N/A
1.5.6	Capacitors bridging insulation	Line-to-line capacitors are subclass X1 or X2. Primary-to-secondary capacitors are subclass Y1.	Pass
1.5.7	Resistors bridging insulation		Pass
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		Pass
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		N/A
1.5.8	Components in equipment for IT power systems		N/A
1.5.9	Surge suppressors		Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.9.1	General		Pass
1.5.9.2	Protection of VDRs	Evaluated in end product.	N/A
1.5.9.3	Bridging of functional insulation by a VDR		Pass
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A
1.6	Power interface		Pass
1.6.1	AC power distribution systems	TN	Pass
1.6.2	Input current	The steady state input current of the equipment did not exceed the RATED CURRENT by more than 10% under NORMAL LOAD. (see appended table 1.6.2)	Pass
1.6.3	Voltage limit of hand-held equipment	Not a hand-held equipment.	N/A
1.6.4	Neutral conductor		Pass
1.7	Marking and instructions		Pass
1.7.1	Power rating	Rating marking readily visible to operator.	Pass
	Rated voltage(s) or voltage range(s) (V)	Refer to the beginning of this Test Report.	Pass
	Symbol for nature of supply, for d.c. only	AC source.	N/A
	Rated frequency or rated frequency range (Hz).....	Refer to the beginning of this Test Report.	Pass
	Rated current (mA or A)	Refer to the beginning of this Test Report.	Pass
	Manufacturer's name or trademark or identification mark.....	GLOBTEK (SUZHOU) CO LTD or E336418	Pass
	Model identification or type reference	Refer to the beginning of this Test Report.	Pass
	Symbol for Class II equipment only.....	60417-1-IEC-5172 symbol marked.	Pass
	Other markings and symbols.....	Additional symbols may be provided when submitted for National Approval.	Pass
1.7.2	Safety instructions and marking	Operating/safety instructions made available to the user.	Pass
1.7.2.1	General		Pass
1.7.2.2	Disconnect devices	To be determined in the end-	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
		use.	
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT Power distribution systems		N/A
1.7.2.5	Operator access with a tool		N/A
1.7.2.6	Ozone		N/A
1.7.3	Short duty cycles	The equipment intended for continuous operation.	N/A
1.7.4	Supply voltage adjustment		N/A
	Method and means of adjustment; reference to installation instructions		N/A
1.7.5	Power outlets on the equipment.....	No standard power outlets provided.	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)	Fuse(s) provided with voltage, current, and special fusing characteristic marking as applicable.	Pass
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals.....		N/A
1.7.7.2	Terminals for a.c. mains supply conductors		N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators		Pass
1.7.8.1	Identification, location and marking.....		N/A
1.7.8.2	Colours	Only functional indicators use color.	Pass
1.7.8.3	Symbols according to IEC 60417		N/A
1.7.8.4	Markings using figures.....	Figures not used for indicating different positions of controls.	N/A
1.7.9	Isolation of multiple power sources		N/A
1.7.10	Thermostats and other regulating devices	No adjustable thermostats or similar regulating devices.	N/A
1.7.11	Durability	UL Recognized Label provided. (see appended table 1.5.1)	Pass
1.7.12	Removable parts		N/A
1.7.13	Replaceable batteries.....		N/A
	Language(s)		-
1.7.14	Equipment for restricted access locations.....	Equipment not intended for installation in a RESTRICTED	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
		ACCESS LOCATION.	

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2	PROTECTION FROM HAZARDS		Pass
2.1	Protection from electric shock and energy hazards		Pass
2.1.1	Protection in operator access areas	To be determined in the end-use.	Pass
2.1.1.1	Access to energized parts	To be determined in the end-use.	N/A
	Test by inspection..... :		N/A
	Test with test finger (Figure 2A) :	To be determined in the end-use.	N/A
	Test with test pin (Figure 2B) :	To be determined in the end-use.	N/A
	Test with test probe (Figure 2C)..... :	No TNV.	N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (V_{peak} or V_{rms}); minimum distance through insulation (mm) :		-
2.1.1.4	Access to hazardous voltage circuit wiring	To be determined in the end-use.	N/A
2.1.1.5	Energy hazards :	The output of the power supply is not an energy hazard.	Pass
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment	The capacitance of the input circuit is > 0.1 uF, measurements are required.	Pass
	Measured voltage (V); time-constant (s) :	For Model GTM91120-3010.5-1.4-P: $V_o=373.3V_{pk}$, 37% $V_o=138.1 V_{pk}$, measured voltage $V_{tc}= 88 V_{pk}$, time-constant=1s; For Model GTM91120-3012-1.5-P: $V_o=373.3V_{pk}$, 37% $V_o=138.1 V_{pk}$, measured voltage $V_{tc}= 100 V_{pk}$, time-constant=1s	-
2.1.1.8	Energy hazards - d.c. mains supply		N/A
	a) Capacitor connected to the d.c. mains supply .. :		N/A
	b) Internal battery connected to the mains supply :		N/A
2.1.1.9	Audio amplifiers :		N/A
2.1.2	Protection in service access areas		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.1.3	Protection in restricted access locations		N/A
2.2	SELV circuits		Pass
2.2.1	General requirements	SELV levels maintained after single fault condition.	Pass
2.2.2	Voltages under normal conditions (V)	All accessible voltages are less than 42.4 Vpk or 60 Vdc and are classified as SELV.	Pass
2.2.3	Voltages under fault conditions (V)	Under fault conditions voltages never exceed 71 Vpk and 120 Vdc and do not exceed 42.4 Vpk or 60 Vdc for more than 0.2 sec.	Pass
2.2.4	Connection of SELV circuits to other circuits	SELV circuits are only connected to other secondary circuits. SELV circuit and all interconnected circuits separated from primary by double insulation. The SELV circuit does not exceed the SELV limits under normal and fault conditions.	Pass
2.3	TNV circuits		N/A
2.3.1	Limits	No TNV	N/A
	Type of TNV circuits		-
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed.....		-
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed.....		-
2.3.5	Test for operating voltages generated externally		N/A
2.4	Limited current circuits		Pass
2.4.1	General requirements	Test for bridging capacitor CY1.	Pass
2.4.2	Limit values	0.5 MIU	Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Frequency (Hz)..... :	--	-
	Measured current (mA)..... :	0.04MIU	-
	Measured voltage (V)..... :	--	-
	Measured circuit capacitance (nF or uF)..... :	0.001uF	-
2.4.3	Connection of limited current circuits to other circuits	The LIMITED CURRENT CIRCUIT connected to other circuits complies with the requirements of Sub-clause 2.4.1.	Pass
2.5	Limited power sources		N/A
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network limited output under normal operating and single fault condition		N/A
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA)..... :		-
	Current rating of overcurrent protective device (A) :		-
2.6	Provisions for earthing and bonding		N/A
2.6.1	Protective earthing		N/A
2.6.2	Functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG..... :		-
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG..... :		-
	Protective current rating (A), cross-sectional area (mm ²), AWG..... :		-
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (ohm), voltage drop (V), test current (A), duration (min)..... :		N/A
2.6.3.5	Colour of insulation..... :		N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.4.2	Protective earthing and bonding terminals	.	N/A
	Rated current (A), type, nominal thread diameter (mm)		-
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A
2.7	Overcurrent and earth fault protection in primary circuits		Pass
2.7.1	Basic requirements	Protective devices integrated in the equipment.	Pass
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not covered in 5.3.7		N/A
2.7.3	Short-circuit backup protection	The building installation is considered as providing short-circuit backup protection.	Pass
2.7.4	Number and location of protective devices	One protective device in the "LIVE" phase	Pass
2.7.5	Protection by several devices	Only one protective device is provided.	N/A
2.7.6	Warning to service personnel		N/A
2.8	Safety interlocks		N/A
2.8.1	General principles		N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.8.7	Switches and relays		N/A
2.8.7.1	Contact gaps (mm)		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A
2.9	Electrical insulation		Pass
2.9.1	Properties of insulating materials		Pass
2.9.2	Humidity conditioning	Electric strength test was conducted after the humidity treatment.	Pass
	Relative humidity (%), temperature (°C).....	93%, 25 C Degree	-
2.9.3	Grade of insulation	No flash over or breakdown of insulation.	Pass
2.9.4	Separation from hazardous voltages		N/A
	Method(s) used.....	Method	-
2.10	Clearances, creepage distances and distances through insulation		Pass
2.10.1	General		Pass
2.10.1.1	Frequency.....	-	Pass
2.10.1.2	Pollution degrees.....	2	Pass
2.10.1.3	Reduced values for functional insulation		Pass
2.10.1.4	Intervening unconnected conductive parts		Pass
2.10.1.5	Insulation with varying dimensions		N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage	(see appended table 2.10.3 and 2.10.4)	Pass
2.10.2.1	General		Pass
2.10.2.2	RMS working voltage	(see appended table 2.10.3 and 2.10.4)	Pass
2.10.2.3	Peak working voltage	(see appended table 2.10.3 and 2.10.4)	Pass
2.10.3	Clearances	(see appended table 2.10.3 and 2.10.4)	Pass
2.10.3.1	General		Pass
2.10.3.2	Mains transient voltages		Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	a) AC mains supply	Less than 300 Vrms.	Pass
	b) Earthed d.c. mains supplies		N/A
	c) Unearthed d.c. mains supplies		N/A
	d) Battery operation		N/A
2.10.3.3	Clearances in primary circuits	(see appended table 2.10.3 and 2.10.4)	Pass
2.10.3.4	Clearances in secondary circuits	See 5.3.4.	N/A
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply.....		N/A
2.10.3.7	Transients from d.c. mains supply.....		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems		N/A
2.10.3.9	Measurement of transient voltage levels		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
2.10.4	Creepage distances	(see appended table 2.10.3 and 2.10.4) See 5.3.4 for secondary circuits.	Pass
2.10.4.1	General		Pass
2.10.4.2	Material group and comparative tracking index		Pass
	CTI tests	Material group IIIb; $100 \leq$ CTI < 175	-
2.10.4.3	Minimum creepage distances		Pass
2.10.5	Solid insulation		Pass
2.10.5.1	General		Pass
2.10.5.2	Distances through insulation		Pass
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices		Pass
2.10.5.5	Cemented joints		N/A
2.10.5.6	Thin sheet material - General	(see appended table 5.2)	Pass
2.10.5.7	Separable thin sheet material		Pass
	Number of layers (pcs)	Two layers used, with any one which comply with the required electric strength test.	-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.5.8	Non-separable thin sheet material		N/A
2.10.5.9	Thin sheet material - standard test procedure		N/A
	Electric strength test..... :		-
2.10.5.10	Thin sheet material - alternative test procedure		Pass
	Electric strength test..... :	Two layers used, with any one which comply with the required electric strength test.	-
2.10.5.11	Insulation in wound components	See Sub clause 2.10.5.14.	Pass
2.10.5.12	Wire in wound components		Pass
	Working voltage..... :		N/A
	a) Basic insulation not under stress..... :		N/A
	b) Basic, supplementary, reinforced insulation..... :		N/A
	c) Compliance with Annex U..... :	trip-insulated wire	Pass
	Two wires in contact inside wound component; angle between 45° and 90°..... :		N/A
2.10.5.13	Wire with solvent-based enamel in wound components		N/A
	Electric strength test..... :		-
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		Pass
	Working voltage..... :	See Sub clause 2.10.5.6	Pass
	- Basic insulation not under stress..... :		N/A
	- Supplementary, reinforced insulation..... :	Comply with 2.10.5.6	Pass
2.10.6	Construction of printed boards		Pass
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	Pass
2.10.6.2	Coated printed boards		N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs)..... :		N/A
2.10.7	Component external terminations		N/A
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

3	WIRING, CONNECTIONS AND SUPPLY		Pass
3.1	General		Pass
3.1.1	Current rating and overcurrent protection		N/A
3.1.2	Protection against mechanical damage	To be evaluated in end product.	N/A
3.1.3	Securing of internal wiring		N/A
3.1.4	Insulation of conductors	(see appended table 5.2)	Pass
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure		N/A
3.1.7	Insulating materials in electrical connections		N/A
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors	All conductors are reliable secured.	Pass
	10 N pull test		Pass
3.1.10	Sleeving on wiring	Sleeving is not used as supplementary insulation.	N/A
3.2	Connection to mains supply		N/A
3.2.1	Means of connection	To be evaluated in end product.	N/A
3.2.1.1	Connection to an a.c. mains supply		N/A
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter of cable and conduits (mm)..... :		-
3.2.4	Appliance inlets		N/A
3.2.5	Power supply cords	To be determined in the end-use.	N/A
3.2.5.1	AC power supply cords		N/A
	Type..... :		-
	Rated current (A), cross-sectional area (mm ²), AWG..... :		-
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N)..... :		-
	Longitudinal displacement (mm)..... :		-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards		N/A
	Diameter of minor dimension D (mm); test mass (g) :		-
	Radius of curvature of cord (mm)..... :		-
3.2.9	Supply wiring space		N/A
3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals		N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm ²)..... :		-
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type and nominal thread diameter (mm)..... :		-
3.3.6	Wiring terminals design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A
3.4	Disconnection from the mains supply		N/A
3.4.1	General requirement		N/A
3.4.2	Disconnect devices	To be evaluated in end product.	N/A
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized		N/A
3.4.5	Switches in flexible cords		N/A
3.4.6	Number of poles - single-phase and d.c. equipment		N/A
3.4.7	Number of poles - three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A
3.5	Interconnection of equipment		N/A
3.5.1	General requirements	Evaluated in end product.	N/A
3.5.2	Types of interconnection circuits..... :		N/A
3.5.3	ELV circuits as interconnection circuits		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3.5.4	Data ports for additional equipment		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4	PHYSICAL REQUIREMENTS		Pass
4.1	Stability		N/A
	Angle of 10°		N/A
	Test force (N)..... :		N/A
4.2	Mechanical strength		Pass
4.2.1	General		Pass
4.2.2	Steady force test, 10 N	10 N applied to components. No energy or other hazards.	Pass
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N	Test were conducted only on bottom and side of plastic enclosure.	Pass
4.2.5	Impact test	Test were conducted only on bottom and side of plastic enclosure	Pass
	Fall test		Pass
	Swing test		N/A
4.2.6	Drop test; height (mm)..... :		N/A
4.2.7	Stress relief test	No indication of shrinkage or distortion on enclosures due to the stress relief test (91°C/7 h). See enclosed test record.	Pass
4.2.8	Cathode ray tubes		N/A
	Picture tube separately certified..... :		N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N)..... :		N/A
4.3	Design and construction		Pass
4.3.1	Edges and corners	All edges and corners are judged to be sufficiently well rounded so as not to constitute a hazard.	Pass
4.3.2	Handles and manual controls; force (N)..... :	No handles/grips/knobs or levers provided in the equipment.	N/A
4.3.3	Adjustable controls		N/A
4.3.4	Securing of parts		N/A
4.3.5	Connection by plugs and sockets	IEC 60083 or IEC 60320 type connectors not used for SELV circuits.	Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.6	Direct plug-in equipment		N/A
	Torque		N/A
	Compliance with the relevant mains plug standard:		N/A
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries		N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
4.3.9	Oil and grease		N/A
4.3.10	Dust, powders, liquids and gases		N/A
4.3.11	Containers for liquids or gases		N/A
4.3.12	Flammable liquids.....		N/A
	Quantity of liquid (l).....		N/A
	Flash point (°C).....		N/A
4.3.13	Radiation		Pass
4.3.13.1	General		N/A
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg)		-
	Measured high-voltage (kV)		-
	Measured focus voltage (kV).....		-
	CRT markings.....		-
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N/A
	Part, property, retention after test, flammability classification		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation		N/A
4.3.13.5	Laser (including LEDs)	This product contains only visible indicator LEDs (Class 1) operating in the range of 400 - 700 nm wavelength. No IEC60825-1 evaluation was deemed necessary. Additional review may be required at the discretion of the accepting NCB.	Pass
	Laser class	(For indicator LEDs, see above statement.)	-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.13.6	Other types		N/A
4.4	Protection against hazardous moving parts		N/A
4.4.1	General		N/A
4.4.2	Protection in operator access areas.....		N/A
4.4.3	Protection in restricted access locations		N/A
4.4.4	Protection in service access areas		N/A
4.5	Thermal requirements		Pass
4.5.1	General		Pass
4.5.2	Temperature tests		Pass
	Normal load condition per Annex L	Operated in the most unfavorable way of operation given in the operating instructions until steady conditions established. (see appended table 4.5)	-
4.5.3	Temperature limits for materials		Pass
4.5.4	Touch temperature limits		Pass
4.5.5	Resistance to abnormal heat.....	See table 4.5.5	Pass
4.6	Openings in enclosures		N/A
4.6.1	Top and side openings	Overall Enclosure to be determined in the end-use.	N/A
	Dimensions (mm)		-
4.6.2	Bottoms of fire enclosures	Overall Enclosure to be determined in the end-use.	N/A
	Construction of the bottom, dimensions (mm).....		-
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment		N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm)		-
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C), time (weeks)		-
4.7	Resistance to fire		Pass
4.7.1	Reducing the risk of ignition and spread of flame	Method 1	Pass
	Method 1, selection and application of components wiring and materials		Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure		Pass
4.7.2.1	Parts requiring a fire enclosure	The unit intended to be installed within a suitable fire enclosure.	Pass
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		Pass
4.7.3.1	General	All components mounted on PWB rated Min V-1. See Table 1.5.1 for ratings of individual components/materials.	Pass
4.7.3.2	Materials for fire enclosures	To be determined in the end-use.	N/A
4.7.3.3	Materials for components and other parts outside fire enclosures		N/A
4.7.3.4	Materials for components and other parts inside fire enclosures	All internal materials are rated V-2 or better or are mounted on a PWB rated V-1 or better	Pass
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		Pass
5.1	Touch current and protective conductor current		Pass
5.1.1	General		Pass
5.1.2	Configuration of equipment under test (EUT)		Pass
5.1.2.1	Single connection to an a.c. mains supply		Pass
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit	Single phase equipment intended only for connection to star TN.	Pass
5.1.4	Application of measuring instrument		Pass
5.1.5	Test procedure		Pass
5.1.6	Test measurements		Pass
	Supply voltage (V)	264 Vac/60 Hz.	-
	Measured touch current (mA).....	Maximum 0.04 mA.	-
	Max. allowed touch current (mA).....	0.25 mA (Class II equipment)	-
	Measured protective conductor current (mA)		-
	Max. allowed protective conductor current (mA) ...		-
5.1.7	Equipment with touch current exceeding 3,5 mA		N/A
5.1.7.1	General		N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N/A
	Supply voltage (V)		-
	Measured touch current (mA).....		-
	Max. allowed touch current (mA).....		-
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.2	Electric strength		Pass
5.2.1	General	(see appended table 5.2)	Pass
5.2.2	Test procedure	No insulation breakdown detected during the test.	Pass
5.3	Abnormal operating and fault conditions		Pass
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	Pass
5.3.2	Motors		N/A
5.3.3	Transformers	(see Annex C)	Pass
5.3.4	Functional insulation..... :	Method (c).	Pass
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE..... :		N/A
5.3.7	Simulation of faults	(see appended table 5.3)	Pass
5.3.8	Unattended equipment	The equipment does not have any thermostats, temperature limiters, or thermal cut-outs which functioned during the Heating Test.	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	No fire, emission of molten metal or deformation was noted during the tests.	Pass
5.3.9.1	During the tests	No fire, emission of molten metal or deformation was noted during the tests.	Pass
5.3.9.2	After the tests	Electric Strength tests performed after abnormal and fault tests.	Pass
6	CONNECTION TO TELECOMMUNICATION NETWORKS		N/A
7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		N/A
A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		Pass
	Position	(see appended table 1.5.1)	-
	Manufacturer	Top Nation Electronic Ltd	-
	Type.....	Switching type	-
	Rated values.....	(see appended table 1.5.1)	-
	Method of protection.....	Regular network	-
C.1	Overload test	(see appended table 5.3)	Pass
C.2	Insulation	(see appended table 5.2)	Pass
	Protection from displacement of windings.....	Triple insulated wire used.	Pass
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		Pass
D.1	Measuring instrument		Pass
D.2	Alternative measuring instrument		N/A
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		Pass
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N/A
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		N/A
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)		Pass
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment		Pass
M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		N/A
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)		N/A
P	ANNEX P, NORMATIVE REFERENCES		Pass
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		Pass
	a) Preferred climatic categories..... :		N/A
	b) Maximum continuous voltage..... :		N/A
	c) Pulse current :		N/A
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N/A
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N/A
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		Pass
 :	UL certified tripple insulated wire.	-
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		Pass
V.1	Introduction		Pass
V.2	TN power distribution systems		Pass
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		N/A
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		N/A
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N/A
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		Pass
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N/A

Enclosure
National Differences

USA / Canada

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict

USA / Canada - Differences to IEC 60950-1:2005 (Second Edition)			
1.1	Equipment able to be installed in accordance with the National Electrical Code ANSI/NFPA 70 and the Canadian Electrical Code, Part1, and when applicable, the National Electrical Safety Code, IEEE C2.		Pass
1.1.1	Equipment able to be installed in accordance with ANSI/NFPA 75 and NEC Art. 645 unless intended for use outside of computer room and provided with such instructions.		Pass
1.1.2	Equipment in wire-line communication facilities serving high-voltage electric power stations operating at greater than 1kV are excluded.		N/A
1.1.2	Special requirements apply to equipment intended for use outdoors.		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20 A.		Pass
1.5.1	All IEC standards for components identified in Annex P.1 replaced by the relevant requirements of CSA and UL component standards in Annex P.1.		Pass
1.5.1	All IEC standards for components identified in Annex P.2 alternatively satisfied by the relevant requirements of CSA and UL component standards in Annex P.2.		Pass
1.5.5	Interconnecting cables acceptable for the application regarding voltage, current, temperature, flammability, mechanical serviceability and the like.		N/A
1.5.5	For other than limited power and TNV circuits, the type of output circuit identified for output connector.		N/A
1.5.5	External cable assemblies that exceed 3.05 m in length to be types specified in the NEC and CEC.		N/A
1.5.5	Detachable external interconnecting cables 3.05 m or less in length and provided with equipment marked to identify the responsible organization and the designation for the cable.		N/A
1.5.5	Building wiring and cable for use in ducts, plenums and other air handling space subject to special requirements and excluded from scope.		N/A
1.5.5	Telephone line and extension cords and the like comply with UL 1863 and CSA C22.2 No. 233.		N/A
1.6.1.2	Equipment intended for connection to a d.c. power (mains) distribution system is subject to special		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	circuit classification requirements (e.g., TNV-2)		
1.6.1.2	Earthing of d.c. powered equipment provided.		N/A
1.7	Lamp replacement information indicated on lampholder in operator access area.		N/A
1.7.1	Special marking format for equipment intended for use on a supply system with an earthed neutral and more than one phase conductor.		N/A
1.7.1	Equipment voltage rating not higher than rating of the plug except under special conditions.		N/A
1.7.6	Special fuse replacement marking for operator accessible fuses.		N/A
1.7.7	Identification of terminal connection of the equipment earthing conductor.		N/A
1.7.7	Connectors and field wiring terminals for external Class 2 or Class 3 circuits provided with marking indicating minimum Class of wiring to be used.		N/A
1.7.7	Marking located adjacent to terminals and visible during wiring.		N/A
2.1.1.1	Bare TNV conductive parts in the interior of equipment normally protected against contact by a cover intended for occasional removal are exempt provided instructions include directions for disconnection of TNV prior to removal of the cover.		N/A
2.3.1.b	Other telecommunication signaling systems (e.g., message waiting) than described in 2.3.1(b) are subject to M.4.		N/A
2.3.1.b	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vp or 60 V d.c., the maximum current limit through a 2000 Ohm or greater resistor with loads disconnected is 7.1 mA peak or 30 mA d.c. under normal conditions.		N/A
2.3.1.b	Limits for measurements across 5000 ohm resistor in the event of a single fault are replaced after 200 ms with the limits of M.3.1.4.		N/A
2.3.2.1	In the event of a single fault, the limits of 2.2.3 apply to SELV circuits and accessible conductive parts.		N/A
2.3.2.4	Enamel coating on signal transformer winding wire allowed as an alternative to Basic insulation in specific telecommunication applications when subjected to special construction requirements and		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	routine testing.		
2.5	Overcurrent protection device required for Class 2 and Class 3 limiting in accordance with the NEC, or for a Limited Power Source, not interchangeable with devices of higher ratings if operator replaceable.		N/A
2.6	Equipment having receptacles for output a.c. power connectors generated from an internal separately derived source have the earthed (grounded) circuit conductor suitably bonded to earth.		N/A
2.6.3.3	For Pluggable Equipment Type A, if a) b) or c) are not applicable, the current rating of the circuit is taken as 20 A		N/A
2.6.3.4	Capacity of connection between earthing terminal and parts required to be earthed subject to special conditions based on the current rating of the circuit.		N/A
2.6.3.4	Protective bonding conductors and their terminals of non-standard constructions (e.g. PWB traces) evaluated to limited short-circuit test of CSA C22.2 No.0.4.		N/A
2.6.4.1	Field wiring terminals for earthing conductors suitable for wire sizes (gauge) used in US and Canada.		N/A
2.7.1	Data for selection of special external branch circuit overcurrent devices marked on the equipment.		N/A
2.7.1	Standard supply outlets protected by overcurrent device in accordance with the NEC, and CEC, Part 1.		N/A
2.7.1	Overcurrent protection for individual transformers that distribute power to other units over branch circuit wiring.		N/A
2.7.1	Additional requirements for overcurrent protection apply to equipment provided with panelboards.		N/A
2.7.1	Non-motor-operated equipment requiring special overcurrent protective device marked with device rating.		N/A
2.10.5.12	Multi-layer winding wire subject to UL component wire requirements in addition to 2.10.5.12 and Annex U.		Pass
3.1.1	Permissible combinations of internal wiring/external cable sizes for overcurrent and short circuit protection.		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
3.1.1	All interconnecting cables protected against overcurrent and short circuit.		N/A
3.2	Wiring methods permit connection of equipment to primary power supply in accordance with the NEC and CEC, Part 1.		N/A
3.2.1	Permitted use for flexible cords and plugs.		N/A
3.2.1	Flexible cords provided with attachment plug rated 125% of equipment current rating.		N/A
3.2.1	Any Class II equipment provided with 15 or 20 A standard supply outlets, Edison-base lampholders or single pole disconnect device provided with a polarized type attachment plug.		N/A
3.2.1.2	Equipment intended for connection to DC mains supply power systems complies with special wiring requirements (e.g., no permanent connection to supply by flexible cord).		N/A
3.2.1.2	Equipment with one pole of the DC mains supply connected to both the equipment mains input terminal and the main protective earthing terminal provided with special instructions and construction provisions for earthing		N/A
3.2.1.2	Equipment with means for connecting supply to earthing electrode conductor has no switches or protective devices between supply connection and earthing electrode connection.		N/A
3.2.1.2	Special markings and instructions for equipment with provisions to connect earthed conductor of a DC supply circuit to earthing conductor at the equipment.		N/A
3.2.1.2	Special markings and instructions for equipment with earthed conductor of a DC supply circuit connected to the earthing conductor at the equipment.		N/A
3.2.1.2	Terminals and leads provided for permanent connection of DC powered equipment to supply marked to indicate polarity if reverse polarity may result in a hazard.		N/A
3.2.3	Permanently connected equipment has provision for connecting and securing a field wiring system (i.e. conduit, or leads etc.) per the NEC and CEC, Part 1.		N/A
3.2.3	Permanently connected equipment may have terminals or leads not smaller than No. 18 AWG		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	(0.82 mm ²) and not less than 150 mm in length for connection of field installed wiring.		
3.2.3	If supply wires exceed 60 °C, marking indicates use of 75 °C or 90 °C wiring for supply connection as appropriate.		N/A
3.2.3	Equipment compatible with suitable trade sizes of conduits and cables.		N/A
3.2.5	Length of power supply cord limited to between 1.5 and 4.5 m unless shorter length used when intended for a special installation.		N/A
3.2.5	Conductors in power supply cords sized according to NEC and CEC, Part I.		N/A
3.2.5	Power supply cords and cord sets incorporate flexible cords suitable for the particular application.		N/A
3.2.6	Strain relief provided for non-detachable interconnecting cables not supplied by a limited power source.		N/A
3.2.9	Adequate wire bending space and volume of field wiring compartment required to properly make the field connections.		N/A
3.2.9	Equipment intended solely for installation in Restricted Access Locations using low voltage d.c. systems may not need provision for connecting and securing a field wiring system. A method of securing wiring or instructions provided to ensure the wiring is protected from abuse.		N/A
3.3	Field wiring terminals provided for interconnection of units for other than LPS or Class 2 circuits also comply with 3.3.		N/A
3.3	Interconnection of units by LPS or Class 2 conductors may have field wiring connectors other than those specified in 3.3 if wiring is reliably separated.	To be evaluated in end product.	N/A
3.3.1	Terminals for the connection of neutral conductor identified by a distinctive white marking or other equally effective means.		N/A
3.3.3	Wire binding screw terminal permitted for connection of No. 10 AWG (5.3 mm ²) or smaller conductor if provided with upturned lugs, cupped washer or equivalent retention.		N/A
3.3.4	Terminals accept wire sizes (gauge) used in the U.S. and Canada.		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
3.3.4	Terminals accept current-carrying conductors rated 125% of the equipment current rating.		N/A
3.3.6	Field wiring terminals marked to indicate the material(s) of the conductor appropriate for the terminals used.		N/A
3.3.6	Connection of an aluminum conductor not permitted to terminal for equipment earthing conductor.		N/A
3.3.6	Field wiring connections made through the use of suitable pressure connectors (including set screw type), solder lugs or splices to flexible leads.		N/A
3.4.2	Separate motor control device(s) required for cord-connected equipment rated more than 12 A, or with motor rated more than 1/3 hp or more than 120 V.		N/A
3.4.8	Vertically mounted disconnect devices oriented so up position of handle is "on".		N/A
3.4.11	For computer-room applications, equipment with battery systems capable of supplying 750 VA for 5 min require battery disconnect means.		N/A
4.2.8.1	Special opening restrictions for enclosures around CRTs with face dimension of 160 mm or more.		N/A
4.2.9	Compartment housing high-pressure lamp marked to indicate risk of explosion.		N/A
4.2.11	For equipment intended for mounting on racks and provided with slide/rails allowing the equipment to slide away from the rack for installation, service and maintenance, additional construction, performance and marking requirements are applicable to determine the adequacy of the slide/rails.		N/A
4.3.2	Loading test for equipment with handle(s) used to support more than 9 kg tested at four times the weight of the unit.		N/A
4.3.6	In addition to the IEC requirements, Direct Plug-in Equipment complies with UL 1310 or CSA 223 mechanical assembly requirements.		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment complies with ANSI/NFPA 30(Table NAE.6).		N/A
4.3.12	Equipment using replenishable liquids marked to indicate type of liquid to be used.		N/A
4.3.13.2	Equipment that produces x-radiation and does not		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	comply with 4.3.12 under all conditions of servicing marked to indicate the presence of radiation where readily visible.		
4.3.13.5	Requirements contained in the applicable national codes and regulations apply to lasers (21 CFR 1040 and REDR C1370).		N/A
4.7	Automated information storage equipment intended to contain more than 0.76 m ³ of combustible media requires provision for automatic sprinklers or a gaseous agent extinguishing system.		N/A
4.7.3.1	Equipment for use in environmental air space other than ducts or plenums provided with metal enclosure or with non-metallic enclosure having adequate fire-resistance and low smoke producing characteristics. Low smoke-producing characteristics evaluated according to UL 2043. Equipment for installation in space used for environmental air as described in Sec. 300-22(c) of the NEC provided with instructions indicating suitability for installation in such locations.		N/A
4.7.3.1	Flame spread rating for external surface of combustible material with exposed area greater than 0.93 m ² or a single dimension greater than 1.8 m; 50 or less for computer room applications or 200 or less for other applications.		N/A
4.7.3.4	Wire marked "VW-1" or "FT-1" considered equivalent.	Internal wirings are UL Recognized, marked VW-1 or FT-1.	Pass
5.1.8.2	Special earthing provisions and instructions for equipment with high touch current due to telecommunication network connections.		N/A
5.1.8.3	Touch current due to ringing voltage for equipment containing telecommunication network leads.		N/A
5.3.7	Overloading of SELV connectors and printed wiring board receptacles accessible to the operator.		N/A
5.3.7	Tests interrupted by opening of a component repeated two additional times.		Pass
5.3.9.1	Test interrupted by opening of wire or trace subject to certain conditions.		N/A
6	Specialized instructions provided for telephones that may be connected to a telecommunications network.		N/A
6	Marking identifying function of telecommunication		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	type connectors not used for connection to a telecommunication network.		
6.3	Equipment remotely powered over telecommunication wiring systems provided with specialized markings adjacent to the connection.		N/A
6.3	Overcurrent protection incorporated into equipment to provide power over telecommunication wiring system not interchangeable with devices of higher ratings if operator replaceable.		N/A
6.4	Additional requirements for equipment intended for connection to a telecommunication network using cable subject to overvoltage from power line failures (Fig. 6C).		N/A
6.4	Where 26 AWG line cord required by Fig. 6C, either the cord is provided with the equipment or described in the safety instructions.		N/A
7	Equipment associated with the cable distribution system may need to be subjected to applicable parts of Chapter 8 of the NEC.		N/A
H	Ionizing radiation measurements made under single fault conditions in accordance with the requirements of the Code of Federal Regulations 21 CFR 1020 and the Canadian Radiation Emitting Devices Act, REDR C1370.		N/A
M.2	Continuous ringing signals evaluated to Method A subjected to special accessibility considerations.		N/A
M.4	Special requirements for message waiting and similar telecommunications signals.		N/A
NAC	Equipment intended for use with a generic secondary protector marked with suitable instructions.		N/A
NAC	Equipment intended for use with a specific primary or secondary protector marked with suitable instructions.		N/A
NAD	Acoustic pressure from an ear piece less than 136 dBA for short duration disturbances, and less than 125 dBA for handsets, 118 dBA for headsets, and 121 dBA for insert earphones, for long duration disturbances.		N/A
NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	requirements.		
NAF	Household/Home Office Document Shredders		N/A
NAF.1.7	Markings and instructions alert the user to key safety considerations related to use of shredders, including not intended to be used by children, avoid touching document feed opening, avoid clothes and hair entanglement, and avoid aerosol products.		N/A
NAF.2.8.3	Safety interlock cannot be inadvertently activated by the articulated accessibility probe (figure NAF.1).		N/A
NAF.3.4	Provided with an isolating switch complying with 3.4.2, including 3 mm contact gap, with appropriate markings associated with the switch.		N/A
NAF.4.4	Hazardous moving parts are not accessible, as determined using the articulated accessibility probe (figure NAF.1) and the accessibility probe/wedge (figures NAF.2/NAF.3).		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE: electrical data (in normal conditions)						Pass
U (V)	I (A)	I rated (A)	P (W)	Fuse #	I fuse (A)	condition/status	
--	--	--	--	--	--	For Model GTM91120-3010.5-1.4-P	
90Vac/50HZ	0.730	--	36.6	F1	36.6	Maximum normal load	
90Vac/60HZ	0.730	--	36.6	F1	36.6	Maximum normal load	
100Vac/50HZ	0.672	1.5	36.3	F1	36.3	Maximum normal load	
100Vac/60HZ	0.657	1.5	36.3	F1	36.3	Maximum normal load	
240Vac/50HZ	0.310	1.5	36.0	F1	36.0	Maximum normal load	
240Vac/60HZ	0.328	1.5	36.3	F1	36.3	Maximum normal load	
264Vac/50HZ	0.293	--	36.1	F1	36.1	Maximum normal load	
264Vac/60HZ	0.307	--	36.4	F1	36.4	Maximum normal load	
--	--	--	--	--	--	For Model GTM91120-3012-1.5-P	
90Vac/50HZ	0.720	--	35.8	F1	35.8	Maximum normal load	
90Vac/60HZ	0.702	--	35.7	F1	35.7	Maximum normal load	
100Vac/50HZ	0.673	1.5	35.6	F1	35.6	Maximum normal load	
100Vac/60HZ	0.630	1.5	35.4	F1	35.4	Maximum normal load	
240Vac/50HZ	0.293	1.5	35.1	F1	35.1	Maximum normal load	
240Vac/60HZ	0.322	1.5	35.1	F1	35.1	Maximum normal load	
264Vac/50HZ	0.277	--	35.3	F1	35.3	Maximum normal load	
264Vac/60HZ	0.300	--	35.3	F1	35.3	Maximum normal load	
supplementary information:							
-- Maximum normal load: Load at rated output and operate continuously.							

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.10.3 and 2.10.4	TABLE: clearance and creepage distance measurements						Pass
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:							
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)	
--	--	--	--	--	--	--	
Basic/supplementary:							
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)	
--	--	--	--	--	--	--	
Reinforced:							
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)	
T1 primary pin to secondary pin	544	243	4.4	13	5	13	
T1 primary pin to secondary wiring	544	243	4.4	13	5	13	
T1 secondary winding to core	544	243	4.4	10	5	10	
T1 secondary pin to core	544	243	4.4	10	5	10	
CY1 primary pin to secondary pin	360	215	4	9.3	4.8	9.3	
U3 primary pin to secondary pin	360	222	4	7.9	4.8	7.9	
supplementary information:							
-- Triple Wire employed for secondary winding, Core acts as primary. 2 layers insulation tape were wrap around the transformer.							

2.10.5	TABLE: distance through insulation measurements					Pass
Distance through insulation (DTI) at/of:	U peak (V)	Urms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)	
Plastic enclosure	--	--	3000Vac	0.4	1.9	
supplementary information:						
Plastic enclosure: HF500R, manufactured by SABIC INNOVATIVE PLASTICS B V.						

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

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 operation									
Max. current during fault operation									
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: Thermal requirements						Pass
	Supply voltage (V)..... :	90Vac/50HZ	90Vac/50HZ	264Vac/60HZ	264Vac/60HZ	--	—
	Ambient Tmin (°C)..... :	--	--	--	--	--	—
	Ambient Tmax (°C)..... :	See below	Shifted to Tma	See below	Shifted to Tma	--	—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

Maximum measured temperature T of part/at:	T (°C)					allowed Tmax (°C)
	Maximum normal load at 90Vac/50HZ	Maximum normal load at 90Vac/50HZ, shifted to Tma	Maximum normal load at, 264Vac/60HZ	Maximum normal load at 264Vac/60HZ, shifted to Tma	--	
--	--	--	--	--	--	--
For Model GTM91120-3010.5-1.4-P	--	--	--	--	--	--
1. CX1 body	49.5	64.2	48.2	62.8	--	100
2. HS1 body	61.9	76.6	63.4	78.0	--	--
3. HS2 Body	62.3	77.0	63.3	77.9	--	--
4. LF1 Coil	59.2	73.9	55.6	70.2	--	130
5. C2 Body	60.0	74.7	60.4	75.0	--	105
6. PWB near Q1	66.2	80.9	68.3	82.9	--	105
7. T1 Coil	64.0	78.7	67.2	81.8	--	110
8. T1 Core	66.0	80.7	69.5	84.1	--	110
9. U2 Body	65.1	79.8	66.9	81.5	--	100
10. CY1 Body	58.6	73.3	61.1	75.7	--	85
11. PWB near T1	60.8	75.5	63.2	77.8	--	105
12. PWB near D7	47.4	62.1	48.6	63.2	--	105
13. Plastic enclosure inside near T1	65.1	79.8	66.1	80.7	--	125
14. Plastic enclosure outside near T1	54.5	69.2	55.3	69.9	--	95
20. Ambient	25.3	40.0	25.4	40.0	--	--
Test duration	2h 40min	--	2h 35min	--	--	--
For Model GTM91120-3012-1.5-P	--	--	--	--	--	--
15. CX1 body	46.9	61.6	45.8	60.4	--	100
16. HS1 body	55.9	70.6	56.9	71.5	--	--
17. HS2 Body	56.3	71.0	56.9	71.5	--	--
18. LF1 Coil	55.3	70.0	52.1	66.7	--	130
19. C2 Body	54.6	69.3	54.5	69.1	--	105
20. PWB near Q1	58.4	73.1	59.7	74.3	--	105
21. T1 Coil	58.1	72.8	60.6	75.2	--	110
22. T1 Core	58.5	73.2	61.1	75.7	--	110
23. U2 Body	59.5	74.2	61.1	75.7	--	100
24. CY1 Body	54.0	68.7	56.0	70.6	--	85
25. PWB near T1	53.4	68.1	55.3	69.9	--	105
26. PWB near D7	63.0	77.7	64.2	78.8	--	105
27. Plastic enclosure inside near T1	58.3	73.0	59.4	74.0	--	125
28. Plastic enclosure outside near T1	52.2	66.9	53.7	68.3	--	95
30. Ambient	25.3	40.0	25.4	40.0	--	--
Test duration	2h	--	2h	--	--	--

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

temperature T of winding:	t ₁ (°C)	41min		34min		T (°C)	allowed T _{max} (°C)	insulation class
		R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)				
--	--	--	--	--	--	--	--	--
supplementary information: Note: The temperatures were measured under worst-case normal mode defined in 1.2.2.1 and as described in sub-clause 1.6.2 and at voltages as described in sub-clause 1.4.5 - With a specified ambient temperature of 40 degree C. - Tmax of components listed below Winding components: T1 coil, core - 110 Deg.C (Class B insulation system, thermocouple method) General components: LF1 coil - 130 Deg.C (Magnet wire rating) PWB - 105 Deg.C (PWB rating) X-Capacitor (CX1)- 100 Deg.C (X-Cap C-of-A) Y-Capacitor(CY1) - 85 Deg.C (Y-Cap C-of-A) Optical Isolator(U2) - 100 Deg.C (Optical Isolator C-of-A) Electrolytic Capacitor (C2) - 105 Deg.C (Rating) Plastic - 125 Deg.C (RTI) Plastic enclosure which may be touched - 95 Deg.C								

4.5.5	TABLE: Ball pressure test of thermoplastic parts			N/A
	allowed impression diameter (mm)	less than or equal to 2.0		—
	part	test temperature (°C)	impression diameter (mm)	
supplementary information:				

4.7	TABLE: resistance to fire				Pass	
	part	manufacturer of material	type of material	thickness (mm)	flammability class	Evidence
	--	--	--	--	--	
supplementary information:						
-- See table 1.5.1 for details.						

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.2	TABLE: electric strength tests, impulse tests and voltage surge tests			Pass
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
--		--	--	--
Functional:				
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
--		--	--	--
Basic/supplementary:				
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
--		--	--	--
Reinforced:				
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Primary/ Secondary		AC	3000Vac	No
Primary/ Enclosure with metal foil		AC	3000Vac	No
Plastic enclosure		AC	3000Vac	No
One layer of T1 insulation tape		AC	3000Vac	No
T1 Core/T1 Secondary		AC	3000Vac	No
T1 Primary/T1 Secondary		AC	3000Vac	No
supplementary information:				
--All electric strength tests duration last at least 60 seconds.				
Tape: 1350F-1, manufactured by 3M COMPANY ELECTRICAL MARKETS DIV (EMD)				
Plastic Enclosure: HF500R, manufactured by SABIC INNOVATIVE PLASTICS B V				

5.3	TABLE: fault condition tests					Pass
ambient temperature (°C)		See below			—	
Power source for EUT: Manufacturer, model/type, output rating		--			—	
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
D1 pin1 to pin2	Short	240Vac/60HZ	1s	F1	0	IP (F1, F2), NC, NT, NB
C2	Short	240Vac/60H	1s	F1	0	IP (F1, F2), NC, NT, NB

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

		Z				
U2 pin1 to pin2	Short	240Vac/60H Z	2min	F1	0.04	Unit Shutdown, IP(Internal circuit), NC, NT, NB
U2 pin3 to pin4	Short	240Vac/60H Z	2min	F1	0.04	Unit Shutdown, IP(Internal circuit), NC, NT, NB
U1 Pin1 to Pin5	Short	240Vac/60H Z	2min	F1	0.04	Unit Shutdown, IP(Internal circuit), NC, NT, NB
U1 Pin2 to Pin5	Short	240Vac/60H Z	2min	F1	0.04	Unit Shutdown, IP(Internal circuit), NC, NT, NB
U1 Pin4 to Pin6	Short	240Vac/60H Z	2min	F1	0.04	Unit Shutdown, IP(Internal circuit), NC, NT, NB
Q1 G to D	Short	240Vac/60H Z	1s	F1	0	IP (F1, F2), NC, NT, NB
Q1 G to S	Short	240Vac/60H Z	2min	F1	0.04	Unit Shutdown, IP(Internal circuit), NC, NT, NB
Q1 D to S	Short	240Vac/60H Z	1s	F1	0	IP (F1, F2), NC, NT, NB
--	--	--	--	--	--	For Model GTM91120-3010.5-1.4-P
T1 PinTA to PinTB	Short	240Vac/60H Z	2min	F1	0.02 to 0.07	Unit Foldback, IP(Internal circuit), NC, NT, NB
T1 PinTA to PinTB	Overlaod(after D7)	240Vac/ 60Hz	7h 49min	F1	0.51	CT, IP(Internal circuit), NC, NT, NB Maximum Temperature of key components: T1 Coil: 94.3Deg.C at ambient 23.1(C, T1 Core: 98.5Deg.C at ambient 22.8(C
Output Terminal ("V+" to "GND")	Overload	240V/60HZ	7h 53min	F1	0.49	CT, IP(Internal circuit), NC, NT, NB Maximum Temperature of key components: 7. T1 Coil: 101.8Deg.C at ambient 24.4(C 8. T1 Core: 105.6Deg.C at ambient 24.3(C 9. U2 body: 99.2Deg.C at ambient 24.4(C
Output Terminal ("V+" to "GND")	Short	240V/60HZ	2min	F1	0.04	Unit Shutdown. IP(Internal circuit), NC, NT, NB
--	--	--	--	--	--	For Model GTM91120-3012-1.5-P
T1 PinTA to PinTB	Short	240Vac/60H Z	2min	F1	0.03 to 0.07	Unit Foldback, IP(Internal circuit), NC, NT, NB
T1 PinTA to PinTB	Overlaod(after D7)	240Vac/ 60Hz	7h 21min	F1	0.42	CT, IP(Internal circuit), NC, NT, NB

IEC 60950-1						
Clause	Requirement + Test				Result - Remark	Verdict
						Maximum Temperature of key components: T1 Coil: 74.9Deg.C at ambient 23.1(C, T1 Core: 74.9Deg.C at ambient 23.1(C
Output Terminal ("V+" to "GND")	Overload	240V/60HZ	7h 53min	F1	0.40	CT, IP(Internal circuit), NC, NT, NB Maximum Temperature of key components: T1 Coil: 77.9Deg.C at ambient 24.4(C, T1 Core: 77.9Deg.C at ambient 24.4(C
Output Terminal ("V+" to "GND")	Short	240V/60HZ	2min	F1	0.04	Unit Shutdown, IP(Internal circuit), NC, NT, NB
supplementary information:						
Results Key: IP = Internal protection operated (component indicated) CT = Constant temperatures were obtained TW = Transformer winding opened CD = Components damaged (damaged components indicated) NB = No indication of dielectric breakdown YB = Dielectric breakdown (time and location indicated) NC = Cheesecloth remained intact YC = Cheesecloth charred or flamed NT = Tissue paper remained intact YT = Tissue paper charred or flamed						