COVER PAGE FOR TEST REPORT

Product Category:	Power Supplies for Information Technology Equipment Including Electrical Business Equipment
Product Category CCN:	QQGQ, QQGQ7
Test Procedure:	Listing
Product:	Direct Plug In Switching Adapter
Model/Type Reference:	GT-81083-0404-X.X-W2, GT-81083-0506-X.X-W2, GT-81083-0509-X.X-W2, GT-81083-0513-X.X-W2, GT-81083-0404-AUS-X.X-W2, GT-81083-0506-AUS-X.X-W2, GT-81083-0509-AUS-X.X-W2, GT-81083-0513-AUS-X.X-W2 Where X.X is optional for specifying the output voltage deviations in 0.1 increments, and X.X is to be subtracted from the base rated voltage
Rating(s):	Input: 100-240 Vac, 50/60 Hz, 0.2 A for model series GT-81083-WWVV-X.X-W2 100-120 Vac, 50/60 Hz, 0.2 A for model series GT-81083-WWVV-AUS-X.X-W2
Standards:	UL 60950-1, 1st Edition, 2007-10-31 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-03, 1st Edition, 2006-07 (Information Technology Equipment - Safety - Part 1: General Requirements)
Applicant Name and Address:	GLOBTEK INC 186 VETERANS DR NORTHVALE NJ 07647 UNITED STATES

This Report includes the following parts, in addition to this cover page:

1. Specific Inspection Criteria
2. Specific Technical Criteria
3. Clause Verdicts
4. Critical Components
5. Test Results
6. National Differences
7. Enclosures

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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Test Report By:

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Reviewed By:

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SPECIFIC INSPECTION CRITERIA

BA1.0	**Special Instructions to UL Representative**
BA1.1	N/A

BB1.0	**Supporting Documentation**
BB1.1	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.

BC1.0	**Markings and instructions**
BC1.1	The following markings and instructions are provided as indicated.
BC1.2	All clause references are from UL 60950-1, 1st Edition, 2007-10-31 (Information Technology Equipment - Safety - Part 1: General Requirements).

Standard Clause	Clause Title	Marking or Instruction Details
1.7.1	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)
1.7.6	Fuses - Rating	Rated current and voltage and type located on or adjacent to fuse or fuseholder.
	Fuses - Non-operator	Unambiguous reference to service documentation for instructions for replacement of fuses replaceable only by service personnel

	access/soldered-in fuses	
Other	Limited Power Source Marking	Unit may be optionally marked "LPS" or "Limited Power Source"

BD1.0	**Production-Line Testing Requirements**						
BD1.1	Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.						
					Test Potential		
	Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
	N/A	---	---	---	---	---	---
BD1.2	Earthing Continuity Test Exemptions - This test is not required for the following models:			GT-81083 Series			
BD1.3	Electric Strength Test Exemptions - This test is not required for the following models:			N/A			
BD1.4	Electric Strength Test Component Exemptions - The following solid-state components may disconnected from the remainder of the circuitry during the performance of this test:			N/A			

BE1.0	**Sample and Test Specifics for Follow-Up Tests at UL**					
BE1.1	Model	Component	Material	Test	Sample(s)	Test Specifics
	N/A	---	---	---	---	---

SPECIFIC TECHNICAL CRITERIA

UL 60950-1, First Edition Information technology equipment - Safety- Part 1: General Requirements	
Report Reference No	E170507-A32-UL-1
Compiled by	AnnaMarie Vessey
Reviewed by	David R. Keen
Date of issue	2008-12-19
Standards	UL 60950-1, 1st Edition, 2007-10-31 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-03, 1st Edition, 2006-07 (Information Technology Equipment - Safety - Part 1: General Requirements)
Test procedure	Listing
Non-standard test method	N/A
Test item description	Direct Plug In Switching Adapter
Trademark	None
Model and/or type reference	GT-81083-0404-X.X-W2, GT-81083-0506-X.X-W2, GT-81083-0509-X.X-W2, GT-81083-0513-X.X-W2, GT-81083-0404-AUS-X.X-W2, GT-81083-0506-AUS-X.X-W2, GT-81083-0509-AUS-X.X-W2, GT-81083-0513-AUS-X.X-W2 Where X.X is optional for specifying the output voltage deviations in 0.1 increments, and X.X is to be subtracted from the base rated voltage
Rating(s)	Input: 100-240 Vac, 50/60 Hz, 0.2 A for model series GT-81083-WWVV-X.X-W2 100-120 Vac, 50/60 Hz, 0.2 A for model series GT-81083-WWVV-AUS-X.X-W2

Particulars: test item vs. test requirements	
Equipment mobility ..... :	direct plug-in
Operating condition ..... :	continuous
Mains supply tolerance (%) ..... :	+10%, -10%
Tested for IT power systems ..... :	No
IT testing, phase-phase voltage (V) ..... :	N/A
Class of equipment ..... :	Class II (double insulated)
Mass of equipment (kg) ..... :	0.07
Protection against ingress of water ..... :	IP X0

Possible test case verdicts:	
- test case does not apply to the test object ..... :	N / A
- test object does meet the requirement ..... :	Pass
- test object does not meet the requirement ..... :	Fail (acceptable only if a corresponding, less stringent national requirement is "Pass")

General remarks:

- "(see Enclosure #)" refers to additional information appended to the Test Report
- "(see appended table)" refers to a table appended to the Test Report
- Throughout the Test Report a point is used as the decimal separator

GENERAL PRODUCT INFORMATION:	
CA1.0	**Report Summary**
CA1.1	N/A
CB1.0	**Product Description**
CB1.1	This product is a direct plug-in type power unit intended to be used for information technology equipment in TN power systems and are for indoor use only. It consists of an isolated transformer with electronic ciruitry housed in a thermoplastic enclosure. It is also provided with parallel type blades with NEMA 1-15P configuration and a length of cord terminated with a molded-on non-standard polarized output connector for output connection.
CC1.0	**Model Differences**
CC1.1	All models are identical except for model designation and output circuitry and rating. Models with -AUS designation have 100-120Vac input only.
CD1.0	**Additional Information**
CD1.1	Output Ratings: GT-81083-WWVV-X.X-W2 Models GT-81083-0404-X.X-W2 and GT-81083-0404-AUS-X.X-W2: WW is output power in Watts, from 03 - 04, 4W Max VV is output voltage for base rated voltage 4.0 Vdc (04), 1A Max X.X is optional for specifying the output voltage deviations in 0.1 increments, and X.X is to be subtracted from base rated voltage of 4.0 Vdc (04) for voltage range of 3.0 - 3.9 volts dc or blank for 4.0 volts Models GT-81083-0506-X.X-W2 and GT-81083-0506-AUS-X.X-W2 : WW is output power in Watts, from 01 - 05 , 5W Max VV is output voltage for base rated voltage 6.0Vdc (06), 1A Max X.X is optional for specifying the output voltage deviations in 0.1 increments, and X.X is to be subtracted from base rated voltage 6.0 Vdc (06), for voltage range of 4.1 - 5.9 volts or blank for 6.0 volts Models GT-81083-0509-X.X-W2 and GT-81083-0509-AUS-X.X-W2: WW is output power in Watts, from 01 - 05, 5W Max VV is output voltage for base rated voltage 9.0 Vdc (09), 0.82A Max X.X is optional for specifying the output voltage deviations in 0.1 increments, and X.X is to be subtracted from base rated voltage 9.0 Vdc (09) for voltage range of 6.1 - 8.9 volts or blank for 9.0 volts Models GT-81083-0513-X.X-W2 and GT-81083-0513-AUS-X.X-W2: WW is output power in Watts, from 01 - 05, 5W Max VV is output voltage for base rated voltage 13.0 Vdc, 0.55A Max X.X is optional for specifying the output voltage deviations in 0.1 increments, and X.X is to be

	subtracted from base rated voltage 13.0 Vdc (13) for voltage range of 9.1 - 12.9 volts or blank for 13 volts
CE1.0	**Technical Considerations**
CE1.2	The product was submitted and tested for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 40°C
CE1.3	The means of connection to the mains supply is: Pluggable A
CE1.4	The product is intended for use on the following power systems: TN
CE1.5	The equipment disconnect device is considered to be: Direct Plug-in blades
CE1.9	The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): Vout (+ to -)

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 or relevant component standard	(See Critical Component List)	Pass
1.5.2	Evaluation and testing of components	Certified components are used in accordance with their ratings, certifications and they comply with applicable parts of this Standard. Components not certified are used in accordance with their ratings and they comply with applicable parts of this Standard and the relevant component Standard. Components, for which no relevant IEC Standard exist, have been tested under the condition occurring in the equipment, using applicable parts of this Standard.	Pass
1.5.3	Thermal controls		N/A
1.5.4	Transformers	Transformers comply with relevant requirements including Annex C.	Pass
1.5.5	Interconnecting cables	VW-1 or FT-1, max. 3.05 m length.	Pass
1.5.6	Capacitors in primary circuits ..... :		N/A
1.5.7	Double insulation or reinforced insulation bridged by components		N/A
1.5.7.1	General		N/A
1.5.7.2	Bridging capacitors		N/A
1.5.7.3	Bridging resistors		N/A
1.5.7.4	Accessible parts		N/A
1.5.8	Components in equipment for IT power systems	Not for use on IT power systems.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6	**Power interface**		Pass
1.6.1	AC power distribution systems	AC power distribution systems are classified as 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 Test Record for details.	Pass
1.6.3	Voltage limit of hand-held equipment	Not hand-held equipment .	N/A
1.6.4	Neutral conductor	Neutral conductor is insulated from secondary circuitry as if it were a line conductor.	Pass

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

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) ..... :	100-120 Vac for models with "-AUS in the p/n and 100-240 Vac f for models with "-AUS in the p/n.	Pass
	Symbol for nature of supply, for d.c. only ..... :	AC source	N/A
	Rated frequency or rated frequency range (Hz).... :	50-60 Hz	Pass
	Rated current (mA or A)..... :	0.2 A	Pass
	Manufacturer's name or trademark or identification mark..... :	GlobTek, Inc or "E170507"	Pass
	Type/model or type reference..... :	GT-81083-WWVV-X.X-W2 or GT-81083-WWVV-AUS-X.X-W2, see additional information area for nomenclature.	Pass
	Symbol for Class II equipment only ..... :	60417-1-IEC-5172 symbol marked.	Pass
	Other symbols..... :	Additional marking may be provided when submitted for national approval.	Pass
	Certification marks ..... :	UL, c-UL.	Pass
1.7.2	Safety instructions	Operating/safety instructions made available to the user.	Pass
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment..... :		N/A
1.7.5	Power outlets on the equipment ..... :	No standard power outlets are provided.	N/A
1.7.6	Fuse identification..... :	F1: T0.8 A, 250 Vac marked on PWB near primary input fuse.	Pass
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals ..... :	Class II equipment	N/A
1.7.7.2	Terminal for a.c. mains supply conductors	Not Permanently connected equipment	N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.8.1	Identification, location and marking ..... :	No indicator, control affecting safety provided.	N/A
1.7.8.2	Colours..... :		N/A
1.7.8.3	Symbols according to IEC 60417 ..... :	There are no switches in the equipment.	N/A
1.7.8.4	Markings using figures..... :	Figures are not used for indicating different positions of controls.	N/A
1.7.9	Isolation of multiple power sources ..... :	There is only one connection to hazardous voltages.	N/A
1.7.10	IT power distribution systems	Not intended to use IT Power System	N/A
1.7.11	Thermostats and other regulating devices	No thermostats or similar regulating devices.	N/A
1.7.12	Language..... :	Reviewed only English markings/instructions. May be provided in other languages upon request from the manufacturer.	-
1.7.13	Durability	All markings provided on UL Recognized Component labels suitable for surface they are applied upon and meet the durability test.	Pass
1.7.14	Removable parts	Marking is not placed on removable parts.	Pass
1.7.15	Replaceable batteries	No batteries provided.	N/A
	Language..... :		-
1.7.16	Operator access with a tool ..... :	No operator access areas require the use of a tool.	N/A
1.7.17	Equipment for restricted access locations..... :		N/A

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		Pass
2.1.1.1	Access to energized parts	See below	Pass
	Test by inspection..... :	Operator can not contact with any parts with hazardous voltage.	Pass
	Test with test finger..... :	The test finger was unable to contact bare hazardous parts.	Pass
	Test with test pin..... :	The test pin cannot touch hazardous voltage through and openings or seams of the whole enclosure.	Pass
	Test with test probe ..... :	No TNV present.	N/A
2.1.1.2	Battery compartments..... :		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (V); minimum distance (mm) through insulation ..... :	See 2.10.3 and 2.10.4 Table of clearance and creepage distance measurements.	-
2.1.1.4	Access to hazardous voltage circuit wiring		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		N/A
	Time-constant (s); measured voltage (V) ..... :		-
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations	The unit is not intended to be used in restricted locations.	N/A

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

2.2	**SELV circuits**		Pass
2.2.1	General requirements		Pass
2.2.2	Voltages under normal conditions (V) ..... :	All accessible voltages are less than 42.4 Vp or 60 V dc and are classified as SELV.	Pass
2.2.3	Voltages under fault conditions (V)..... :	Under fault conditions voltages never exceed 71 Vp and 120 V dc and do not exceed 42.4 Vp or 60 V dc for more than 0.2 sec.	Pass
2.2.3.1	Separation by double insulation or reinforced insulation (method 1)		Pass
2.2.3.2	Separation by earthed screen (method 2)		N/A
2.2.3.3	Protection by earthing of the SELV circuit (method 3)		N/A
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 reinforced 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		N/A
	Type of TNV circuits ..... :		-
2.3.2	Separation from other circuits and from accessible parts		N/A
	Insulation employed..... :		-
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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.4	**Limited current circuits**		N/A
2.4.1	General requirements		N/A
2.4.2	Limit values		N/A
	Frequency (Hz) ..... :		-
	Measured current (mA) ..... :		-
	Measured voltage (V) ..... :		-
	Measured capacitance (mF) ..... :		-
2.4.3	Connection of limited current circuits to other circuits		N/A
2.5	**Limited power sources**		Pass
	Inherently limited output		N/A
	Impedance limited output		N/A
	Overcurrent protective device limited output		N/A
	Regulating network limited output under normal operating and single fault condition		Pass
	Regulating network limited output under normal operating conditions and overcurrent protective device limited output under single fault condition		N/A
	Output voltage (V), output current (A), apparent power (VA): ..... :	Model GT-81083-0506-X.X-W2 and GT-81083-0506-AUS-X.X-W2: Uoc: 5.18 V Isc: 3.1 A VA: 6.9 VA Model GT-81083-0513-X.X-W2 and GT-81083AUS-0513-X.X-W2 Uoc: 9.18 V Isc: 2.2 A VA: 8.0 VA	-
	Current rating of overcurrent protective device (A) :		-

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

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 (mm2), AWG ..... :		-
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm2), AWG ..... :		-
2.6.3.4	Resistance (Ohm) of earthing conductors and their terminations, test current (A) ..... :		N/A
2.6.3.5	Colour of insulation ..... :		N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type and 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

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

2.7	**Overcurrent and earth fault protection in primary circuits**		Pass
2.7.1	Basic requirements		Pass
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not covered in 5.3		N/A
2.7.3	Short-circuit backup protection	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		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
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

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

2.9	**Electrical insulation**		Pass
2.9.1	Properties of insulating materials	Natural rubber, hygroscopic materials and materials containing asbestos are not used as insulating materials. Electric strength test was conducted after the humidity treatment. See below.	Pass
2.9.2	Humidity conditioning	Humidity treatment performed to 120 hrs in condition : 95%, 40 degree C (93%, 25 degree C for Insulation System, Type YCI-130)	Pass
	Humidity (%) ..... :	95% (93% for Insulation System, Type YCI-130)	-
	Temperature (°C)..... :	40 degree C (25 degree C for Insulation System, Type YCI-130)	-
2.9.3	Grade of insulation	Reinforced Insulation between Primary and SELV, Basic Insulation between Primary and Earth, Functional Insulation between Primary and Primary and between SELV and SELV.	Pass

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

2.10	**Clearances, creepage distances and distances through insulation**		Pass
2.10.1	General	Pollution degree 2 applicable.	Pass
2.10.2	Determination of working voltage	See Table 2.10.3 and 2.10.4	Pass
2.10.3	Clearances	See appended table.	Pass
2.10.3.1	General	Measured distances are adequate.	Pass
2.10.3.2	Clearances in primary circuit	See appended table.	Pass
2.10.3.3	Clearances in secondary circuits	Functional insulation, see 5.3.4.	Pass
2.10.3.4	Measurement of transient voltage levels		N/A
2.10.4	Creepage distances	See appended table.	Pass
	CTI tests..... :	Material group IIIb; 100 <= CTI < 175.	-
2.10.5	Solid insulation	Solid or laminated insulating materials having adequate thickness are provided.	Pass
2.10.5.1	Minimum distance through insulation	See appended Table 2.10.5	Pass
2.10.5.2	Thin sheet material	Three layers used, two of which complies with the required electric strength test. Thickness 0.025 mm each.	Pass
	Number of layers (pcs) ..... :	Two layers of polyester tape provided as outer wrap on primary and secondary winding of transformer. Three layers of polyester tape provided between primary and secondary wires.	-
	Electric strength test ..... :	Electric strength conducted on one layer of tape at 3000 Vac.	-
2.10.5.3	Printed boards	PWB is not used as reinforced or supplementary insulation.	N/A
	Distance through insulation		N/A
	Electric strength test for thin sheet insulating material ..... :		-
	Number of layers (pcs) ..... :		N/A
2.10.5.4	Wound components	Triple Insulated wire used.	Pass
	Number of layers (pcs) ..... :	Three wrapped layers.	Pass

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

	Two wires in contact inside wound component; angle between 45° and 90° ..... :	Physical separation in the form of insulating sleeving provided to relieve mechanical stress at the crossover point.	Pass
2.10.6	Coated printed boards	No coated printed wiring boards.	N/A
2.10.6.1	General		N/A
2.10.6.2	Sample preparation and preliminary inspection		N/A
2.10.6.3	Thermal cycling		N/A
2.10.6.4	Thermal ageing (°C) ..... :		N/A
2.10.6.5	Electric strength test ..... :		-
2.10.6.6	Abrasion resistance test		N/A
	Electric strength test ..... :		-
2.10.7	Enclosed and sealed parts ..... :		N/A
	Temperature T1=T2 = Tma - Tamb +10K (°C)..... :		N/A
2.10.8	Spacings filled by insulating compound..... :	UL approved optical isolators used.	Pass
	Electric strength test ..... :	(see appended table 5.2)	-
2.10.9	Component external terminations		N/A
2.10.10	Insulation with varying dimensions		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	Internal wiring is adequately sized for the current it is intended to carry and protected from overcurrent.	Pass
3.1.2	Protection against mechanical damage	The wires are routed away from sharp edges and parts which could damage insulation.	Pass
3.1.3	Securing of internal wiring		Pass
3.1.4	Insulation of conductors		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	Conductors suitably terminated, creepage and clearances maintained, second securing for soldered terminations provided.	Pass
	10 N pull test		N/A
3.1.10	Sleeving on wiring		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3.2	**Connection to an a.c. mains supply or a d.c. mains supply**		Pass
3.2.1	Means of connection	The unit is provided with a means for direct plug-in.	Pass
3.2.1.1	Connection to an a.c. mains supply		Pass
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections	Single mains supply	N/A
3.2.3	Permanently connected equipment	The equipment is not permanently connected.	N/A
	Number of conductors, diameter (mm) of cable and conduits..... :		-
3.2.4	Appliance inlets	Direct plug-in equipment.	N/A
3.2.5	Power supply cords	Direct plug-in equipment.	N/A
3.2.5.1	AC power supply cords		N/A
	Type ..... :		-
	Rated current (A), cross-sectional area (mm²), AWG ..... :		-
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief	Direct plug-in equipment.	N/A
	Mass of equipment (kg), pull (N) ..... :		-
	Longitudinal displacement (mm)..... :		-
3.2.7	Protection against mechanical damage	Direct plug-in equipment.	N/A
3.2.8	Cord guards	Direct plug-in equipment.	N/A
	D (mm); test mass (g) ..... :		-
	Radius of curvature of cord (mm) ..... :		-
3.2.9	Supply wiring space	Direct plug-in equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3.3	**Wiring terminals for connection of external conductors**		N/A
3.3.1	Wiring terminals	Direct plug-in equipment.	N/A
3.3.2	Connection of non-detachable power supply cords	Direct plug-in equipment.	N/A
3.3.3	Screw terminals	Direct plug-in equipment.	N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm^2) ..... :	Direct plug-in equipment.	-
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type and nominal thread diameter (mm) ..... :	Direct plug-in equipment.	-
3.3.6	Wiring terminals design	Direct plug-in equipment.	N/A
3.3.7	Grouping of wiring terminals	Direct plug-in equipment.	N/A
3.3.8	Stranded wire	Direct plug-in equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3.4	**Disconnection from the mains supply**		Pass
3.4.1	General requirement	Direct Plug-In equipment	Pass
3.4.2	Disconnect devices	A mains plug that is part of DIRECT PLUG-IN EQUIPMENT	Pass
3.4.3	Permanently connected equipment	Not permanently connected equipment.	N/A
3.4.4	Parts which remain energized	No parts remain energized when the disconnect device is removed.	N/A
3.4.5	Switches in flexible cords	No isolating switch in the cord set.	N/A
3.4.6	Single-phase equipment and d.c. equipment	Disconnect device disconnects both poles simultaneously.	Pass
3.4.7	Three-phase equipment	The equipment is single-phased.	N/A
3.4.8	Switches as disconnect devices	No such switch is provided.	N/A
3.4.9	Plugs as disconnect devices	Direct Plug-In equipment. There are no power supply cord used.	N/A
3.4.10	Interconnected equipment	No interconnection of hazardous voltages.	N/A
3.4.11	Multiple power sources	One power source only.	N/A

3.5	**Interconnection of equipment**		Pass
3.5.1	General requirements	Output of power supply is a limited power source.	Pass
3.5.2	Types of interconnection circuits ..... :	Interconnection circuits are SELV CIRCUITS.	Pass
3.5.3	ELV circuits as interconnection circuits		N/A

4	**PHYSICAL REQUIREMENTS**		Pass
4.1	Stability		N/A
	Angle of 10°	Direct Plug-In equipment.	N/A
	Test: force (N) ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.2	**Mechanical strength**		Pass
4.2.1	General	See below	Pass
4.2.2	Steady force test, 10 N		Pass
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N	See Test Record for details.	Pass
4.2.5	Impact test	Direct plug-in equipment.	N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test	See Test Record for details.	Pass
4.2.7	Stress relief test	See Test Record for details.	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

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Clause	Requirement + Test	Result - Remark	Verdict

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) ..... :		N/A
4.3.3	Adjustable controls	No setting for power supply voltage.	N/A
4.3.4	Securing of parts		N/A
4.3.5	Connection of plugs and sockets	The equipment does not have any interchangeable plugs/sockets.	N/A
4.3.6	Direct plug-in equipment	Power supply suitable for the application and compliant with national requirements is to be provided by the manufacturer or distributor.	Pass
	Dimensions (mm) of mains plug for direct plug-in . :	The blade configuration is in accordance with the national applicable standards. NEMA 1-15P Configuration.	Pass
	Torque and pull test of mains plug for direct plug-in; torque (Nm); pull (N) ..... :	The additional torque applied to the socket-outlet to maintain the engagement face in the vertical plane did not exceed 0.25 Nm.	Pass
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries		N/A
4.3.9	Oil and grease	The insulation of the internal wiring is not exposed to oil, grease, etc.	N/A
4.3.10	Dust, powders, liquids and gases	The equipment does not produce or employ powders, liquids, or gases.	N/A
4.3.11	Containers for liquids or gases	The equipment does not contain liquid.	N/A
4.3.12	Flammable liquids ..... :	The equipment does not use any flammable liquids.	N/A
	Quantity of liquid (l) ..... :		N/A
	Flash point (°C) ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.13	Radiation; type of radiation	Ionizing radiation or laser or in which similar hazards are not presents.	N/A
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)		N/A
	Laser class..... :		-
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

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Clause	Requirement + Test	Result - Remark	Verdict
4.5	**Thermal requirements**		Pass
4.5.1	Maximum temperatures	The equipment and its component parts did not attain excessive temperatures during normal operation.	Pass
	Normal load condition per Annex L .....:	Operated in the most unfavorable way of operation given in the operating instructions until steady conditions established. Permitted rises based on manufacturer's specified Tma of 40 degree C. See Test Record for details.	Pass
4.5.2	Resistance to abnormal heat	See Test Record for details.	Pass
4.6	**Openings in enclosures**		N/A
4.6.1	Top and side openings		N/A
	Dimensions (mm).....:		-
4.6.2	Bottoms of fire enclosures	No openings.	N/A
	Construction of the bottom.....:		-
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C)/time (weeks) .....:		-

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Clause	Requirement + Test	Result - Remark	Verdict

4.7	**Resistance to fire**		Pass
4.7.1	Reducing the risk of ignition and spread of flame	Method 1: Selection and application of components and materials which minimize the possibility of ignition and spread of flame.	Pass
	Method 1, selection and application of components wiring and materials		Pass
	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	Components in primary and secondary circuits are provided with fire enclosure.	Pass
4.7.2.2	Parts not requiring a fire enclosure	Interconnecting cable is marked "VW-1" or "FT-1"	Pass
4.7.3	Materials		Pass
4.7.3.1	General	See below.	Pass
4.7.3.2	Materials for fire enclosures	Equipment is moveable with mass less than 18 kg. Fire enclosure material is V-1 minimum.	Pass
4.7.3.3	Materials for components and other parts outside fire enclosures	Interconnecting cable is marked "VW-1" or "FT-1".	Pass
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	No air filter assemblies.	N/A
4.7.3.6	Materials used in high-voltage components	No high-voltage components	N/A

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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	Touch current levels did not exceed limits of Table 5A. See enclosed test record.	Pass
5.1.2	Equipment under test (EUT)	Single mains connection.	Pass
5.1.3	Test circuit	Test circuit of Figure 5A used.	Pass
5.1.4	Application of measuring instrument	Measuring circuit of Annex D used.	Pass
5.1.5	Test procedure	Touch current was measured from primary to enclosure and primary to output.	Pass
5.1.6	Test measurements	RMS value measured.	Pass
	Test voltage (V) ..... :	264 V ac, 60 Hz	-
	Measured touch current (mA) ..... :	Max 0.005 mA	-
	Max. allowed touch current (mA) ..... :	0.25 mA	-
	Measured protective conductor current (mA) ..... :		-
	Max. allowed protective conductor current (mA) ... :		-
5.1.7	Equipment with touch current exceeding 3.5 mA .. :	Touch current is < 0.25mA.	N/A
5.1.8	Touch currents to and from telecommunication networks and cable distribution systems and from telecommunication networks	No TNV circuit.	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network and a cable distribution system	No TNV circuit.	N/A
	Test voltage (V) ..... :		-
	Measured touch current (mA) ..... :		-
	Max. allowed touch current (mA) ..... :		-
5.1.8.2	Summation of touch currents from telecommunication networks ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.2	**Electric strength**		Pass
5.2.1	General	Based on the electric strength test the use of the insulating materials within the equipment is satisfactory.	Pass
5.2.2	Test procedure	No insulation breakdown detected during the test. See Test Record for details.	Pass
5.3	**Abnormal operating and fault conditions**		Pass
5.3.1	Protection against overload and abnormal operation	Unit is protected by regulating circuitry and primary input fuse. See Test Record for details.	Pass
5.3.2	Motors		N/A
5.3.3	Transformers	Transformers are protected by primary fuse and by regulating network.	Pass
5.3.4	Functional insulation ..... :	Functional insulation complies with the requirements (a) or (c).	Pass
5.3.5	Electromechanical components		N/A
5.3.6	Simulation of faults	See Table 5.3.	Pass
5.3.7	Unattended equipment	The equipment is not intended for unattended use.	N/A
5.3.8	Compliance criteria for abnormal operating and fault conditions	No fire, emission of molten metal or deformation was noted during the tests. Electric Strength tests performed after abnormal and fault tests.	Pass

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Clause	Requirement + Test	Result - Remark	Verdict

6	**CONNECTION TO TELECOMMUNICATION NETWORKS**		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements		N/A
	Test voltage (V) ..... :		-
	Current in the test circuit (mA)..... :		-
6.1.2.2	Exclusions..... :		N/A

6.2	**Protection of equipment users from overvoltages on telecommunication networks**		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A

6.3	**Protection of the telecommunication wiring system from overheating**		N/A
	Max. output current (A)..... :		-
	Current limiting method..... :		-

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Clause	Requirement + Test	Result - Remark	Verdict

7	**CONNECTION TO CABLE DISTRIBUTION SYSTEMS**		N/A
7.1	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.2	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.3	Insulation between primary circuits and cable distribution systems		N/A
7.3.1	General		N/A
7.3.2	Voltage surge test		N/A
7.3.3	Impulse test		N/A

A	**Annex A, TESTS FOR RESISTANCE TO HEAT AND FIRE**		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)		N/A
A.1.1	Samples.....:		-
	Wall thickness (mm) .....:		-
A.1.2	Conditioning of samples; temperature (°C) .....:		N/A
A.1.3	Mounting of samples.....:		N/A
A.1.4	Test flame		N/A
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s).....:		-
	Sample 2 burning time (s).....:		-
	Sample 3 burning time (s).....:		-

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Clause	Requirement + Test	Result - Remark	Verdict

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)**		N/A
A.2.1	Samples, material ..... :		-
	Wall thickness (mm) ..... :		-
A.2.2	Conditioning of samples		N/A
A.2.3	Mounting of samples		N/A
A.2.4	Test flame		N/A
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s)..... :		-
	Sample 2 burning time (s)..... :		-
	Sample 3 burning time (s)..... :		-
A.2.7	Alternative test acc. to IEC 60695-2-2, cl. 4, 8		N/A
	Sample 1 burning time (s)..... :		-
	Sample 2 burning time (s)..... :		-
	Sample 3 burning time (s)..... :		-

A.3	**Hot flaming oil test (see 4.6.2)**		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

B	**Annex B, MOTOR TESTS UNDER ABNORMAL CONDITIONS(see 4.7.2.2 and 5.3.2)**		N/A
B.1	General requirements		N/A
	Position ..... :		-
	Manufacturer ..... :		-
	Type ..... :		-
	Rated values ..... :		-
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days) ..... :		-
	Electric strength test: test voltage (V) ..... :		-
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	Test procedure		N/A
B.7.2	Alternative test procedure; test time (h) ..... :		N/A
B.7.3	Electric strength test		N/A
B.8	Test for motors with capacitors		N/A
B.9	Test for three-phase motors		N/A
B.10	Test for series motors		N/A
	Operating voltage (V) ..... :		-

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Clause	Requirement + Test	Result - Remark	Verdict

C	**Annex C, TRANSFORMERS (see 1.5.4 and 5.3.3)**		Pass
	Position ..... :	T1	-
	Manufacturer ..... :	Dee Van Enterprise Co., Ltd. or Glob Tek Inc.	-
	Type ..... :	90E165000-00H, 90E165000-01H, 90E165000-02H, 90E165000-03H.	-
	Rated values ..... :	T1 employs Class B (130C), Types HIS-8A and YCI-130	-
	Method of protection ..... :	Regulating Network	-
C.1	Overload test	See Test Record for details.	Pass
C.2	Insulation	Insulation complies with Clauses 2.10 and 5.2.2.	Pass
	Protection from displacement of windings ..... :	Triple insulated wire used.	Pass

D	**Annex D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS**		Pass
D.1	Measuring instrument		Pass
D.2	Alternative measuring instrument		N/A

E	**Annex E, TEMPERATURE RISE OF A WINDING**	N/A

F	**Annex F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10)**	Pass

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Clause	Requirement + Test	Result - Remark	Verdict

G	**Annex G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES**		N/A
G.1	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply		N/A
G.2.2	DC mains supply		N/A
G.3	Determination of telecommunication network transient voltage (V) : :		N/A
G.4	Determination of required withstand voltage (V) ... :		N/A
G.5	Measurement of transient levels (V) ..... :		N/A
G.6	Determination of 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
	Metal used ..... :		-

K	**ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.7)**		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V) ..... :		N/A
K.3	Thermostat endurance test; operating voltage (V) :		N/A
K.4	Temperature limiter endurance; operating voltage (V) ..... :		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A

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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 4.5.1)**		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
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringing signal		N/A
M.3.1.1	Frequency (Hz) ..... :		-
M.3.1.2	Voltage (V) ..... :		-
M.3.1.3	Cadence; time (s), voltage (V) ..... :		-
M.3.1.4	Single fault current (mA) ..... :		-
M.3.2	Tripping device and monitoring voltage ..... :		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V) ..... :		N/A

N	**Annex N, IMPULSE TEST GENERATORS (see 2.10.3.4, 6.2.2.1, 7.3.2 and clause G.5)**		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
P	**Annex P, NORMATIVE REFERENCES**		Pass
Q	**Annex Q, BIBLIOGRAPHY**		N/A
R	**Annex R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES**		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	**Annex S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)**		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	**Annex T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)**		N/A
	..... :		-
U	**Annex U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		Pass
	..... :	(See appended table 1.5.1)	-

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	**TABLE: list of critical components**					Pass
Object/part No.	Manufacturer/ trademark	type/model	technical data	Product Category CCN(s)	Required Marks of Conformity	Supplement ID
01. Enclosure	GE Plastics Global Products For Worldwide Procurement	SE1X	V-1, 105 degree C, minimum 1.5 mm thick. Measured overall 66.45 by 25 by 42.6 mm. Two halves construction, secured together by ultrasonic welding.	QMFZ2	UL	3-01
02. Input Blades	--	--	Solid copper, non-grounding, non-polarized, NEMA 1-15P configuration. Spaced minimum 8 mm from perimeter edge of Enclosure. Input blades connected to PWB by internal wiring.	--	--	3-01
03. Output Cord Strain Relief	Various	Various	PVC bushing integrally molded on output cord. Provided when Output Cord provided.	QMFZ2	UL	4-03
04. Output Cord	Various	Various	Maximum 3.05 m, marked VW-1 or FT-1, terminates with a polarized connector outside enclosure.	AVLV2	UL	3-01
05. Internal Wiring (Primary)	Various	Various	Rated minimum 80 degree C, 300 V, minimum No. 26 AWG. PVC, TFE, PTFE, FEP or neoprene or surface marked VW-1	AVLV, AVLV2	UL	3-02
06. Insulating Tubing/Sleeving	Various	Various	FEP, PTFE, PVC, TFE, neoprene, or marked VW-1; 105 degree C, 300 V	UZFT2, YDPU2, YDRY2, YDTU2	UL	3-02
07. Printed Wiring Board	Various	Various	Rated minimum V-1, 105 degree C.	ZPMV2	UL	5-02

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Clause	Requirement + Test	Result - Remark	Verdict

08. Fuse (F1)	Various	Various	T0.8 A, 250 Vac.	JDYX	UL	3-03
08a. Fuse (F1) (Alternate)	Conquer Electronics Co., Ltd.	PTU	T0.8 A, 250 Vac.	JDYX2	UL	
08b. Fuse (F1) (Alternate)	Shenzhen Lanson Electronics Co., Ltd.	SMT	T0.8 A, 250 Vac.	JDYX2	UL	
08c. Fuse (F1) (Alternate)	Littelfuse Wickmann Werke	392	T0.8 A, 250 Vac.	JDYX2	UL	
08d. Fuse (F1) (Alternate)	Ever Island Electric Co., Ltd. & Walter Electric	2010	T0.8 A, 250 Vac.	JDYX2	UL	
08e. Fuse (F1) (Alternate)	Conquer Electronics Co., Ltd.	MST	T0.8 A, 250 Vac.	JDYX2	UL	
09. Varistor (MOV1) (Optional)	Various	Various	Rated 300 Vac, 385 Vdc.	XUHT2	UL	3-03
10. Bridge Diodes (D1, D2, D3, D4)	--	--	Rated minimum 1 A, minimum 800 V.	--	--	3-03
11. Electrolytic Capacitors (C1, C2)	--	--	Integral pressure relief, rated maximum 4.7 µF, minimum 400 V, minimum 105 degree C.	--	--	3-03
12. Chokes (L1) (Optional)	--	30D003330-00H	Open type construction. Rated 105 degree C.	--	--	4-01
12-1. Core (L1)	--	--	Ferrite, measured overall 8 mm diameter by 6 mm high.	--	--	4-01
12-2. Coil (L1)	Various	Various	Rated minimum 105 degree C.	OBMW2	UL	4-01
13. Optical Isolators (IC2)	Cosmo Electronics Corp.	K1010, KP1010	Minimum 3000 V ac isolation. Double protection.	FPQU2	UL	3-03
13a. Optical Isolators (IC2) (Alternate)	Everlight Electronics Co., Ltd.	EL817	Minimum 3000 V ac isolation. Double protection.	FPQU2	UL	3-03
13b. Optical Isolators (IC2) (Alternate)	Sharp Corp., Electronic Components Group	PC817, PC123	Minimum 3000 V ac isolation. Double protection.	FPQU2	UL	3-03
13c. Optical Isolators (IC2) (Alternate)	Bright LED Electronics Corp.	BPC-817B, BPC-817MB	Minimum 3000 V ac isolation. Double protection.	FPQU2	UL	3-03
13d. Optical Isolators	Lite-On Technology	LTV-817	Minimum 3000 V ac isolation.	FPQU2	UL	3-03

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(IC2) (Alternate)	Corp.		Double protection.			
14. Transformer (T1)	Globtek Inc. or Dee Van Enterprise Co., Ltd.	90E165000-00H, 90E165000-01H, 90E165000-02H, 90E165000-03H	Class B. Open type construction. See Enclosure ID. 4-02 or 4-04 for construction details.	--	--	3-03
14-1. Insulation System	Dee Van Enterprise Co., Ltd.	HIS-8A	Class B	OBJY2	UL	
14-2. Core (T1)	--	--	Ferrite, measured overall 16 by 14.5 by 4.8 mm.	--	--	
14-3. Coil (Primary) (T1)	Various	Various	Rated minimum 130 degree C.	OBMW2	UL	
14-4. Triple Insulated Winding Wire (Secondary) (T1)	Furukawa Electric Co., Ltd.	TEX-E	Rated minimum 130 degree C.	OBJT2	UL	
14-5. Bobbin (T1)	Hitachi Chemical Co., Ltd.	CP-J-8800	Rated V-0, 150 degree C, minimum 0.39 mm thick.	QMFZ2	UL	
14-6. Insulating Tape (T1)	Symbio Inc.	MY130	Polyester tape, 0.05 mm thick, rated 130 degree C.	OANZ2	UL	
14-7. Varnish (T1)	Hitachi Chemical Co., Ltd.	WA-238A, WA-258	Rated minimum 130 degree C.	OBOR2	UL	
14-8. Tubing (T1) (for transformer Enclosure ID. 4-02)	Zeus Industrial Products Inc.	TFE-TW-300	Minimum 130 degree C. Provided on all exit leads.	YDPU2	UL	
14a-1. Insulation System (T1) (Alternate)	Dee Van Enterprise Co., Ltd.	YCI-130	Class B	OBJY2	UL	3-03
14a-2. Core (T1)	--	--	Ferrite, measured overall 16 by 14.5 by 4.8 mm.	--	--	
14a-3. Coil (Primary) (T1)	Various	Various	Rated minimum 130 degree C.	OBMW2	UL	
14a-4. Bobbin (T1)	Hitachi Chemical Co., Ltd.	CP-J-8800	V-0, 150 degree C, minimum 0.39 mm thick.	QMFZ2	UL	
14a-4a. Bobbin (T1) (Alternate)	Sumitomo Bakelite Co., Ltd.	PM-9820	V-0, 150 degree C, minimum 0.39 mm thick.	QMFZ2	UL	
14a-5. Tape (T1)	Symbio Inc.	35660, 35661	130 degree C.	OANZ2	UL	

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14a-5a. Tape (T1) (Alternate)	3M Company	1350F-1, 1350F-2	130 degree C, 0.05 mm thick	OANZ2	UL	
14a-6. Triple Insulated Winding (Secondary) (T1)	Young Chang Silicone Co., Ltd.	STW-B	130 degree C.	OBJT2	UL	
14a-7. Tube (T1) (for transformer Enclosure ID. 4-02)	Zeus Industrial Products Inc.	TFE-TW-300, TFE-SW-600	200 degree C, 300 V.	YDPU2	UL	
14a -7a. Tube (T1) (for transformer Enclosure ID. 4-02) (Alternate)	Great Holding Industrial Co., Ltd.	TFS, TFT	200 degree C, 300 V.	YDPU2	UL	
14a-8. Varnish (T1)	Hitachi Chemical Co., Ltd.	WP-2952F-2G	130 degree C.	OBOR2	UL	
14a-8a. Varnish (T1) (Alternate)	Elantas Electrical Insulation Elantas Pdg Inc.	468-2(+)	130 degree C.	OBOR2	UL	
15. LPS Resistors (R8, R8A, R8B, R8C, RT1)	--	--	R8, R8A, R8B, R8C rated 1.8 ohms, 1/4 W, RT1 rated 15 ohms, 1/4 W.	--	--	3-03
16. Insulation Sheet (optional)	Various	Various	Rated V-2, 130 degree C, minimum 0.4 mm thick. U-shaped, measured overall 15.5 by 16 by 13 mm. Provided around T1.	QMFZ2	UL	3-03
17. Foam	Various	Various	Rated V-2, 130 degree C. Provided between T1 and enclosure.	QMFZ2	UL	3-02
18. Adhesive Glue	Various	Various	Minimum V-2, 105 degree C.	QMFZ2	UL	3-03
19. Label	Various	Various	40 degree C.	PGDQ2	UL	3-01

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Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	**TABLE: electrical data (in normal conditions)**					Pass
fuse #	I rated (A)	U (V)	P (W)	I (mA)	I fuse (mA)	condition/status
Model GT-81083-0506-1.0-W2 (+5 Vdc/1 A)	--	--	--	--	--	--
F1	--	90	7.5	139	139	Max. Normal Load / 50Hz
F1	0.2	100	7.5	126	126	Max. Normal Load / 50Hz
F1	0.2	240	8.0	81	81	Max. Normal Load / 50Hz
F1	--	254	8.2	79	79	Max. Normal Load / 50Hz
F1	--	264	8.2	77	77	Max. Normal Load / 50Hz
F1	0.2	120	7.6	116	116	Max. Normal Load / 50Hz
F1	0.2	132	7.6	103	103	Max. Normal Load / 50Hz
F1	--	90	7.5	142	142	Max. Normal Load / 60Hz
F1	0.2	100	7.5	128	128	Max. Normal Load / 60Hz
F1	0.2	240	8.1	82	82	Max. Normal Load / 60Hz
F1	--	254	8.2	79	79	Max. Normal Load / 60Hz
F1	--	264	8.3	79	79	Max. Normal Load / 60Hz
F1	0.2	120	7.7	114	114	Max. Normal Load / 60Hz
F1	0.2	132	7.6	106	106	Max. Normal Load / 60Hz
Model GT-81083-0509-2.9-W2 (+6.1 Vdc /0.82 A)	--	--	--	--	--	--
F1	--	90	7.3	134	134	Max. Normal Load / 50Hz
F1	0.2	100	7.2	122	122	Max. Normal Load / 50Hz
F1	0.2	240	8.1	80	80	Max. Normal Load / 50Hz
F1	--	254	8.2	78	78	Max. Normal Load / 50Hz
F1	--	264	8.3	76	76	Max. Normal Load / 50Hz
F1	0.2	120	7.4	105	105	Max. Normal Load / 50Hz
F1	0.2	132	7.5	100	100	Max. Normal Load / 50Hz
F1	--	90	7.3	136	136	Max. Normal Load / 60Hz
F1	0.2	100	7.2	124	124	Max. Normal Load / 60Hz
F1	0.2	240	8.1	81	81	Max. Normal Load / 60Hz
F1	--	254	8.3	79	79	Max. Normal Load / 60Hz
F1	--	264	8.3	78	78	Max. Normal Load / 60Hz
F1	0.2	120	7.4	104	104	Max. Normal Load / 60Hz
F1	0.2	132	7.5	101	101	Max. Normal Load / 60Hz

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Clause	Requirement + Test	Result - Remark	Verdict

Model GT-81083-0513-3.9-W2 (+9.1 Vdc/0.55 A)	--	--	--	--	--	--
F1	--	90	7.4	135	135	Max. Normal Load / 50Hz
F1	0.2	100	7.3	122	122	Max. Normal Load / 50Hz
F1	0.2	240	8.2	82	82	Max. Normal Load / 50Hz
F1	--	254	8.3	80	80	Max. Normal Load / 50Hz
F1	--	264	8.2	78	78	Max. Normal Load / 50Hz
F1	0.2	120	7.2	105	105	Max. Normal Load / 50Hz
F1	0.2	132	7.3	100	100	Max. Normal Load / 50Hz
F1	--	90	7.4	136	136	Max. Normal Load / 60Hz
F1	0.2	100	7.3	124	124	Max. Normal Load / 60Hz
F1	0.2	240	8.2	83	83	Max. Normal Load / 60Hz
F1	--	254	8.3	80	80	Max. Normal Load / 60Hz
F1	--	264	8.2	78	78	Max. Normal Load / 60Hz
F1	0.2	120	7.2	108	108	Max. Normal Load / 60Hz
F1	0.2	132	7.4	103	103	Max. Normal Load / 60Hz
Model GT-81083-0513-W2 (+13 Vdc/0.39 A)	--	--	--	--	--	--
F1	--	90	7.4	134	134	Max. Normal Load / 50Hz
F1	0.2	100	7.3	126	126	Max. Normal Load / 50Hz
F1	0.2	240	8.0	79	79	Max. Normal Load / 50Hz
F1	--	254	8.2	77	77	Max. Normal Load / 50Hz
F1	--	264	8.2	76	76	Max. Normal Load / 50Hz
F1	0.2	120	7.4	108	108	Max. Normal Load / 50Hz
F1	0.2	132	7.3	100	100	Max. Normal Load / 50Hz
F1	--	90	7.4	136	136	Max. Normal Load / 60Hz
F1	0.2	100	7.3	128	128	Max. Normal Load / 60Hz
F1	0.2	240	8.0	80	80	Max. Normal Load / 60Hz
F1	--	254	8.2	78	78	Max. Normal Load / 60Hz
F1	--	264	8.2	77	77	Max. Normal Load / 60Hz
F1	0.2	120	7.4	110	110	Max. Normal Load / 60Hz
F1	0.2	132	7.3	103	103	Max. Normal Load / 60Hz
supplementary information:						
Additional testing of the Model Series GT-81083 was not considered necessary based on the results of						

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previous investigation. All tests were derived from records of tests for a substantially similar product, which the Test Record has been deemed appropriate for use in this Test Report.

2.10.3 and 2.10.4	**TABLE: clearance and creepage distance measurements**					Pass
clearance cl and creepage distance dcr at/of:	Up (V)	U r.m.s. (V)	required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)
Primary, Line to Neutral, Before Fuse, PWB Trace	<420	<250	1.5	2.8	2.5	2.8
Primary to Secondary, 10N, IC2 (Pri) to IC3 (Sec)	<420	<250	4.0	10.8	5.0	10.8
Primary to Secondary, Under IC2, PWB Trace	<420	<250	4.0	7.5	5.0	7.5
Primary to Secondary, Under T1, PWB Trace	432	205	4.2	6.6	5.0	6.6
Primary to Secondary, IC2	<420	<250	4.0	6.2	5.0	6.2
Primary to Secondary, T1	432	205	4.2	6.6	5.0	6.6
Secondary to Core, T1	432	205	4.2	5.2	5.0	5.2
supplementary information:						
1) Transformer (T1) provided with insulation tape wrapped around core. 2) Transformer (T1) uses triple insulated winding wire for secondary winding. 3) Transformer (T1) core considered at primary voltage. 4) Transformer (T1) provided with insulation sheet around body near secondary components. 5) Tubed components: L1, F1 6) Glued components: Input leads, F1, MOV1, F1, C3, IC3, L1, L3, L2, T1 Sec wires. Additional testing of the Model Series GT-81083 was not considered necessary based on the results of previous investigation. All tests were derived from records of tests for a substantially similar product, which the Test Record has been deemed appropriate for use in this Test Report.						

2.10.5	**TABLE: distance through insulation measurements**			Pass
distance through insulation di at/of:	Up (V)	test voltage (V)	required di (mm)	di (mm)
Insulation Sheet	420	3000	0.4	0.4
Optical Isolator	420	3000	0.4	0.4
supplementary information:				
Additional testing of the Model Series GT-81083 was not considered necessary based on the results of previous investigation. All tests were derived from records of tests for a substantially similar product, which the Test Record has been deemed appropriate for use in this Test Report.				

4.5	**TABLE: temperature rise measurements**						Pass
	test voltage (V)	--	--	--	--	--	—

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	t1 (°C).....	--	--	--	--	--	—
	t2 (°C).....	--	--	--	--	--	—
maximum temperature T of part/at:		T (°C)					allowed Tmax (°C)
Model GT-81083-0506-1.0-W2 (+5 Vdc/1 A)		90 Vac (Vertical)	264 Vac (Vertical)	264 Vac (Horizontal)	--	--	--
Enclosure Near Blades		46.4	48.3	47.8	--	--	105
PWB under D7		71.8	78.3	78.0	--	--	105
C2 Body		77.2	89.0	87.4	--	--	105
L1 Coil		74.0	78.6	76.2	--	--	105
T1 Primary Side Coil		84.7	95.4	94.9	--	--	110
T1 Secondary Side Coil		85.6	96.4	95.7	--	--	110
T1 Core		81.6	92.0	91.1	--	--	110
U2 Body		66.3	71.6	72.4	--	--	100
L2 Coil		70.8	75.7	77.1	--	--	105
Inside Enclosure		81.0	91.5	89.7	--	--	105
Surface Enclosure		57.5	62.7	62.8	--	--	95
Ambient air		40.0	40.0	40.0	--	--	--
Model GT-81083-0513-3.9-W2 (+9.1 Vdc/0.55 A)		90 Vac (Vertical)	264 Vac (Vertical)	264 Vac (Horizontal)	--	--	--
Enclosure Near Blades		45.8	47.6	46.4	--	--	105
PWB under D7		70.8	74.7	73.8	--	--	105
C2 Body		79.2	89.4	87.4	--	--	105
L1 Coil		76.2	81.3	79.5	--	--	105
T1 Primary Side Coil		81.8	93.3	93.0	--	--	110
T1 Secondary Side Coil		79.8	91.0	90.5	--	--	110
T1 Core		76.4	87.2	86.1	--	--	110
U2 Body		72.9	81.1	81.4	--	--	100
L2 Coil		67.9	75.3	75.9	--	--	105
Inside Enclosure		79.7	93.9	94.5	--	--	105
Surface Enclosure		54.1	59.3	57.9	--	--	95
Ambient air		40.0	40.0	40.0	--	--	--
Model GT-81083-0506-1.0-W2 (+5 Vdc/1 A)		90 Vac (Vertical)	264 Vac (Vertical)	--	--	--	--
PWB under Q2		84.4	99.1	--	--	--	105
Ambient air		40.0	40.0	--	--	--	--
temperature T of winding:			R_1 (Ω)	R_2 (Ω)	T (°C)	allowed Tmax (°C)	insulation class
--			--	--	--	--	--

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supplementary information:
Additional testing of the Model Series GT-81083 was not considered necessary based on the results of previous investigation. All tests were derived from records of tests for a substantially similar product, which the Test Record has been deemed appropriate for use in this Test Report. Maximum Normal Load: See Table. Temperatures adjusted to reflect ambient of 40°C.

4.5.2	**TABLE: ball pressure test of thermoplastics**		Pass
	allowed impression diameter (mm) ..... :	<2.0 mm	—

part	test temperature (°C)	impression diameter (mm)
Enclosure, GE, Type SE1X	125	1.56 mm
T1 Bobbin, Hitachi, Type CP-J-8800	125	1.3 mm
For alternate transformer insulation system, Type YCI-130, from Dee Van Enterprise Co., Ltd., and bobbin construction.	--	--
Transformer (T1) bobbin, Hitachi Chemical Co., Ltd. type CP-J-8800, 0.39 mm thick	125	0.99 mm
Transformer (T1) bobbin, Sumitomo Bakelite Co Ltd type PM-9820, 0.39 mm thick	125	1.03 mm

supplementary information:
Additional testing of the Model Series GT-81083 was not considered necessary based on the results of previous investigation. All tests were derived from records of tests for a substantially similar product, which the Test Record has been deemed appropriate for use in this Test Report.

4.7	**TABLE: resistance to fire**			Pass
part	manufacturer of material	type of material	thickness(mm)	flammability class
--	--	--	--	--

supplementary information:
See Critical Components List.

5.2	**TABLE: electric strength tests, impulse tests and voltage surge tests**	Pass

test voltage applied between:	test voltage (V) a.c./d.c.	breakdown Yes / No
One layer of insulation (T1)	3000 Vac	No
Primary winding to SELV winding	3000 Vac	No

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SELV winding to core	3000 Vac	No
Primary to SELV	4242 Vdc	No
Primary to Enclosure with Foil	4242 Vdc	No
For alternate transformer insulation system, Type YCI-130, from Dee Van Enterprise Co., Ltd., and bobbin construction.	--	--
Unit: Primary to Secondary	DC 4242 V	No
Unit: Primary to Enclosure (covered with foil)	DC 4242 V	No
T1: Primary winding to SELV winding	AC 3000 V	No
T1: SELV winding to core	AC 3000 V	No
T1: One layer of insulation (top surface to bottom surface) (Symbio Inc. Type 35660)	AC 3000 V	No
T1: One layer of insulation (top surface to bottom surface) (Symbio Inc. Type 35661)	AC 3000 V	No
T1: One layer of insulation (top surface to bottom surface) (3M Company Type 1350F-1)	AC 3000 V	No
T1: One layer of insulation (top surface to bottom surface) (3M Company Type 1350F-2)	AC 3000 V	No
supplementary information:		
Additional testing of the Model Series GT-81083 was not considered necessary based on the results of previous investigation. All tests were derived from records of tests for a substantially similar product, which the Test Record has been deemed appropriate for use in this Test Report.		

5.3	**TABLE: fault condition tests**						Pass
	ambient temperature (°C) ..... :				See Results		—
	model/type of power supply ..... :				See Page 1 of Test Report		—
	manufacturer of power supply ..... :				--		—
	rated markings of power supply ..... :				--		—
component No.	fault	test voltage (V)	test time	fuse No.	fuse current (A)	result	
Model GT-81083-0513-3.9-W2 (+9.1 Vdc/0.55 A)	--	--	--	--	--	--	
D6	Short	240	1 sec	F1	0	IP (F1), NT, NB, NC.	
C1	Short	240	1 sec	F1	0	IP (F1), NT, NB, NC.	
Q2 (E-B)	Short	240	10 mins	F1	0.006	Unit shutdown, NT, NB, NC.	
Q2 (E-C)	Short	240	1 sec	F1	0	IP (F1), CD (Q2), NT, NB, NC.	
Q2 (B-C)	Short	240	1 sec	F1	0	IP (F1), CD (Q2), NT, NB, NC.	
IC1 (1-2)	Short	240	20 secs	F1	0	IP (F1), CD (Q2), NT, NB,	

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						NC.
IC1 (2-3)	Short	240	10 secs	F1	0	IP (F1), CD (Q2), NT, NB, NC.
IC1 (1-3)	Short	240	10 secs	F1	0	IP (F1), CD (Q2), NT, NB, NC.
IC2 (Pri)	Short	240	10 mins	F1	0.006	Unit shutdown, NT, NB, NC.
IC2 (Sec)	Short	240	1 min	F1	0	IP (F1), CD (Q2), NT, NB, NC.
T1 (3-4)	Short	240	10 secs	F1	0	IP (F1), CD (Q2), NT, NB, NC.
T1 (X1–X2)	Short	240	10 secs	F1	0	IP (F1), CD (Q2), NT, NB, NC.
T1 (After D9)	Overload	240	2.6 hrs	F1	0.11	CT at 0.9 A, output increased to 1.0A Unit shutdown, NT, NB, NC. T1 coil = 101°C, ambient = 27°C.
Vout (+ to -)	Short	240	10 mins	F1	0.0027	Unit shutdown, NT, NB, NC.
Vout (+ to -)	Overload	240	3.8 hrs	F1	0.10	CT at 0.85 A, output increased to 0.95 A Unit shutdown, NT, NB, NC. T1 coil = 96°C, ambient = 26°C.
Model GT-81083-0506-1.0-W2 (+5 Vdc/1 A)	--	--	--	--	--	--
T1 (X1-X2)	Short	240	10 secs	F1	0	IP (F1), CD (Q2), NT, NB, NC.
T1 (After D9)	Overload	240	2.6 hrs	F1	0.11	CT at 1.45 A, output increased to 1.5A Unit shutdown, NT, NB, NC. T1 coil = 105°C, ambient = 27°C.
Vout (+ to -)	Short	240	10 mins	F1	0.0024	Unit shutdown, NT, NB, NC.
Vout (+ to -)	Overload	240	3.8 hrs	F1	0.10	CT at 1.35 A, output increased to 1.4 A Unit shutdown, NT, NB, NC. T1 coil = 97°C, ambient = 26°C.
For alternate Fuses	--	--	--	--	--	--
D6	Short	240	1 sec	F1	0	CD (F1), NB, NT, NC
Q2(E-C)	Short	240	1 sec	F1	0	CD (F1), NB, NT, NC

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Clause	Requirement + Test	Result - Remark	Verdict

C1	Short	240	1 sec	F1	0	CD (F1), NB, NT, NC
Q2(B-C)	Short	240	1 sec	F1	0	CD (F1), NB, NT, NC
IC1(1-2)	Short	240	1 sec	F1	0	CD (F1, Q2), NB, NT, NC
IC1(2-3)	Short	240	1 sec	F1	0	CD (F1), NB, NT, NC
IC1(1-3)	Short	240	1 sec	F1	0	CD (F1, Q2), NB, NT, NC
T1(3-4)	Short	240	1 sec	F1	0	CD (F1), NB, NT, NC
IC2(sec.)	Short	240	1 sec	F1	0	CD (F1), NB, NT, NC
T1(A-B)	Short	240	10 mins	F1	0.003	SD, NB, NT, NC

supplementary information:

Comments Key: IP - Internal protection operated (list component) CT - Constant temperatures were obtained TW - Transformer winding opened CD - Components damaged (list damaged components) NB - No indication of dielectric breakdown YB - Dielectric breakdown (indicate time and location) NC - Cheesecloth remained intact YC - Cheesecloth charred or flamed NT - Tissue paper remained intact YT - Tissue paper charred or flamed SD - Unit shot down and no indication of output voltage and current. Fuse used: Conquer, Type PTU. For alternate fuses: all fuse open items were performed with all fuse sources as below and get the same results. Fuse sources: 1. Shenzhen Lanson Electronics Co., Ltd., Type SMT; 2. Littelfuse Wickmann Werke, Type 392; 3. Ever Island Electric Co., Ltd. & Walter Electric, Type 2010; 4. Conquer Electronics Co., Ltd., Type MST. Additional testing of the Model Series GT-81083 was not considered necessary based on the results of previous investigation. All tests were derived from records of tests for a substantially similar product, which the Test Record has been deemed appropriate for use in this Test Report.

Enclosure

National Differences

USA / Canada

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SubClause	Difference + Test	Result - Remark	Verdict

USA / Canada - Differences to IEC 60950-1:2001, First 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.	Interconnecting cables comply with the relevant requirements of this standard.	Pass
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

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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	Screw shell of Edison-base lampholder tied to the neutral conductor.		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	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 routine testing.		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
2.3.2	In the event of a single fault, the limits of 2.2.3 apply to SELV circuits and accessible conductive parts.		N/A
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 neither a) or b) are 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
2.10.5.4	Multi-layer winding wire subject to UL component wire requirements in addition to 2.10.5.4 and Annex U.		Pass
3.1.1	Permissible combinations of internal wiring/external		Pass

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SubClause	Difference + Test	Result - Remark	Verdict
	cable sizes for overcurrent and short circuit protection.		
3.1.1	All interconnecting cables protected against overcurrent and short circuit.		Pass
3.2	Wiring methods permit connection of equipment to primary power supply in accordance with the NEC and CEC, Part 1.		Pass
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,		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	Part 1.		
3.2.3	Permanently connected equipment may have terminals or leads not smaller than No. 18 AWG (0.82 mm²) and not less than 152 mm in length for connection of field installed wiring.		N/A
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.	Direct plug-in equipment.	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 then LPS or Class 2 circuits also comply with 3.3.	Direct plug-in equipment.	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.		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 mm²) or smaller conductor if provided with upturned lugs, cupped		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	washer or equivalent retention.		
3.3.4	Terminals accept wire sizes (gauge) used in the U.S. and Canada.		N/A
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
4.3.2	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.	See Test Record for details.	Pass
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 comply with 4.3.12 under all conditions of servicing marked to indicate the presence of radiation where readily visible.		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
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.		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
5.3.6	Overloading of SELV connectors and printed wiring board receptacles accessible to the operator.	See Table 5.3.	Pass
5.3.6	Tests interrupted by opening of a component repeated two additional times.		N/A
5.3.8.1	Test interrupted by opening of wire or trace subject to certain conditions.	No opening of wire or trace	N/A
6	Specialized instructions provided for telephones that may be connected to a telecommunications network.		N/A
6	Marking identifying function of telecommunication type connectors not used for connection to a telecommunication network.		N/A
6.2.1	Special requirements for enameled wiring used as electrical separation provided between parts		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	connected to telecommunication network and telecommunication circuitry intentionally isolated from network.		
6.2.1	Digital line termination equipment (e.g., NCTE) subject to separation requirements.		N/A
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
6.5	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
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

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SubClause	Difference + Test	Result - Remark	Verdict
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 to the user, as determined using the articulated accessibility probe (figure NAF.1) and the accessibility probe/wedge (figures NAF.2/NAF.3).		N/A