Issue Date: 2010-03-19 Page 1 of 2 Report Reference # E336418-A17-UL-2

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: Switching Power Adapter

Model/Type Reference: GT-41076-0603-A-A, GT-41076-0605-A-A, GT-41076-0609-A-A, GT-41076-

0612-A-A, GT-41076-0615-A-A, GT-41076-0618-A-A, GT-41076-0620-A-A,

GT-41076-0624-A-A.

Rating(s): Input: 100-240 Vac, 50-60 Hz, 0.3 A.

Output:

GT-41076-0603-A-A; 3Vdc, 6W GT-41076-0605-A-A; 5Vdc, 6W GT-41076-0609-A-A; 9Vdc, 6W GT-41076-0612-A-A; 12Vdc, 6W GT-41076-0615-A-A; 15Vdc, 6W GT-41076-0618-A-A; 18Vdc, 6W GT-41076-0620-A-A; 20Vdc, 6W GT-41076-0624-A-A; 24Vdc, 6W

Standards: 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)

Applicant Name and

Address:

GLOBTEK (SUZHOU) CO LTD

BLDG 4, #76

JINLING EAST RD SUZHOU PARK

SUZHOU

JIANGSU 215021 CHINA

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.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

Any information and documentation provided to you involving UL Mark services are provided on behalf of Underwriters Laboratories Inc(ULI) or any authorized license of ULI.

Test Report By:

Iris Zhang Engineer

UL-CCIC Company Limited

Reviewed By:

Hubert Koszewski Project Engineer

UL International Polska Sp. z o.o.

E336418-A17-UL-2

Issue Date: 2010-03-19 Page 1 of 51 Report Reference # E336418-A17-UL-2

SPECIFIC INSPECTION CRITERIA

BA1.0	Special Instructions to UL Representative
BA1.1	Corrosion Protection - Ferrous metal parts protected by painting, plating or equivalent.
	Flexible Printed Wiring - (ZPXK2), flammability rating minimum V-2 or VTM-2, operating temperature minimum 105°C, unless otherwise specified in individual descriptive sections.
	Internal Plastic Part Materials - (QMFZ2), flammability rating minimum V-2.
	Exception: Specific items noted in the descriptive sections of this Procedure. Small parts (i.e. gears, cams, belts, bearings, etc.) which would contribute negligible fuel to a fire, are exempt from flammability requirements if separated from electrical parts capable of raising the temperature of the plastic to its ignition point under fault conditions 1) by at least 13 mm of air or 2) by a solid barrier of material V-1 or better. No separation from insulated wires and cables is required.
	Internal Wiring - Routed away from sharp edges, moving parts. Primary: (AVLV2): FEP, PTFE, PVC, TFE, neoprene or surface marked VW-1; rated minimum 80°C, 300 V. Routed away from secondary (SEC, ELV, SELV) uninsulated live parts. Secondary: Low voltage secondary (SEC, ELV, SELV) (AVLV2) rated minimum 60°C, 30 V, FEP, PTFE, PVC, TFE, neoprene, or surface marked VW-1; routed away from primary uninsulated live parts, and unless insulated for the highest voltage involved, from insulated primary circuit wiring.
	Lithium Batteries - Not permitted unless specifically described in Report.
	MARKINGS:
	Permanency of Marking - Required markings are permanently ink-stamped, silk-screened, molded in, or on self-adhesive labels as described below.
	Earthing Symbol - For products provided with nondetachable power supply cords or intended for permanent connection to building supply wiring, earthing symbol (IEC 417, Symbol No. 5019) provided adjacent to wiring terminal intended for connection of protective earthing conductor.
	Nameplate Marking - Listee's name or File number, model number, and electrical ratings. May be provided on more than one label. Located where tools not necessary for gaining access; located on parts not likely to be discarded or lost.
	Recognition Mark for Products Evaluated to Canadian Requirements - Each UL Recognized Component evaluated to the Canadian Standard for Safety of Information Technology Equipment, Including Electrical Business Equipment is marked with the UL Recognized Component Mark for Canada.
	Mechanical Assembly - Enclosure parts and component mounting assemblies reliably secured by welding, thread forming screws, rivets or machine bolts with nuts and lock washers or star washers or any combination thereof.
	Metallized Coatings - Not permitted on inside surfaces of enclosures unless specifically described in Report.

Neutral Terminal - For products provided with nondetachable power supply cords or intended for permanent connection to building supply wiring, capital letter "N" provided adjacent to any terminal intended exclusively for connection of the primary neutral conductor, if any.

Soldered Connections - Mechanically secured before soldering. Terminal

Blocks - Terminal blocks in low voltage secondary circuits (SELV, ELV, SEC) molded phenolic composition or (QMFZ2), integral barriers between adjacent terminals. Terminal plates, binding screws or connectors, copper alloy. Open-backed types provided with minimum 0.8 mm thick fiber or phenolic insulator between terminal block and mounting surface, except for penetration type terminal blocks.

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 -
	 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 in	Markings and instructions			
BC1.1	The following mar	The following markings and instructions are provided as indicated.			
BC1.2	All clause references are from UL 60950-1, 2nd Edition, 2007-03-27 (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			

Issue Date: 2010-03-19 Page 3 of 51 Report Reference # E336418-A17-UL-2

	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.

BD1.0	Production-Line Testing Requirements							
BD1.1	Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.							
					Te Pote	est ential		
	Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s	
BD1.2	Earthing Continuity Test Exemptions - This test is not required for the following models:		All models in this report					
BD1.3	Electric Strength Test Exemptions - This test is not required for the following models:		All models in this report					
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

Issue Date: 2010-03-19 Page 4 of 51 Report Reference # E336418-A17-UL-2

SPECIFIC TECHNICAL CRITERIA

UL 60950-1:2005 (2nd Edition) Information technology equipment - Safety Part 1: General requirements

Report Reference No..... E336418-A17-UL-2

Compiled by Iris Zhang

Reviewed by Hubert Koszewski

Date of issue 2010-03-19

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)

Test procedure: Listing Non-standard test method N/A

Test item description Switching Power Adapter

Trademark None

Model and/or type reference: GT-41076-0603-A-A, GT-41076-0605-A-A, GT-41076-0609-A-A, GT-

41076-0612-A-A, GT-41076-0615-A-A, GT-41076-0618-A-A, GT-

41076-0620-A-A, GT-41076-0624-A-A.

Rating(s) Input: 100-240 Vac, 50-60 Hz, 0.3 A.

Output:

GT-41076-0603-A-A; 3Vdc, 6W GT-41076-0605-A-A; 5Vdc, 6W GT-41076-0609-A-A; 9Vdc, 6W GT-41076-0612-A-A; 12Vdc, 6W GT-41076-0615-A-A; 15Vdc, 6W GT-41076-0618-A-A; 18Vdc, 6W GT-41076-0620-A-A; 20Vdc, 6W

GT-41076-0624-A-A; 24Vdc, 6W

Issue Date: 2010-03-19 Page 5 of 51 Report Reference # E336418-A17-UL-2

Particulars: test item vs. test requirements

Equipment mobility direct plug-in for construction A; movable for

construction B

Connection to the mains pluggable A

Operating condition: continuous

Over voltage category: OVC II

Mains supply tolerance (%) +6%, -10%

Tested for IT power systems N/A

IT testing, phase-phase voltage (V): N/A

IP protection class IP 20

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

Issue Date: 2010-03-19 Page 6 of 51 Report Reference # E336418-A17-UL-2

GENERA	AL PRODUCT INFORMATION:
CA1.0	Report Summary
CA1.1	N/A
CB1.0	Product Description
CB1.1	Electronic Component mounted on PWB and housed with plastic enclosure.
CC1.0	Model Differences
CC1.1	Models are identical except for output rating. Construction A of each model is identical to the one with construction B except that construction A of each model is direct plug in unit with interchangeable blade and construction B of each model is movable with interchangeable appliance inlet.
CD1.0	Additional Information
CD1.1	Issue 1, Amendment 1: Employing construction B of each model.
CE1.0	Technical Considerations
CE1.2	The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 40 Deg.C for all models except for Model GT-41076-0603-A-A., For Model GT-41076-0603-A-A:, - 35 Deg.C for output wattage 6 W max.;, - 40 Deg.C for output wattage 5.4 W max.,
CE1.3	The means of connection to the mains supply is: Construction A: Direct plug-in, Pluggable A; Construction B:Detachable power cord, 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: Construction A: Plug; Construction B: Appliance inlet,
CE1.7	The product was investigated to the following additional standards: The blade securement in accordance with UL 1310.,
CE1.9	The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): Output "+" to "-"

Issue Date: 2010-03-19 Page 7 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005				
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 appended table 1.5.1)	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 IEC60950-1 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 IEC60950-1.	Pass
1.5.3	Thermal controls		N/A
1.5.4	Transformers	See Annex C	Pass
1.5.5	Interconnecting cables	Interconnecting cables comply with the relevant requirements of this standard.	Pass
1.5.6	Capacitors bridging insulation	Line-to-line capacitors are subclass X1 or X2.	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
1.5.7.4	Accessible parts	Accessible conductive parts separated from other parts by DOUBLE or REINFORCED INSULATION bridged by bridging capacitors (CY1) comply with the requirements	Pass

Issue Date: 2010-03-19 Page 8 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005				
Clause	Requirement + Test	Result - Remark	Verdict	

		for LIMITED CURRENT CIRCUITS.	
1.5.8	Components in equipment for IT power systems		N/A
1.5.9	Surge suppressors		Pass
1.5.9.1	General		Pass
1.5.9.2	Protection of VDRs		Pass
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		
1.6.1	AC power distribution systems	AC power distribution systems are classify 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.	Pass
		(see appended table 1.6.2)	
1.6.3	Voltage limit of hand-held equipment	Not hand-held equipment.	N/A
1.6.4	Neutral conductor	Neutral is insulated from body with basic insulation.	Pass

Issue Date: 2010-03-19 Page 9 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005			
Clause	Requirement + Test	Result - Remark	Verdict

1.7	Marking and instructions		Pass
1.7.1	Power rating	Rating marking readily visible to operator.	Pass
		See below for details.	
	Rated voltage(s) or voltage range(s) (V):	100-240 V ac	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)	0.3 A	Pass
	Manufacturer's name or trademark or identification mark	Globtech Inc.	Pass
	Model identification or type reference:	See Ratings	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.	N/A
1.7.2	Safety instructions and marking	Safety instructions in English. Other languages will be provided when submitted for national approval.	Pass
1.7.2.1	General		Pass
1.7.2.2	Disconnect devices		Pass
1.7.2.3	Overcurrent protective device		Pass
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		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 are provided.	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)		N/A
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals:		N/A
1.7.7.2	Terminal for a.c. mains supply conductors		N/A

Issue Date: 2010-03-19 Page 10 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005				
Clause	Requirement + Test	Result - Remark	Verdict	
1.7.7.3	Terminals for d.c. mains supply conductors		N/A	
1.7.8	Controls and indicators		N/A	
1.7.8.1	Identification, location and marking:		N/A	
1.7.8.2	Colours:		N/A	
1.7.8.3	Symbols according to IEC 60417		N/A	
1.7.8.4	Markings using figures		N/A	
1.7.9	Isolation of multiple power sources:		N/A	
1.7.10	Thermostats and other regulating devices:		N/A	
1.7.11	Durability	All markings provided on UL Recognized Component labels suitable for surface they are applied upon and meet the durability test.	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	

ACCESS LOCATION.

Issue Date: 2010-03-19 Page 11 of 51 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005			
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	No operator access to energized parts.	Pass
	Test by inspection:	No operator access to energized parts.	Pass
	Test with test finger (Figure 2A):	The test finger was unable to contact bare hazardous par	N/A
	Test with test pin (Figure 2B):		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 (Vpeak or Vrms); minimum distance through insulation (mm):		-
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.	N/A
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment		N/A
	Measured voltage (V); time-constant (s):		-
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	No bare parts operating at HAZARDOUS VOLTAGES in a service access area.	N/A
2.1.3	Protection in restricted access locations	The unit is not intended to be used in restricted locations.	N/A

Issue Date: 2010-03-19 Page 12 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005				
Clause	Requirement + Test		Result - Remark	Verdict

2.2	SELV circuits		Pass
2.2.1	General requirements	SELV levels are maintained after single fault condition.	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 71V peak and 120Vdc and do not exceed 42.4V peak or 60V dc 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.	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
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

Issue Date: 2010-03-19 Page 13 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005			
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 circuit capacitance (nF or uF):	-
2.4.3	Connection of limited current circuits to other circuits	N/A

2.5	Limited power sources		Pass
	a) Inherently limited output		Pass
	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
		Maximum Uoc = 23.97 Vdc, Isc = 3.5 A, VA = 14.2 W.	-
	Current rating of overcurrent protective device (A):		-

Issue Date: 2010-03-19 Page 14 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005			
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 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
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
		

Issue Date: 2010-03-19 Page 15 of 51 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005		
Clause	Requirement + Test	Result - Remark	Verdict

2.7	Overcurrent and earth fault protection in primary circuits		Pass
2.7.1	Basic requirements	Protective devices are integrated in the equipment.	Pass
	Instructions when protection relies on building installation	Instructions specify maximum overcurrent protection of 20 A in the installation.	Pass
2.7.2	Faults not covered in 5.3.7	See appended table 5.3.	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 resistor 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
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

Issue Date: 2010-03-19 Page 16 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005			
Clause	Requirement + Test	Result - Remark	Verdict

2.9	Electrical insulation		Pass
2.9.1	Properties of insulating materials	See appended table 1.5.1	Pass
2.9.2	Humidity conditioning	Electric strength test was conducted after the humidity treatment.	Pass
	Relative humidity (%), temperature (°C)	93%	-
2.9.3	Grade of insulation	Electric strength test conducted after the humidity treatment. No breakdown of insulation.	Pass
2.9.4	Separation from hazardous voltages		Pass
	Method(s) used	Method 1 used.	-

Issue Date: 2010-03-19 Page 17 of 51 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005		
Clause	Requirement + Test	Result - Remark	Verdict

2.10	Clearances, creepage distances and distances t	hrough insulation	Pass
2.10.1	General	Pollution degree 2 applicable.	Pass
2.10.1.1	Frequency:	Up to 30kHz.	Pass
2.10.1.2	Pollution degrees:		Pass
2.10.1.3	Reduced values for functional insulation		Pass
2.10.1.4	Intervening unconnected conductive parts		N/A
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		Pass
2.10.2.3	Peak working voltage		Pass
2.10.3	Clearances	(see appended table 2.10.3 and 2.10.4) For Functional Insulation, see 5.3.4.	Pass
2.10.3.1	General		Pass
2.10.3.2	Mains transient voltages		Pass
	a) AC mains supply:	OVC II	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		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

Issue Date: 2010-03-19 Page 18 of 51 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005		
Clause	Requirement + Test	Result - Remark	Verdict

	b) Transients from a telecommunication network		N/A
2.10.4	Creepage distances	(see appended table 2.10.3 and 2.10.4) For Functional Insulation, see 5.3.4.	Pass
2.10.4.1	General		Pass
2.10.4.2	Material group and comparative tracking index		Pass
	CTI tests:	Assume material group III b: 100<=CTI<175	-
2.10.4.3	Minimum creepage distances		Pass
2.10.5	Solid insulation	See below	Pass
2.10.5.1	General		Pass
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	Pass
2.10.5.3	Insulating compound as solid insulation		Pass
2.10.5.4	Semiconductor devices		Pass
2.10.5.5	Cemented joints		N/A
2.10.5.6	Thin sheet material - General		Pass
2.10.5.7	Separable thin sheet material		Pass
	Number of layers (pcs)	Two	-
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	(see appended table 2.10.5)	-
2.10.5.11	Insulation in wound components		Pass
2.10.5.12	Wire in wound components	Transformer insulation complies to 2.10.5.2	Pass
	Working voltage:	(see appended table 2.10.5)	Pass
	a) Basic insulation not under stress:	(see appended table 2.10.5)	Pass
	b) Basic, supplementary, reinforced insulation:	(see appended table 2.10.5)	Pass
	c) Compliance with Annex U	Recognized triple wire used	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		Pass
	Electric strength test		-

Issue Date: 2010-03-19 Page 19 of 51 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005		
Clause	Requirement + Test	Result - Remark	Verdict

	Routine test		N/A
2.10.5.14	Additional insulation in wound components		Pass
	Working voltage	(see appended table 5.2)	Pass
	- Basic insulation not under stress:	(see appended table 5.2)	Pass
	- Supplementary, reinforced insulation:	(see appended table 5.2)	Pass
2.10.6	Construction of printed boards		N/A
2.10.6.1	Uncoated printed boards		N/A
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
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

Issue Date: 2010-03-19 Page 20 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005			
Clause	Requirement + Test	Result - Remark	Verdict

3	WIRING, CONNECTIONS AND SUPPLY		Pass
3.1	General		Pass
3.1.1	Current rating and overcurrent protection		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	Uninsulated conductors have been adequately fixed to prevent, in normal use, any reduction of creepage or clearance distances below those prescribed by in 2.9.	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	No contact pressure through insulating material.	Pass
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors		N/A
	10 N pull test		N/A
3.1.10	Sleeving on wiring		N/A

Issue Date: 2010-03-19 Page 21 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005			
Clause	Requirement + Test	Result - Remark	Verdict

3.2	Connection to mains supply		Pass
3.2.1	Means of connection	Construction A: provided with a means for direct plug-in. Construction B: provided with an appliance inlet.	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 of cable and conduits (mm):		-
3.2.4	Appliance inlets	For construction B: the appliance inlet complies with IEC 60320, (see appended table 1.5.1)	Pass
3.2.5	Power supply cords	see appended table 1.5.1	Pass
3.2.5.1	AC power supply cords		Pass
	Туре:	SVT or SPT-2.	-
	Rated current (A), cross-sectional area (mm²), AWG:	0.3 A; 18 AWG min.	-
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):		-
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

Issue Date: 2010-03-19 Page 22 of 51 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005		
Clause	Requirement + Test	Result - Remark	Verdict

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 (mm²):	-
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		Pass
3.4.1	General requirement		Pass
3.4.2	Disconnect devices	For construction A: the plug is considered to be the disconnect device. For construction B: it is provided with an appliance coupler.	Pass
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	Disconnect device disconnects both poles simultaneously.	Pass
3.4.7	Number of poles - three-phase equipment	The equipment is single-phased.	N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		Pass
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources	One power source only.	N/A

Issue Date: 2010-03-19 Page 23 of 51 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005		
Clause	Requirement + Test	Result - Remark	Verdict

3.5	Interconnection of equipment		Pass
3.5.1	General requirements	This equipment is only considered for connection to SELV.	Pass
3.5.2	Types of interconnection circuits:	Interconnection circuits are SELV CIRCUITS.	Pass
3.5.3	ELV circuits as interconnection circuits	No ELV interconnections.	N/A
3.5.4	Data ports for additional equipment		N/A

4	PHYSICAL REQUIREMENTS	Pass
4.1	Stability	N/A
	Angle of 10°	N/A
	Test force (N)	N/A

Issue Date: 2010-03-19 Page 24 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005			
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	10N were applied to components.	Pass
		No energy or other hazards.	
4.2.3	Steady force test, 30 N	No internal enclosure.	N/A
4.2.4	Steady force test, 250 N	No hazards as a result of the 250 N test.	Pass
4.2.5	Impact test		N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm):	No hazards as a result of the drop test.	Pass
4.2.7	Stress relief test	No indication of shrinkage or distortion on enclosures due to the stress relief test (108.3 Deg.C/7 h).	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

Issue Date: 2010-03-19 Page 25 of 51 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005		
Clause	Requirement + Test	Result - Remark	Verdict

4.3	Design and construction		Pass
4.3.1	Edges and corners	All edges and corners 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		N/A
4.3.4	Securing of parts		N/A
4.3.5	Connection by plugs and sockets		Pass
4.3.6	Direct plug-in equipment		Pass
	Torque:	For construction A: : the additional torque applied was 0.0125 N.m.	Pass
	Compliance with the relevant mains plug standard:	The blade securement in accordance with UL 1310.	Pass
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 of 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 (I):		N/A
	Flash point (°C)		N/A
4.3.13	Radiation		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

Issue Date: 2010-03-19 Page 26 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005			
Clause	Requirement + Test	Result - Remark	Verdict

	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

4.5	Thermal requirements		Pass
4.5.1	General		Pass
4.5.2	Temperature tests	(see appended table 4.5)	Pass
	Normal load condition per Annex L:	Operated in the most unfavorable way of operation given in the operating instructions until steady conditions established.	-
4.5.3	Temperature limits for materials		Pass
4.5.4	Touch temperature limits		Pass
4.5.5	Resistance to abnormal heat:	It has been determined from examination of the physical characteristics of the materials used that the material meets the requirements of the test.	Pass

Issue Date: 2010-03-19 Page 27 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005			
Clause	Requirement + Test	Result - Remark	Verdict

4.6	Openings in enclosures		N/A
4.6.1	Top and side openings	No opening.	N/A
	Dimensions (mm)		-
4.6.2	Bottoms of fire enclosures	No bottom opening.	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):		-

Issue Date: 2010-03-19 Page 28 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005			
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	Pass
	Method 1, selection and application of components wiring and materials	(see appended table 4.7)	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	A fire enclosure covers all parts.	Pass
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		Pass
4.7.3.1	General	See below.	Pass
4.7.3.2	Materials for fire enclosures	V-1 minimum.	Pass
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. See Table 1.5.1 for material information.	Pass
4.7.3.5	Materials for air filter assemblies	intormation.	N/A
4.7.3.6	Materials used in high-voltage components		N/A

Issue Date: 2010-03-19 Page 29 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005			
Clause	Requirement + Test	Result - Remark	Verdict

ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		Pass
Touch current and protective conductor current		Pass
General	See below.	Pass
Configuration of equipment under test (EUT)	Equipment designed for connection to only one power source.	Pass
Single connection to an a.c. mains supply		Pass
Redundant multiple connections to an a.c. mains supply		N/A
Simultaneous multiple connections to an a.c. mains supply		N/A
Test circuit	Single phase equipment intended only for connection to star TN or TT system.	Pass
Application of measuring instrument	Test made to 10X20 cm metal foil in contact with accessible non-conductive part.	Pass
Test procedure		Pass
Test measurements		Pass
Supply voltage (V):	264 V ac	-
		-
Max. allowed touch current (mA)	0.25 mA.	-
Measured protective conductor current (mA):		-
Max. allowed protective conductor current (mA):		-
Equipment with touch current exceeding 3,5 mA		N/A
General:		N/A
Simultaneous multiple connections to the supply		N/A
Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks		N/A
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):		-
Summation of touch currents from telecommunication networks		N/A
	General Configuration of equipment under test (EUT) Single connection to an a.c. mains supply Redundant multiple connections to an a.c. mains supply Simultaneous multiple connections to an a.c. mains supply Test circuit Application of measuring instrument Test procedure Test measurements Supply voltage (V)	General See below. Configuration of equipment under test (EUT) Equipment designed for connection to an a.c. mains supply Redundant multiple connections to an a.c. mains supply Simultaneous multiple connections to an a.c. mains supply Test circuit Single phase equipment intended only for connection to star TN or TT system. Application of measuring instrument Test made to 10X20 cm metal foil in contact with accessible non-conductive part. Test procedure Test measurements Supply voltage (V)

Issue Date: 2010-03-19 Page 30 of 51 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005		
Clause	Clause Requirement + Test Result - Remark		
	a) EUT with earthed telecommunication ports:		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

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. (see appended table 5.2)	Pass
5.2.2	Test procedure	No insulation breakdown detected during the test. (see appended table 5.2)	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	No motors.	N/A
5.3.3	Transformers	Transformers are constructed in accordance with the applicable Clause and Annex C. (see appended 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		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. Electric Strength tests performed after abnormal and fault tests.	Pass
5.3.9.1	During the tests		Pass
5.3.9.2	After the tests		Pass

Issue Date: 2010-03-19 Page 31 of 51 Report Reference # E336418-A17-UL-2

	IEG	C 60950-1:2005		
Clause	Requirement + Test		Result - Remark	Verdict

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

6.2	Protection of equipment users from overvoltage networks	s on telecommunication	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	
	Max. output current (A):	-
	Current limiting method:	-

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

Issue Date: 2010-03-19 Page 32 of 51 Report Reference # E336418-A17-UL-2

	IEC 6	60950-1:2005	
Clause	Requirement + Test	Result - Remark	Verdict

Α	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE	
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 (see IEC 60695-11-3)	N/A
	Flame A, B, C or D:	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):	-
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; temperature (°C):	N/A
A.2.3	Mounting of samples:	N/A
A.2.4	Test flame (see IEC 60695-11-4)	N/A
	Flame A, B or C:	-
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 60695-11-5, cl. 5 and 9	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

Issue Date: 2010-03-19 Page 33 of 51 Report Reference # E336418-A17-UL-2

	IEC	60950-1:2005	
Clause	Requirement + Test	Result - Remark	Verdict
A.3.3	Compliance criterion		N/A

В	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.6.1	General	N/A
B.6.2	Test procedure	N/A
B.6.3	Alternative test procedure	N/A
B.6.4	Electric strength test; test voltage (V):	N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits	N/A
B.7.1	General	N/A
B.7.2	Test procedure	N/A
B.7.3	Alternative test procedure	N/A
B.7.4	Electric strength test; test voltage (V):	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):	-

Issue Date: 2010-03-19 Page 34 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005				
Clause	Requirement + Test		Result - Remark	Verdict

С	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		Pass
	Position	(see appended table 1.5.1)	-
	Manufacturer	(see appended table 1.5.1)	-
	Туре	(see appended table 1.5.1)	-
	Rated values:	(see appended table 1.5.1)	-
	Method of protection	(see appended table 1.5.1)	-
C.1	Overload test	(see appended table 5.3)	Pass
C.2	Insulation	(see appended table 5.2)	Pass
	Protection from displacement of windings:	Margin tape provided on each end of each winding.	Pass

D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		Pass
D.1	Measuring instrument	Simpson Meter 228	Pass
D.2	Alternative measuring instrument		N/A

I	E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)	N/A	
	_	7 ti ti 12 ti 2 ti 2 ti 3 ti 3 ti 3 ti 3 ti 3 ti	, .	

F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES	Pass
	(see 2.10 and Annex G)	

Page 35 of 51 Report Reference # E336418-A17-UL-2 Issue Date: 2010-03-19

IEC 60950-1:2005			
Clause	Requirement + Test	Result - Remark	Verdict

G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES	N/A
G.1	Clearances	N/A
G.1.1	General	N/A
G.1.2	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	Earthed d.c. mains supply:	N/A
G.2.3	Unearthed d.c. mains supply:	N/A
G.2.4	Battery operation:	N/A
G.3	Determination of telecommunication network transient voltage (V) :	N/A
G.4	Determination of required withstand voltage (V)	N/A
G.4.1	Mains transients and internal repetitive peaks:	N/A
G.4.2	Transients from telecommunication networks:	N/A
G.4.3	Combination of transients	N/A
G.4.4	Transients from cable distribution systems	N/A
G.5	Measurement of transient voltages (V)	N/A
G.6	Determination of minimum clearances	N/A

Н	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(s) used:		-

Issue Date: 2010-03-19 Page 36 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005			
Clause	Requirement + Test	Result - Remark	Verdict

K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)	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

L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)	
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	N/A

Issue Date: 2010-03-19 Page 37 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005				
Clause	Requirement + Test		Result - Remark	Verdict

М	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 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
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A

	Р	ANNEX P, NORMATIVE REFERENCES	Pass	l
--	---	-------------------------------	------	---

Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)	
	a) Preferred climatic categories:	N/A
	b) Maximum continuous voltage:	N/A
	c) Pulse current:	N/A

Issue Date: 2010-03-19 Page 38 of 51 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005						
Clause	Requirement + Test	Result - Remark	Verdict				

R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A

S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		
S.1	Test equipment	N/A	
S.2	Test procedure	N/A	
S.3	Examples of waveforms during impulse testing	N/A	

Т	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)		
	:	-	

V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		
V.1	Introduction	N/A	
V.2	TN power distribution systems	N/A	

Issue Date: 2010-03-19 Page 39 of 51 Report Reference # E336418-A17-UL-2

<u> </u>	IEC 60950-1:2005	
Clause	Requirement + Test Result - Remark	Verdict
W	ANNEX W, SUMMATION OF TOUCH CURRENTS	N/A
W.1	Touch current from electronic circuits	N/A
W.1.1	Floating circuits	N/A
W.1.2	Earthed circuits	N/A
W.2	Interconnection of several equipments	N/A
W.2.1	Isolation	N/A
W.2.2	Common return, isolated from earth	N/A
W.2.3	Common return, connected to protective earth	N/A
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see	N/A
^	clause C.1)	IN/A
X.1	Determination of maximum input current	N/A
X.2	Overload test procedure	N/A
		I
Υ	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)	N/A
Y.1	Test apparatus	N/A
Y.2	Mounting of test samples:	N/A
Y.3	Carbon-arc light-exposure apparatus:	N/A
Y.4	Xenon-arc light-exposure apparatus:	N/A
	<u> </u>	<u> </u>
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)	N/A
_	ATTENDED ON LEGITLE (See 2.10.0.2 and Olduse 0.2)	1 4/ / 1

AA

N/A

ANNEX AA, MANDREL TEST (see 2.10.5.8)

Issue Date: 2010-03-19 Page 40 of 51 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005						
Clause	Requirement + Test		Result - Remark	Verdict			

1.5.1	TABLE: list of critica	I components				Pass
Object/part No.	Manufacturer/ trademark	type/model	technical data	Product Category CCN(s)	Required Marks of Conformity	Supplement ID
Construction A						
01. Input Blades	Various	Various	Two copper alloy blades are molded on plug support			3-01
02. Plug support	SABIC INNOVATIVE PLASTICS Global Products for Worldwide Procurement	SE1X	Rated minimum V-1, minimum 2.3 mm thick, 105°C, Secured on enclosure by snap fit. Overall 26.1 mm by 26.5 mm by 9.1 mm.	QMFZ2	UL	3-01
03. Enclosure	SABIC INNOVATIVE PLASTICS Global Products for Worldwide Procurement	SE1X	Two halves construction, rated V-1 or better, rated 105°C, Secured together by ultrasonic welding. Overall 62 mm by 31.5 mm by 40.5 mm.	QMFZ2	UL	3-01
04. PWB	Various	Various	V-1 or better, min. 130°C	ZPMV2 ZPMV8		3-02
05. Fuse (FR1)	Various	Various	Listed, rated T1A, 250Vac. Body sleeved with Tubing/Sleeving.	JDYX	UL	3-02
05a. Fuse (FR1) (Alternate)	Littelfuse Inc.	677 series	Rated T1A, 250Vac. Body sleeved with Tubing/Sleeving.	JDYX2 JDYX8	UL	3-02
05b. Fuse (FR1) (Alternate)	Conquer Electronic Co., Ltd.	PTU	Rated T1A, 250Vac. Body sleeved with Tubing/Sleeving.	JDYX2 JDYX8	UL	3-02
05c. Fuse (FR1) (Alternate)	Sleek Co., Ltd.	37 series	Rated T1A, 250Vac. Body sleeved with Tubing/Sleeving.	JDYX2 JDYX8	UL	3-02
05d. Resistor (FR1) (Alternate)	Tzai Yuan Enterprise Co. Ltd.	KNP (NKNP)	10 ohm, 1W			3-02
Bridging-Capacitors (CY1) (optional)	Various	Various	Primary-to-Secondary, rated 105°C, maximum 2200 pF, minimum 250 V, marked with Y1, provided with VDE and	FOWX2/8 or FOKY2/8	UL	3-02

Issue Date: 2010-03-19 Page 41 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005						
Clause	Requirement + Test		Result - Remark	Verdict		

			SEV marking.			
Optical Isolator (PC1)	Sharp Corp Electronic Components Group	PC 817	Rated isolation minimum 3000 V ac.	FPQU2/8	UL	3-02
Optical Isolator (PC1) (Alternate)	Sharp Corp Electronic Components Group	PC 123	Rated isolation minimum 5000 V ac.	FPQU2/8	UL	3-02
Optical Isolator (PC1) (Alternate)	Isocom Ltd.	4N35X	Rated isolation minimum 3000 V ac.	FPQU2/8	UL	3-02
Optical Isolator (PC1) (Alternate)	Lite-On Technology Corp	LTV-817, LTV817M or LTV817S	Rated isolation minimum 3000 V ac.	FPQU2/8	UL	3-02
Optical Isolator (PC1) (Alternate)	Fairchild Semiconductor Corp	H11A817X	Rated isolation minimum 3000 V ac.	FPQU2/8	UL	3-02
Optical Isolator (PC1) (Alternate)	Cosmo Electronics Corp	K1010	Rated isolation minimum 3000 V ac.	FPQU2/8	UL	3-02
Optical Isolator (PC1) (Alternate)	Everlight Electronics Co Ltd.	EL817	Rated isolation minimum 3000 V ac.	FPQU2/8	UL	3-02
Optical Isolator (PC1) (Alternate)	Matsushita Electric Industrial Co Ltd. Panasonic Corp of North America	ON3171	5000 V ac isolation	FPQU2	UL	3-02
Optical Isolator (PC1) (Alternate)	NEC Compound Semiconductor Devices Ltd.	PS2561	5000 V ac isolation	FPQU2	UL	3-02
Optical Isolator (PC1) (Alternate)	Vishay Semiconductor Gmbh	TCET1108, TCET1103, TCET1109	5000 V ac isolation	FPQU2	UL	3-02
Optical Isolator (PC1) (Alternate)	Toshiba Corp., Semiconductor Co, Discrete Semiconductor Div.	TLP721	4000 V ac isolation	FPQU2	UL	3-02
Electrolytic Capacitor (C1)	Various	Various	Electrolytic type with integral pressure relief, rated minimum			3-02

Issue Date: 2010-03-19 Page 42 of 51 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005						
Clause	Requirement + Test		Result - Remark	Verdict			

			400 V, 10-22uF, minimum 85°C.			
Electrolytic Capacitor (C2)	Various	Various	Electrolytic type with integral pressure relief, rated minimum 400V, 4.7-10uF, minimum 85°C.			3-02
PWM IC (U1)	Various	Various	Rated minimum, 0.56 A, minimum 730 V			3-02
Bridge Diodes (DB1)	Various	Various	Rated minimum 1 A, minimum 600 V			3-02
Transformer (T1) (for Model 3A-061WP03)	Long Sail Electronic Co Ltd	SBI4.2	Class B	OBJY2	UL	4-01
Transformer (T1) Insulation tape	3M Company	1350F-1	130°C	OANZ2	UL	4-01
Transformer (T1) Insulation tape (Alternate)	Symbio Inc.	35660	130°C	OANZ2	UL	4-01
Transformer (T1) Margin tape	3M Company	44	130 Degree C .Provided on bobbin bottom edge of outer winding (N4), minimum 2 mm wide.	OANZ2	UL	4-01
Transformer (T1) Bobbin	Sumitomo Bakelite	PM-9820	V-0, 150°C phenolic, minimum 0.8 mm thick.	QMFZ2	UL	4-01
Transformer (T1) Varnish	John C. Dolph Co.	BC-346A	220°C	OBOR2	UL	4-01
Coil	Various	Various	130°C	OBMW2	UL	4-01
Transformer (T1) Triple insulation wire	Furukawa Electric Industry Co., Ltd.	TEX-E	(Sec) Rated 600V, 105°C.	OBJT2	UL	4-01
Transformer (T1) Triple insulation wire (Alternate)	Totoku Electric Co.	TIW-2X,	(Sec) Rated 1400V, 130°C.	OBJT2	UL	4-01
Transformer (T1) Sleeving/Tubing	Great Holding Industrial Co., Ltd.	TFL	150°C	YDPU2	UL	4-01
Transformer (T1) (for	Long Sail Electronic	SBI4.2	Class B, same construction as	OBJY2	UL	

Issue Date: 2010-03-19 Page 43 of 51 Report Reference # E336418-A17-UL-2

		IEC 60950-1:2005		
Clause	Requirement + Test		Result - Remark	Verdict

model 3A-061WP05)	Co Ltd		above, except for secondary winding.			
Transformer (T1) (for model 3A-061WP12)	Long Sail Electronic Co Ltd	SBI4.2	Class B, same construction as above, except for secondary winding.	OBJY2	UL	
Transformer (T1) (for model 3A-061WP18)	Long Sail Electronic Co Ltd	SBI4.2	Class B, same construction as above, except for secondary winding.	OBJY2	UL	
Transformer (T1) (for model 3A-061WP24)	Long Sail Electronic Co Ltd	SBI4.2	Class B, same construction as above, except for secondary winding.	OBJY2	UL	
Transformer (T1) (for Model 3A-061WP03) (Alternate)	Yann Shnn Co	GH-130	Class B	OBJY2	UL	4-01
Transformer (T1) (for Model 3A-061WP03) (Alternate) Insulation tape	3M Company	1350F-1	130°C	OANZ2	UL	4-01
Transformer (T1) (for Model 3A-061WP03) (Alternate) Insulation tape (Alternate)	Bondtec Pacific Co., Ltd.	371F	130°C	OANZ2	UL	4-01
Transformer (T1) (for Model 3A-061WP03) (Alternate) Margin tape	3M Company	44	130°C .Provided on bobbin bottom edge of outer winding (N4), minimum 2 mm wide.	OANZ2	UL	4-01
Transformer (T1) (for Model 3A-061WP03) (Alternate) Margin tape (Alternate)	Bondtec Pacific Co., Ltd.	201	130°C. Provided on bobbin bottom edge of outer winding (N4), minimum 2 mm wide.	OANZ2	UL	4-01
Transformer (T1) (for Model 3A-061WP03) (Alternate)	Chang Chun Plastics Co. Ltd.	T375J	V-0, 150°C phenolic, minimum 0.75 mm thick.	QMFZ2	UL	4-01

Issue Date: 2010-03-19 Page 44 of 51 Report Reference # E336418-A17-UL-2

		IEC 60950-1:2005		
Clause	Requirement + Test		Result - Remark	Verdict

Bobbin						
Transformer (T1) (for Model 3A-061WP03) (Alternate) Varnish	P D George/Viking	V1380FC	Minimum 130°C	OBOR2	UL	4-01
Transformer (T1) (for Model 3A-061WP03) (Alternate) Coil	Various	Various	130°C	OBMW2	UL	4-01
Transformer (T1) (for Model 3A-061WP03) (Alternate) Triple insulation wire	Great leoflon industrial Co., Ltd.	TRW(B)	(Sec) Rated 600V, 130°C	OBJT2	UL	4-01
Transformer (T1) (for Model 3A-061WP03) (Alternate) Sleeving/Tubing	Great Holding Industrial Co., Ltd.	TFL	150°C	YDPU2	UL	4-01
Transformer (T1) (for Model 3A-061WP05) (Alternate)	Yann Shnn Co	GH-130	Class B, same construction as above, except for secondary winding.	OBJY2	UL	
Transformer (T1) (for Model 3A-061WP12) (Alternate)	Yann Shnn Co	GH-130	Class B, same construction as above, except for secondary winding.	OBJY2	UL	
Transformer (T1) (for Model 3A-061WP18) (Alternate)	Yann Shnn Co	GH-130	Class B, same construction as above, except for secondary winding.	OBJY2	UL	
Transformer (T1) (for Model 3A-061WP24) (Alternate)	Yann Shnn Co	GH-130	Class B, same construction as above, except for secondary winding.	OBJY2	UL	
Transformer (T1) (for Model 3A-061WP03) (Alternate)	Taiwan Volt Electronic Co Ltd.	TVE-130	Class B	OBJY2	UL	4-01
Insulation tape	3M Company	1350F	130°C	OANZ2	UL	4-01
Margin tape	3M Company	44	130°C. Provided on bobbin	OANZ2	UL	4-01

Issue Date: 2010-03-19 Page 45 of 51 Report Reference # E336418-A17-UL-2

		IEC 60950-1:2005		
Clause	Requirement + Test		Result - Remark	Verdict

			bottom edge of outer winding (N4), minimum 2 mm wide.			
Bobbin	Hitachi Chemical Co Ltd	CP-J-8800	V-0, 150°C phenolic, minimum 0.38 mm thick.	QMFZ2	UL	4-01
Coil	Various	Various	130°C	OBMW2	UL	4-01
Varnish	Hitachi Chemical Co Ltd	WA-238A	Minimum 130°C	OBOR2	UL	4-01
Varnish (Alternate)	Hitachi Chemical Co Ltd	WF-285	Minimum 130°C	OBOR2	UL	4-01
Varnish (Alternate)	Hitachi Chemical Co Ltd	WP-2952F-2G	Minimum 130°C	OBOR2	UL	4-01
Varnish (Alternate)	Kyocera Chemical Corp.	TVB-2024	Minimum 130°C	OBOR2	UL	4-01
Varnish (Alternate)	Kyocera Chemical Corp.	TVB-2180T++	Minimum 130°C	OBOR2	UL	4-01
Triple insulation wire	Furukawa Electric Industry Co., Ltd.	TEX-E	(Sec) Rated 600V, 105°C.	OBJT2	UL	4-01
Sleeving/Tubing	ZEUS INDUSTRIAL PRODUCTS INC	TFE-TW-300	200°C	YDPU2	UL	4-01
Transformer (T1) (for model 3A-061WP05) (Alternate)	Taiwan Volt Electronic Co. Ltd.	TVE-130	Class B, same construction as above, except for secondary winding.	OBJY2	UL	
Transformer (T1) (for model 3A-061WP12) (Alternate)	Taiwan Volt Electronic Co Ltd	TVE-130	Class B, same construction as above, except for secondary winding.	OBJY2	UL	
Transformer (T1) (for model 3A-061WP18) (Alternate)	Taiwan Volt Electronic Co Ltd	TVE-130	Class B, same construction as above, except for secondary winding.	OBJY2	UL	
12n. Transformer (T1) (for model 3A-061WP24) (Alternate)	Taiwan Volt Electronic Co Ltd	TVE-130	Class B, same construction as above, except for secondary winding.	OBJY2	UL	
Mylar sheet (Between Bottom board and enclosure)	Formex, Div of Illinois Tool Works Inc, Formerly	FORMEX- (a)(b)(f2)	V-2, VTM-2 or better, overall 35mm by 18mm, min. 0.4mm thick	QMFZ2	UL	3-03

Issue Date: 2010-03-19 Page 46 of 51 Report Reference # E336418-A17-UL-2

		IEC 60950-1:2005		
Clause	Requirement + Test		Result - Remark	Verdict

Insulating	Various	Various	FEP, PTFE, PVC, TFE,	YDPU2, YDRY2,	UL	3-02
Tubing/Sleeving			neoprene, polyimide or marked VW-1; 105°C, 300 V, provided	UZFT2		
			with F1.			
Output cord	Various	Various	Minimum 22 AWG, rated			
			minimum 300 V, 80°C,			
			maximum 3 m, marked VW-1			
			or FT-1, coiled or uncoiled.			
			Mechanically secured and soldered to PWB. Terminates			
			with a polarized connector			
			outside enclosure.			
Output cord alternate	Various	Various	Style No. 1185, AWM, No. 22	AVLV2	UL, cUL	
Output cord alternate	various	vanous	AWG min., VW-1, 80°C, 300 V;	AVLVZ	OL, COL	
			one end is soldered to PWB;			
			other end molded with			
			connector barrel type			
Output cord alternate	Various	Various	SPT-1, AWM, No. 18 AWG	AVLV2	UL, cUL	
o aspar oor a allomato		1 4.1.0 4.0	min., VW-1, 105°C, 300 V; one		02,002	
			end is soldered to PWB; other			
			end molded with connector			
			barrel type			
Label	Various	Various	40°C if max. surface	PGDQ2 or PGJI2	UL	
			temperature not specified.			
Strain Relief	Various	Various	PVC. Min. V-1 Integrally	QMFZ2	UL	4-06
			molded with interconnecting			
			cable.			
			See Enclosure 4-06 for details.			
Varistor (Optional)	Various	Various	Rated minimum 300 Vac.	VZCA/2	UL	
			Provided in series with fuse.			
Construction B			Construction B is similar to			3-05
			construction A except for the			
			fllowing items. The following			
			items B01, B02 may be			

Issue Date: 2010-03-19 Page 47 of 51 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005		
Clause	Requirement + Test	Result - Remark	Verdict

			delivered additional with construction A.			
B01. Interchangeable AC Inlet	Globtek Inc	Q-C18(R)	10A/250 Vac, 60°C	AXUT3	UL	
B02. Power Supply Cord (Optional)	Various	Various	,	ZJCZ and RTRT and AXUT, or ELBZ	UL	

Issue Date: 2010-03-19 Page 48 of 51 Report Reference # E336418-A17-UL-2

	IE	C 60950-1:2005	
Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE:	TABLE: electrical data (in normal conditions)							
U (V)	I (A)	I rated (A)	P (W)	Fuse #	I fuse (A)	condition/status			
suppleme	supplementary information:								
See Test Record									

2.10.3 and 2.10.4	TABLE: clearance	ABLE: clearance and creepage distance measurements						
	cl) and creepage at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
supplementary information:								
See Test Re	See Test Record							

2.10.5	TABLE: distance through insulation measurements						
Distance th	rough insulation (DTI) at/of:	U peak (V)	Urms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)	
supplementary information:							
See Test R	ecord						

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 position?	to install	the batter	y in a reverse	polarity					
	Non-rechargeable batteries				Rech	argeable l	oatteries		
	Discharging		Un- intentional charging	Charging	9	Disch	arging		ersed rging
	Meas. current	Manuf. specs.		Meas. current	Manuf. specs.	Meas. current	Manuf. specs.	Meas. current	Manuf. specs.

Issue Date: 2010-03-19 Page 49 of 51 Report Reference # E336418-A17-UL-2

				IEC 60950-1:20	05				
Clause	Requirer	nent + Te	est		Res	Result - Remark			Verdict
					·				
Max. current during fault operation									
Test results:									Verdict
- Chemical I	eaks								N/A
- Explosion	of the batt	ery							N/A
- Emission c	of flame or	expulsio	n of molten n	netal					N/A
- Electric str	ength test	s of equip	oment after c	ompletion of tests					N/A
supplement	ary inform	ation:							•

4.5 TABLE: Thermal requirements					Pass
Supply voltage (V):	See Below	See Below	See Below	See Below	 _
Ambient Tmin (°C):					 _
Ambient Tmax (°C):	See Below	Tma	See Below	Tma	 _
Maximum measured temperature T of part/at:			T (°C)		allowed Tmax (°C)
Issue 1, Amendment 1: Employing construction B for each model.					
Model GT-41076-0603-A-A(loaded at 3V, 2A)	Maxim um normal load at 90Vac/ 60HZ (Before BLADE ENDU RANC E)	90Vac/ 60HZ (Before	60HZ	Maxim um normal load at 90Vac/ 60HZ (After BLADE ENDU RANC E), shifted to Tma	
AC inlet body near blade	44.0	56.8	44.6	57.3	 60
Internal enclosure near live	58.2	71.0	58.7	71.4	 105
Ambient	22.2	35.0	22.3	35.0	
Test duration	2h2min		2h10mi		

Issue Date: 2010-03-19 Page 50 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005						
Clause	Requirement + Test	Result - Remark	Verdict			

				n			
Model GT-41076-0603-A-A(loaded at 3V, 1.8A)			Maxim um normal load at 90Vac/ 60HZ, shifted to Tma				
AC inlet body near blade	AC inlet body near blade						60
Ambient		48.9 38.9	50 40				
Test duration							
temperature T of winding:	t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	allowed T _{max} (°C)	insulation class

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

- 40 Deg.C for all models except for Model GT-41076-0603-A-A.
 Model GT-41076-0603-A-A: 35 Deg.C for output wattage 6 W max.; 40 Deg.C for output wattage 5.4 W max.
- Tmax of components listed below

General components:

Inlet body - 60 Deg.C (Inlet C-of-A)

Internal enclosure near live - 105 Deg.C (Plastic RTI)

4.5.5	TABLE: Ball pressure test of thermoplastic parts		Pass		
	allowed allowed impression diameter (mm):			_	
part		test temperature (°C) impre		ion diameter mm)	
-		-	-		
supplementary information:					
See Test F	Record				

4.7	.7 TABLE: resistance to fire						
	part	manufacturer of material	type of material	thickness (mm)	flammability class	Evidence	

Issue Date: 2010-03-19 Page 51 of 51 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005						
Clause	Requirement + Test		Result - Remark	Verdict		

supplementary information:	
See Test Record	

5.2	TABLE: electric strength tests, impulse	Pass				
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No		
supplemer	supplementary information:					
See Test F	Record					

5.3	TABLE: fault condition tests					Pass	
	ambient temperature (°C):						_
	Power source for EUT: Manufacturer, model/type, output rating:					_	
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation	
supplementary information:							
See Test Re	cord						

Issue Date: 2010-03-19 Page 1 of 10 Report Reference # E336418-A17-UL-2

Enclosure National Differences

USA / Canada

Issue Date: 2010-03-19 Page 2 of 10 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005		
SubClause D	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.	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.	Pass
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

Issue Date: 2010-03-19 Page 3 of 10 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005		
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

Issue Date: 2010-03-19 Page 4 of 10 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005			
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.	N/A
3.1.1	Permissible combinations of internal wiring/external cable sizes for overcurrent and short circuit protection.	Pass

Issue Date: 2010-03-19 Page 5 of 10 Report Reference # E336418-A17-UL-2

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict

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.	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	N/A

Issue Date: 2010-03-19 Page 6 of 10 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005		
SubClause	Difference + Test	Result - Remark	Verdict

	terminals or leads not smaller than No. 18 AWG (0.82 mm²) 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.	see appended table 1.5.1	Pass
3.2.5	Conductors in power supply cords sized according to NEC and CEC, Part I.		Pass
3.2.5	Power supply cords and cord sets incorporate flexible cords suitable for the particular application.		Pass
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 then 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.		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 washer or equivalent retention.		N/A
3.3.4	Terminals accept wire sizes (gauge) used in the		N/A
	<u> </u>		

Issue Date: 2010-03-19 Page 7 of 10 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005		
SubClause	Difference + Test	Result - Remark	Verdict

	U.S. and Canada.		
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.	For construction A	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

Issue Date: 2010-03-19 Page 8 of 10 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005		
SubClause	Difference + Test	Result - Remark	Verdict

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
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 m³ 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 m² 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.	VW-1 or FT-1 cord used.	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.		N/A
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

Issue Date: 2010-03-19 Page 9 of 10 Report Reference # E336418-A17-UL-2

	IEC 60950-1:2005		
SubClause	Difference + Test	Result - Remark	Verdict

6	Marking identifying function of telecommunication type connectors not used for connection to a telecommunication network.	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
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	N/A

	IEC 60950-1:2005		
SubClause	Difference + Test	Result - Remark	Verdict

	is required to comply with special acoustic pressure 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