



Test Report issued under the responsibility of:



TEST REPORT

IEC 60950-1: 2005 (2nd Edition) and/or EN 60950-1:2006 Information technology equipment – Safety – Part 1: General requirements

Report Reference No......: T223-0183/08
Date of issue.....: 2008-08-21
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CB/CCA Testing Laboratory: Slovenian Institute of Quality and Metrology - SIQ
 Testing Laboratory is accredited by Slovenian Accreditation, Reg. No.: LP-009
Address: Tržaška cesta 2, SI-1000 Ljubljana, Slovenia

Applicant's name.....: Globtek Inc.,
Address: 186 Veterans Drive Northvale, NJ 07647, USA

Manufacturer's name: Globtek Inc.,
Address: 186 Veterans Drive Northvale, NJ 07647, USA

Factory's name: Globtek Inc.,
Address:

Test specification:
Standard.....: IEC 60950-1:2005 (2nd Edition) and/or
 EN 60950-1:2006
Test procedure: CB
Non-standard test method.....: N/A

Test Report Form No......: IECEN60950_1C
Test Report Form(s) Originator: SGS Fimko Ltd
Master TRF: Dated 2007-01

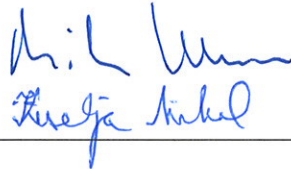
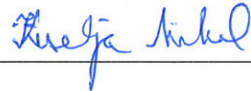
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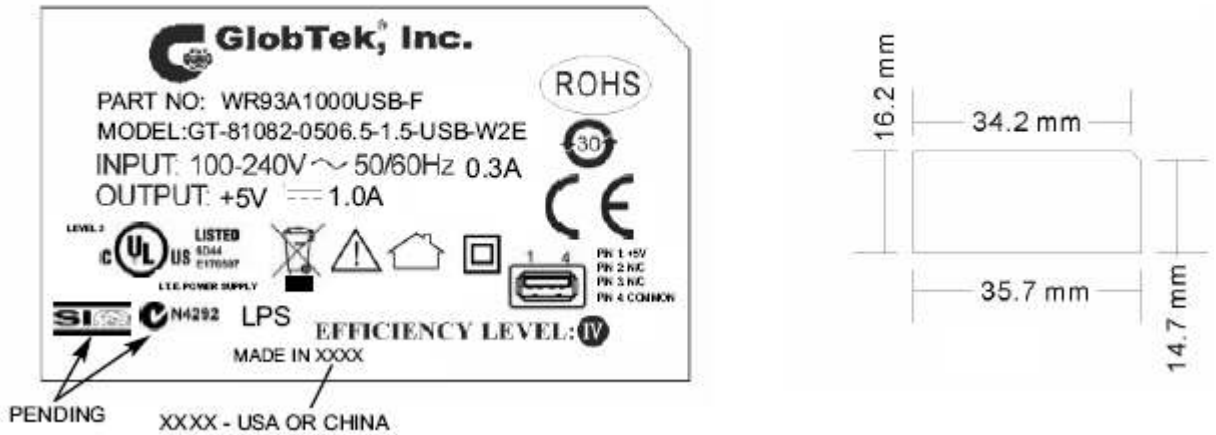
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Test item description:	Direct plug-in Power Supply for IT Equipment
Trade Mark	GlobTek, Inc
Manufacturer.....:	GlobTek Inc.,
Model/Type reference.....:	GT-81082-0506.5-X.X-USB-W2X (for model list refer to page 7)
Ratings.....:	Input: 100-240 Vac; 0,3 A; 50-60 Hz Output: +5 Vdc; 1 A

Testing procedure and testing location:	
<input checked="" type="checkbox"/> CB/CCA Testing Laboratory:	Slovenian Institute of Quality and Metrology - SIQ
Testing location/ address.....:	Tržaška cesta 2, SI-1000 Ljubljana, Slovenia
<input type="checkbox"/> Associated CB Laboratory:	
Testing location/ address.....:	
Tested by (name + signature)	Milan Kumer 
Approved by (+ signature)	Mihal Kiselja 
<input type="checkbox"/> Testing procedure: TMP	
Tested by (name + signature)	
Approved by (+ signature)	
Testing location/ address.....:	
<input type="checkbox"/> Testing procedure: WMT	
Tested by (name + signature)	
Witnessed by (+ signature).....:	
Approved by (+ signature)	
Testing location/ address.....:	
<input type="checkbox"/> Testing procedure: SMT	
Tested by (name + signature)	
Approved by (+ signature)	
Supervised by (+ signature).....:	
Testing location/ address.....:	
<input type="checkbox"/> Testing procedure: RMT	
Tested by (name + signature)	
Approved by (+ signature)	
Supervised by (+ signature).....:	
Testing location/ address.....:	

Summary of testing:	
Tests performed (name of test and test clause): See below	Testing location: Slovenian Institute of Quality and Metrology - SIQ Tržaška cesta 2, 1000 Ljubljana, Slovenia
Summary of compliance with National Differences: Argentina**, Australia*, Austria**, Belarus**, Belgium**, Brazil**, Bulgaria**, Canada, China**, Croatia**, Czech Republic**, Denmark, Finland, France**, Germany, Greece**, Hungary**, India**, Indonesia**, Ireland, Israel**, Italy**, Japan**, Kenya**, Korea, Malaysia**, Mexico**, Netherlands**, New Zealand, Norway, Poland**, Portugal**, Romania**, Russian Federation**, Saudi Arabia**, Serbia**, Singapore**, Slovakia**, Slovenia**, South Africa**, Spain**, Sweden, Switzerland, Thailand**, Turkey**, Ukraine**, United Arab Emirates**, United Kingdom, Uruguay**, USA * No national differences to IEC 60950-1:2005 (2 nd edition) declared ** No national differences to IEC 60950-1:2005 (2 nd edition) or IEC 60950-1:2001 (1 st edition) declared	

Copy of marking plate



The above label is a draft of an artwork for marking plate pending approval by National Certification Bodies and it shall not be affixed to products prior to such an approval

Overview of the testing done (P = Test passed, N/A test not applicable)		
Clause	Test	Test conducted
1.6.2	Input Test	P
2.1.1.5	Energy Hazard Measurements	P
2.1.1.7	Capacitance Discharge Test	N/A
2.9.2	Humidity Test	P
2.2.2	SELV: Hazard Voltage (Circuit) Measurement Test	P
2.2.3	SELV Reliability testing	P
2.4	Limited Current Circuit (Bridging components)	N/A
2.5	Limited Power Source	P
2.6	Earthing Test, earth trace test (UL PAG)	N/A
2.10.2	Working Voltage on PCB and Transformer	P
2.10.3 / 2.10.4	Clearance and Creepage distance measurement	P
2.10.5.6	Thin Sheet Material (barriers)	P
2.10.5.3	Enclosed or Hermetically Sealed Unit Test	P
4.2.2/ 4.2.3	Steady force test, 10N, 30 N, 250 N	P
4.2.5	Impact test, Fall test, Swing test	N/A

Clause	Test	Test conducted
4.2.6	Drop test	P
4.2.7	Stress relief test; heat test (°C/7 h)	P
4.2.10	Wall or ceiling mounted equipment	N/A
4.3.2	Handle Test (with USA Deviation)	N/A
4.3.6	Torque Test for direct plug in Products. Dimensions of the plugs	P
4.5.5	Resistance to abnormal heat (Ball pressure test)	P
4.5.2	Heating (Temperature) Test	P
5.1	Touch Current and ground conductor current	P
5.2	Electric Strength Test	P
5.3	Abnormal Operating Tests foreseeable misuse: SELV reliability and failure in the voltage regulation Functional insulation, Component faults Overload and short output	P
	Hot swap test	N/A
	Insulation resistance Test	N/A

Test item particulars	
Equipment mobility	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input checked="" type="checkbox"/> direct plug-in
Connection to the mains	<input checked="" type="checkbox"/> pluggable equipment <input type="checkbox"/> permanent connection <input type="checkbox"/> detachable power supply cord <input type="checkbox"/> non-detachable power supply cord <input type="checkbox"/> not directly connected to the mains
Operating condition	<input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time:
Over voltage category (OVC)	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV
Mains supply tolerance (%)	+6% /-10%
Tested for IT power systems	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
IT testing, phase-phase voltage (V)	230 (only for Norway)
Class of equipment	<input type="checkbox"/> Class I <input checked="" type="checkbox"/> Class II <input type="checkbox"/> Class III <input type="checkbox"/> Not classified
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
IP protection class	None
Altitude during operation (m)	2000 m
Mass of equipment (kg).....	0,064 kg
Possible test case verdicts:	
- test case does not apply to the test object.....	N/A
- test object does meet the requirement	P (Pass)
- test object does not meet the requirement	F (Fail)
Testing	
Date of receipt of test item	2008-07-08
Date(s) of performance of tests	From 2008-07-16 to 2008-08-21
General remarks:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. "(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.	
Note: This TRF includes EN Group Differences together with National Differences and Special National Conditions, if any. All Differences are located in the Appendix to the main body of this TRF.	
Throughout this report a comma is used as the decimal separator.	
This Test Report consists of the following documents:	
Test Report	
National Differences – Enclosure No. 1 (11 pages)	
Additional tests on plug portion – Enclosure No. 2 (10 pages)	
Pictures, Drawings and Transformer Data Sheets- Enclosure No. 3 (20 pages)	
Schematics and Proprietary Information – Enclosure No. 4 (6 pages)	

General product information:**Information about the Product:**

The power supply is a switch mode power supply (direct plug - in type) used for DC supply of IT or office equipment

The power supply's top enclosure is secured to bottom enclosure by ultrasonic welding.

The test items are pre-production samples without serial numbers.

GT-81082-0506.5-X.X-USB-W2E European plug

GT-81082-0506.5-X.X-USB-W2U UK plug

GT-81082-0506.5-X.X-USB-W2A Australian/NZ plug

GT-81082-0506.5-X.X-USB-W2 North American, Japan and China plug

GT-81082-0506.5-X.X-USB-W2K Korean plug

X.X: Voltage Differentiator.

X.X can be subtracted in 0.1 volt increments from 6.5V. Minimum output voltage is 4V.

Remark: ¹⁾ Only the European, British, Australian, Japanese and Korean plug has been subjected to plug portion test, other plug types must be evaluated during national approval. Construction with/of American and Chinese plug has been not considered/evaluated in this report

Summary of testing:

1. The products were tested to be suitable for connection to 16 A branch circuit in series. The unit is approved for TN mains star connections.
2. The secondary output circuit is separated from mains by reinforced insulation and rated SELV non hazardous energy levels and Limited Power Source acc. to Cl.2.5,
3. The plug is used as disconnect device.
4. All models are similar except for resistor on the secondary side that adjust the output voltage.
5. The transformer provides reinforced insulation of insulation class B (see also list of safety critical components).
6. The equipment has been evaluated for use in a Pollution Degree 2 and overvoltage category II environment and a maximum altitude of 2000 m.
7. A suitable Electrical and Fire enclosure is provided.
8. The product was evaluated for a maximum ambient of 40°C. The temperature test was performed in vertical and horizontal application.
9. Unless otherwise specified Model GT-81082-0506.5-1.5-USB-W2E was tested to represent other similar models
10. European plug is separately approved according to EN 50075 by TÜV Rheinland (J9924394). Dimensions of the injection part of the Korea plug are in accordance with the requirement of KSC 8305 standard. Dimensions of the injection part of the UK plug are in accordance with the requirement of the BS 1363 standard. Dimensions of the injection part of the Australian plug are in accordance with the AS/NZS 3112. Dimensions of the injection part of the Japan plug are in accordance with the IEC 60906-2.
Only dimensions of the plugs were measured and torque test was performed. Compliance with the BS 1363, AS/NZS 3112, KSC 8305 and IEC 60906-2 shall be evaluated during national approval.

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1	GENERAL		P
1.5	Components		P
1.5.1	General		P
	Comply with IEC 60950 or relevant component standard	(see appended table 1.5.1)	P
1.5.2	Evaluation and testing of components	<p>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 IEC 60950-1 and the relevant component standard.</p> <p>Components, for which no relevant IEC-standard exist, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950-1.</p>	P
1.5.3	Thermal controls		N/A
1.5.4	Transformers	The built-in transformer complies with all relevant requirements, see annex C	P
1.5.5	Interconnecting cables	Output cable see 3.1	P
1.5.6	Capacitors bridging insulation	no such capacitors are used	N/A
1.5.7	Resistors bridging insulation		N/A
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		N/A
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		N/A
1.5.8	Components in equipment for IT power systems		N/A
1.5.9	Surge suppressors		N/A
1.5.9.1	General		N/A
1.5.9.2	Protection of VDRs		N/A
1.5.9.3	Bridging of functional insulation by a VDR		N/A
1.5.9.4	Bridging of basic insulation by a VDR		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A
1.6	Power interface		P
1.6.1	AC power distribution systems		P
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment		N/A
1.6.4	Neutral conductor		N/A
1.7	Marking and instructions		P
1.7.1	Power rating		P
	Rated voltage(s) or voltage range(s) (V)	100–240 Vac	P
	Symbol for nature of supply, for d.c. only	AC input voltage only	N/A
	Rated frequency or rated frequency range (Hz)	50-60 Hz	P
	Rated current (mA or A)	300 mA	P
	Manufacturer's name or trade-mark or identification mark	GlobTek	P
	Model identification or type reference	GT-81082-0506.5-X.X-USB-W2X	P
	Symbol for Class II equipment only	Class II symbol (IEC 60417-1, symbol No. 5172) is applied on enclosure.	P
	Other markings and symbols	For indoor use.	P
	Certification marks	See copy of marking.	P
1.7.2	Safety instructions and marking		P
1.7.2.1	General		P
1.7.2.2	Disconnect devices	The plug is considered as disconnect device.	P
1.7.2.3	Overcurrent protective device	Unit is for direct plug in.	N/A
1.7.2.4	IT power distribution systems		N/A
1.7.2.5	Operator access with a tool		N/A
1.2.7.6	Ozone		N/A
1.7.3	Short duty cycles	Unit is intended for continues operation.	N/A
1.7.4	Supply voltage adjustment	No voltage settings, unit with wide range input.	N/A
	Methods and means of adjustment; reference to installation instructions		N/A
1.7.5	Power outlets on the equipment	No power outlets provided.	N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)	Marking adjacent to fuse on PCB as: F1AL250VAC	N/A
1.7.7	Wiring terminals	Unit is for direct plug in use.	N/A
1.7.7.1	Protective earthing and bonding terminals	Class II unit.	N/A
1.7.7.2	Terminals for a.c. mains supply conductors		N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators	No controls.	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		P
1.7.12	Removable parts	No removable parts.	N/A
1.7.13	Replaceable batteries		N/A
	Language(s)		—
1.7.14	Equipment for restricted access locations		N/A

2	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energy hazards		P
2.1.1	Protection in operator access areas	No operator access to hazardous voltage. Power supply is closed by ultrasonic welding. Only output USB connector and external surface of enclosure is accessible to operator.	P
2.1.1.1	Access to energized parts		P
	Test by inspection		P
	Test with test finger (Figure 2A)		P
	Test with test pin (Figure 2B)		P
	Test with test probe (Figure 2C)		N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (V_{peak} or V_{rms}); minimum distance through insulation (mm)		—

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.1.1.4	Access to hazardous voltage circuit wiring	No access to hazardous voltage, protected by reinforced insulation and enclosure.	P
2.1.1.5	Energy hazards	Unit is covered by enclosure without openings, Output < 10 VA	P
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).....	There is no capacitor directly connected between L and N.	—
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 d.c. mains supply		N/A
2.1.1.9	Audio amplifiers		N/A
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations		N/A
2.2	SELV circuits		P
2.2.1	General requirements		P
2.2.2	Voltages under normal conditions (V)	Max. SELV voltage is DC 6,5V on output.	P
2.2.3	Voltages under fault conditions (V)	SELV voltage does not exceed 42,4 V peak or DC 60 V.	P
2.2.4	Connection of SELV circuits to other circuits	SELV output only for connection to SELV circuits.	P
2.3	TNV circuits		N/A
2.3.1	Limits	No TNV circuit.	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		—

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Clause	Requirement + Test	Result - Remark	Verdict
2.3.5	Test for operating voltages generated externally		N/A
2.4	Limited current circuits		N/A
2.4.1	General requirements	No limited current circuit.	N/A
2.4.2	Limit values		N/A
	Frequency (Hz)..... :		—
	Measured current (mA) :		—
	Measured voltage (V)..... :		—
	Measured circuit capacitance (nF or μ F) :		—
2.4.3	Connection of limited current circuits to other circuits		N/A
2.5	Limited power sources		P
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network limited output under normal operating and single fault condition		P
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA)..... :	See appended table 2.5 (See in addition table 5.3)	—
	Current rating of overcurrent protective device (A)		—
2.6	Provisions for earthing and bonding		N/A
2.6.1	Protective earthing	The unit is protection class II, no earthing connection is provided.	N/A
2.6.2	Functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm^2), AWG :		—
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm^2), AWG :		—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min)..... :		N/A

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

2.7	Overcurrent and earth fault protection in primary circuits		P
2.7.1	Basic requirements		P
	Instructions when protection relies on building installation	Protection relies on building installation, fuse for protection in addition.	P
2.7.2	Faults not simulated in 5.3.7		N/A
2.7.3	Short-circuit backup protection		N/A
2.7.4	Number and location of protective devices	Fuse in line.	P
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	No safety interlocks.	N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.8.7	Switches and relays		N/A
2.8.7.1	Contact gaps (mm)		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

2.9	Electrical insulation		P
2.9.1	Properties of insulating materials	Natural rubber, materials containing asbestos or hygroscopic materials are not used as insulation.	P
2.9.2	Humidity conditioning		P
	Relative humidity (%), temperature (°C)	(see appended table 2.9.2)	—
2.9.3	Grade of insulation	Primary to Sec: reinforced, Primary to enclosure: reinforced	P
2.9.4	Separation from hazardous voltages	reinforced insulation	P
	Method(s) used	reinforced insulation	—

2.10	Clearances, creepage distances and distances through insulation		P
2.10.1	General		P
2.10.1.1	Frequency	58,82kHz	P
2.10.1.2	Pollution degrees	2	P
2.10.1.3	Reduced values for functional insulation	see table 5.3	P
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	The measured working voltage or the input voltage was applied, whatever value was higher (see table 2.10.2)	P
2.10.2.1	General		P
2.10.2.2	RMS working voltage		P
2.10.2.3	Peak working voltage		P
2.10.3	Clearances		P
2.10.3.1	General		P

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.2	Mains transient voltages		P
	a) AC mains supply	2500 V	P
	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)	P
2.10.3.4	Clearances in secondary circuits	(see appended table 2.10.3 and 2.10.4)	P
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply	2500 V	P
2.10.3.7	Transients from d.c. mains supply		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems		N/A
2.10.3.9	Measurement of transient voltage levels		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network :		N/A
2.10.4	Creepage distances		P
2.10.4.1	General		P
2.10.4.2	Material group and comparative tracking index		P
	CTI tests.....	III b) was applied	—
2.10.4.3	Minimum creepage distances	See appended table 2.10.3 and 2.10.4	P
2.10.5	Solid insulation		P
2.10.5.1	General		P
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	P
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices	Approved optical insulators acc. to IEC 60950-1 are used.	P
2.10.5.5	Cemented joints		N/A
2.10.5.6	Thin sheet material – General	Transformer is using triple insulated wire.	N/A
2.10.5.7	Separable thin sheet material		N/A
	Number of layers (pcs).....		—
2.10.5.8	Non-separable thin sheet material		N/A
2.10.5.9	Thin sheet material – standard test procedure		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Electric strength test		—
2.10.5.10	Thin sheet material – alternative test procedure		N/A
	Electric strength test		—
2.10.5.11	Insulation in wound components	The transformer was considered as wound component. The primary to secondary insulation is done with use of triple insulated wire on secondary winding.	P
2.10.5.12	Wire in wound components		P
	Working voltage	231,8Vrms / 488Vpk	P
	a) Basic insulation not under stress		N/A
	b) Basic, supplementary, reinforced insulation	reinforced	P
	c) Compliance with Annex U	Approved triple insulated wire is used.	P
	Two wires in contact inside wound component; angle between 45° and 90°	Where two wires are in contact in such an angle, additional tubing is provided.	P
2.10.5.13	Wire with solvent-based enamel in wound components		N/A
	Electric strength test		—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		N/A
	Working voltage		N/A
	- Basic insulation not under stress		N/A
	- Supplementary, reinforced insulation		N/A
2.10.6	Construction of printed boards		P
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	P
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	1 layer PCB, no inner layer.	N/A
2.10.6.4	Insulation between conductors on different layers of a printed board	Primary and secondary layers do not overlap.	N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs).....		N/A
2.10.7	Component external terminations	(see appended table 2.10.3 and 2.10.4)	P
2.10.8	Tests on coated printed boards and coated components		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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	Approved optocouplers are used.	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	Approved optocouplers are used.	N/A
2.10.12	Enclosed and sealed parts		N/A

3	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General		P
3.1.1	Current rating and overcurrent protection	Internal wiring is PVC insulated, the wiring gauge is suitable for current intended to be carried. Internal wiring for primary power distribution protected by built-in fuse.	P
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges which could damage the insulation and cause hazard.	P
3.1.3	Securing of internal wiring	The internal wiring are secured by solder pins or tubing so that loosening of the terminal connections is unlikely.	P
3.1.4	Insulation of conductors	The insulation of the individual conductors are suitable for the application and the working voltage. For the insulation material see 3.1.1. (see appended table 5.2)	P
3.1.5	Beads and ceramic insulators	Not used.	N/A
3.1.6	Screws for electrical contact pressure	No such screws provided.	N/A
3.1.7	Insulating materials in electrical connections	All current carrying connections are metal to metal.	N/A
3.1.8	Self-tapping and spaced thread screws	No such screws provided.	N/A
3.1.9	Termination of conductors	All conductors are reliably secured	P

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Clause	Requirement + Test	Result - Remark	Verdict
	10 N pull test	Force 10N applied to the termination points of the conductors	P
3.1.10	Sleeving on wiring	No sleeving used	N/A
3.2	Connection to a mains supply		P
3.2.1	Means of connection	Provided with plug on the housing.	P
3.2.1.1	Connection to an a.c. mains supply	see above	P
3.2.1.2	Connection to a d.c. mains supply	AC source	N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter of cable and conduits (mm)		—
3.2.4	Appliance inlets	Unit is for direct plug in use.	N/A
3.2.5	Power supply cords	No power supply cords	N/A
3.2.5.1	AC power supply cords		N/A
	Type		—
	Rated current (A), cross-sectional area (mm ²), AWG		—
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N)		—
	Longitudinal displacement (mm)		—
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards		N/A
	Diameter or minor dimension D (mm); test mass (g)		—
	Radius of curvature of cord (mm)		—
3.2.9	Supply wiring space		N/A
3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals	Direct plug-in unit.	N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm ²)		—

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Clause	Requirement + Test	Result - Remark	Verdict
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type, nominal thread diameter (mm)		—
3.3.6	Wiring terminal 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		P
3.4.1	General requirement	The plug is used as disconnect device.	P
3.4.2	Disconnect devices		P
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized	There is no parts remained with hazardous voltage or energy in the equipment when SPS is separated from AC mains	P
3.4.5	Switches in flexible cords		N/A
3.4.6	Number of poles – single-phase and d.c. equipment	Direct plug-in unit. No instruction is required.	P
3.4.7	Number of poles – three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices	Direct plug-in unit. No instruction is required.	N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A

3.5	Interconnection of equipment		P
3.5.1	General requirements	Output is intended for connection to SELV circuit.	P
3.5.2	Types of interconnection circuits	SELV	P
3.5.3	ELV circuits as interconnection circuits		N/A
3.5.4	Data ports for additional equipment		N/A

4	PHYSICAL REQUIREMENTS		P
4.1	Stability		N/A
	Angle of 10°	Direct plug-in power supply.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

	Test force (N)		N/A
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4.2	Mechanical strength		P
4.2.1	General		P
4.2.2	Steady force test, 10 N	Test on Components (see appended table 4.2.2 in Enclosure No. 2)	P
4.2.3	Steady force test, 30 N	No internal enclosure.	N/A
4.2.4	Steady force test, 250 N	No hazard. The test is performed with 250 N.	P
4.2.5	Impact test		N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm)	No damage after 1m drop.	P
4.2.7	Stress relief test	Test is carried out at (74,6°C) 80°C / 7h. No risk of shrinkage or distortion on enclosures due to release of internal stresses.	P
4.2.8	Cathode ray tubes		N/A
	Picture tube separately certified		N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N)		N/A

4.3	Design and construction		P
4.3.1	Edges and corners	All edges and corners are rounded and/or smoothed.	P
4.3.2	Handles and manual controls; force (N)	No handles or controls provided.	N/A
4.3.3	Adjustable controls	No controls provided.	N/A
4.3.4	Securing of parts	No connection likely to be exposed to mechanical stress is provided in unit.	P
4.3.5	Connection by plugs and sockets	No mismatching of connectors, plugs or sockets possible.	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.6	Direct plug-in equipment	The prevention of imposing to undue strain on the socket-outlet was done by construction of the plug of adaptor. For European plug: 0.03Nm; For British plug: 0.03Nm; For Australian plug: 0.03Nm; For Japanese plug: 0.03Nm; For Korean plug: 0.03Nm.	P
	Torque	See above	—
	Compliance with the relevant mains plug standard	(See attached partial test reports)	P
4.3.7	Heating elements in earthed equipment	The equipment does not have any heating elements.	N/A
4.3.8	Batteries	The equipment does not have any batteries.	N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
4.3.9	Oil and grease		N/A
4.3.10	Dust, powders, liquids and gases	The equipment does not produce dust or employ powders, liquids.	N/A
4.3.11	Containers for liquids or gases	The equipment does not contain liquids.	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
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
	Part, property, retention after test, flammability classification		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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	No moving part.	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		P
4.5.1	General		P
4.5.2	Temperature tests	(see appended table 4.5) The equipment and its component parts did not attain excessive temperatures during normal operation.	P
	Normal load condition per Annex L	Rated output load	—
4.5.3	Temperature limits for materials	(see appended table 4.5)	P
4.5.4	Touch temperature limits	(see appended table 4.5)	P
4.5.5	Resistance to abnormal heat	(see appended table 4.5.5)	P
4.6	Openings in enclosures		P
4.6.1	Top and side openings		P
	Dimensions (mm)	no openings	—
4.6.2	Bottoms of fire enclosures		P
	Construction of the bottom, dimensions (mm) ..	no openings	—
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment	no openings	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).....		—

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Clause	Requirement + Test	Result - Remark	Verdict
4.7	Resistance to fire		P
4.7.1	Reducing the risk of ignition and spread of flame		P
	Method 1, selection and application of components wiring and materials	See list of safety critical components.	P
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure		P
4.7.2.1	Parts requiring a fire enclosure	Internal components.	P
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		P
4.7.3.1	General		P
4.7.3.2	Materials for fire enclosures	The fire enclosure is V-1 or better material (see appended table 1.5.1)	P
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	PCB material is V-0 All internal materials are rated V-2 or better or are mounted on PCB rated V-0. See enclosed list of safety critical component.	P
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		P
5.1	Touch current and protective conductor current		P
5.1.1	General		P
5.1.2	Configuration of equipment under test (EUT)	EUT has only one mains connection.	P
5.1.2.1	Single connection to an a.c. mains supply	Equipment of figure 5A used.	P
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit		P
5.1.4	Application of measuring instrument	Using measuring instrument in annex D.	P
5.1.5	Test procedure	The touch current was measured from mains to DC output connector and to a 100 mm x 200 mm metal foil wrapped on accessible non-conductive parts (plastic enclosure).	P
5.1.6	Test measurements		P
	Supply voltage (V)	264 Vac	—
	Measured touch current (mA)	Touch current was measured on the enclosure (see enclosed test results in Enclosure No. 2, table 5.1.6)	—
	Max. allowed touch current (mA)	≤ 0,25 mA for accessible unearthed parts	—
	Measured protective conductor current (mA)		—
	Max. allowed protective conductor current (mA)...		—
5.1.7	Equipment with touch current exceeding 3,5 mA	Neither stationary permanently connected equipment nor stationary pluggable equipment type B.	N/A
5.1.7.1	General		N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Supply voltage (V)		—
	Measured touch current (mA)		—
	Max. allowed touch current (mA)		—
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

5.2	Electric strength		P
5.2.1	General	See appended table 5.2 Based on the electric strength test the use of the insulating materials within the equipment is satisfactory.	P
5.2.2	Test procedure	No insulation breakdown detected during the test.	P

5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P
5.3.2	Motors	No motor is provided.	N/A
5.3.3	Transformers	(see appended table abnormal testing enclosed)	P
5.3.4	Functional insulation.....	Within primary and secondary the functional insulation was verified via shorts (Method C).	P
5.3.5	Electromechanical components	The equipment does not have any electromechanical components in the secondary.	N/A
5.3.6	Audio amplifiers in ITE		N/A
5.3.7	Simulation of faults		P
5.3.8	Unattended equipment	The unit is intended for continuous operation. There is no thermal sensor or cut-off for operational condition.	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	(see appended table 5.2)	P
5.3.9.1	During the tests	No fire, emission of molten metal or deformation was noted during the tests.	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.3.9.2	After the tests	Electric strength tests performed after abnormal and fault tests.	P

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	No TNV	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 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	General	Not connected to cable distribution system	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

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Clause	Requirement + Test	Result - Remark	Verdict
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 (see IEC 60695-11-3)		N/A
	Flame A, B, C or D		—
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

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Clause	Requirement + Test	Result - Remark	Verdict
A.3.3	Compliance criterion		N/A
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.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)		—
C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		P
	Position	T1: Primary to secondary	—
	Manufacturer	GlobTek	—
	Type	Switch mode	—

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Clause	Requirement + Test	Result - Remark	Verdict
	Rated values	See list of safety critical components.	—
	Method of protection	Primary current limitation	—
C.1	Overload test	(see appended table 5.3)	P
C.2	Insulation	(see appended table 5.2)	P
	Protection from displacement of windings	Use of triple insulated wire does not require special precaution.	P
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		P
D.1	Measuring instrument	D1 was used.	P
D.2	Alternative measuring instrument		N/A
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		P
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 supplies		N/A
G.2.3	Unearthed d.c. mains supplies		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

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Clause	Requirement + Test	Result - Remark	Verdict
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
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(s) used		---
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)		P
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		P
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	Ringling signal		N/A
M.3.1.1	Frequency (Hz)		—

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Clause	Requirement + Test	Result - Remark	Verdict
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
P	ANNEX P, NORMATIVE REFERENCES		—
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		N/A
	a) Preferred climatic categories		N/A
	b) Maximum continuous voltage		N/A
	c) Pulse current		N/A
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N/A
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)		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)		P

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Clause	Requirement + Test	Result - Remark	Verdict
		Approved triple insulated wire is used. See list of critical components.	—
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		P
V.1	Introduction		P
V.2	TN power distribution systems	IT-power system for Norway.	P
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		P
W.1	Touch current from electronic circuits	See table 5.1.6	P
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 clause C.1)		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A
Y	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
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		P
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N/A
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
EN 60950-1:2006 – CENELEC COMMON MODIFICATIONS			
Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations		P
General	Delete all the "country" notes in the reference document according to the following list: 1.4.8 Note 2 1.5.1 Note 2 & 3 1.5.8 Note 2 1.5.9.4 Note 2.2.3 Note 2.2.4 Note 2.3.2.1 Note 2 2.3.4 Note 2 2.7.1 Note 2.10.3.2 Note 2 3.2.1.1 Note 3.2.4 Note 3. 4.3.6 Note 1 & 2 4.7 Note 4 4.7.3.1 Note 2 5.1.7.1 Note 3 & 4 6 Note 2 & 5 6.1.2.1 Note 2 6.2.2 Note 6. 2.2.1 Note 2 7.1 Note 3 7.2 Note G.2.1 Note 2 Annex H Note 2		N/A
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment – Maximum sound pressure level measurement methodology and limit considerations – Part 1: General method for "one package equipment", and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment – Maximum sound pressure level measurement methodology and limit considerations – Part 2: Guidelines to associate sets with headphones coming from different manufacturers.		N/A
1.5.1	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1	<p>Add the following NOTE:</p> <p>NOTE Z1 In addition, the instructions shall include, as far as applicable, a warning that excessive sound pressure from earphones and headphones can cause hearing loss</p>		N/A
2.7.1	<p>Replace the subclause as follows:</p> <p>Basic requirements</p> <p>To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c):</p> <p>a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment;</p> <p>b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;</p> <p>c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions.</p> <p>If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.</p>	Unit provides fuse in live supply conductor.	P
2.7.2	This subclause has been declared 'void'.		—
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.		N/A

IEC/EN 60950-1																					
Clause	Requirement + Test	Result - Remark	Verdict																		
3.2.5.1	<p>Replace “60245 IEC 53” by “H05 RR-F”; “60227 IEC 52” by “H03 VV-F or H03 VVH2-F”; “60227 IEC 53” by “H05 VV-F or H05 VVH2-F2”.</p> <p>In Table 3B, replace the first four lines by the following:</p> <table border="1"> <tr> <td>Up to and including 6</td> <td></td> <td></td> </tr> <tr> <td>0,75^{a)}</td> <td></td> <td></td> </tr> <tr> <td>Over 6 up to and including 10</td> <td></td> <td>(0,75)^{b)}</td> </tr> <tr> <td>1,0</td> <td></td> <td></td> </tr> <tr> <td>Over 10 up to and including 16</td> <td></td> <td>(1,0)^{c)}</td> </tr> <tr> <td>1,5</td> <td></td> <td></td> </tr> </table> <p>In the conditions applicable to Table 3B delete the words “in some countries” in condition^{a)}.</p> <p>In NOTE 1, applicable to Table 3B, delete the second sentence.</p>	Up to and including 6			0,75 ^{a)}			Over 6 up to and including 10		(0,75) ^{b)}	1,0			Over 10 up to and including 16		(1,0) ^{c)}	1,5				N/A
Up to and including 6																					
0,75 ^{a)}																					
Over 6 up to and including 10		(0,75) ^{b)}																			
1,0																					
Over 10 up to and including 16		(1,0) ^{c)}																			
1,5																					
3.3.4	<p>In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following:</p> <table border="1"> <tr> <td>Over 10 up to and including 16</td> <td>1,5 to 2,5</td> </tr> <tr> <td>1,5 to 4</td> <td></td> </tr> </table> <p>Delete the fifth line: conductor sizes for 13 to 16 A.</p>	Over 10 up to and including 16	1,5 to 2,5	1,5 to 4			N/A														
Over 10 up to and including 16	1,5 to 2,5																				
1,5 to 4																					
4.3.13.6	<p>Add the following NOTE:</p> <p>NOTE Z1 Attention is drawn to 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz. Standards taking into account this Recommendation which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.</p>		N/A																		
Annex H	<p>Replace the last paragraph of this annex by:</p> <p>At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see NOTE). Account is taken of the background level.</p> <p>Replace the notes as follows:</p> <p>NOTE These values appear in Directive 96/29/Euratom.</p> <p>Delete NOTE 2.</p>		N/A																		
Bibliography	Additional EN standards.	—																			
ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS	—																			
ZB	SPECIAL NATIONAL CONDITIONS		P																		

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.2.4.1	In Denmark , certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.		N/A
1.5.7.1	In Finland, Norway and Sweden , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2.		N/A
1.5.8	In Norway , due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A
1.5.9.4	In Finland, Norway and Sweden , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A
1.7.2.1	In Finland, Norway and Sweden , CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In Finland: "Laitte on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan" In Norway: "Apparatet må tilkoples jordet stikkontakt" In Sweden: "Apparaten skall anslutas till jordat uttag"		N/A
1.7.5	In Denmark , socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.	There are no socket-outlets providing power to other appliances.	N/A
2.2.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.2	In Finland, Norway and Sweden there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.	Unit not intended for connection to TNV circuit.	N/A
2.3.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A

IEC/EN 60950-1																																							
Clause	Requirement + Test	Result - Remark	Verdict																																				
2.6.3.3	In the United Kingdom , the current rating of the circuit shall be taken as 13 A, not 16 A.	Class II equipment	N/A																																				
2.7.1	In the United Kingdom , to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.	Unit provides fuse in live supply conductor.	P																																				
2.10.5.13	In Finland, Norway and Sweden , there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A																																				
3.2.1.1	<p>In Switzerland, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets:</p> <table border="0"> <tr> <td>SEV 6532-2.1991</td> <td>Plug Type 15</td> <td>3P+N+PE</td> </tr> <tr> <td>250/400 V, 10 A</td> <td></td> <td></td> </tr> <tr> <td>SEV 6533-2.1991</td> <td>Plug Type 11</td> <td>L+N</td> </tr> <tr> <td>250 V, 10 A</td> <td></td> <td></td> </tr> <tr> <td>SEV 6534-2.1991</td> <td>Plug Type 12</td> <td>L+N+PE</td> </tr> <tr> <td>250 V, 10 A</td> <td></td> <td></td> </tr> </table> <p>In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998:</p> <table border="0"> <tr> <td>SEV 5932-2.1998</td> <td>Plug Type 25</td> <td>3L+N+PE</td> </tr> <tr> <td>230/400 V, 16 A</td> <td></td> <td></td> </tr> <tr> <td>SEV 5933-2.1998</td> <td>Plug Type 21</td> <td>L+N</td> </tr> <tr> <td>250 V, 16 A</td> <td></td> <td></td> </tr> <tr> <td>SEV 5934-2.1998</td> <td>Plug Type 23</td> <td>L+N+PE</td> </tr> <tr> <td>250 V, 16 A</td> <td></td> <td></td> </tr> </table>	SEV 6532-2.1991	Plug Type 15	3P+N+PE	250/400 V, 10 A			SEV 6533-2.1991	Plug Type 11	L+N	250 V, 10 A			SEV 6534-2.1991	Plug Type 12	L+N+PE	250 V, 10 A			SEV 5932-2.1998	Plug Type 25	3L+N+PE	230/400 V, 16 A			SEV 5933-2.1998	Plug Type 21	L+N	250 V, 16 A			SEV 5934-2.1998	Plug Type 23	L+N+PE	250 V, 16 A				N/A
SEV 6532-2.1991	Plug Type 15	3P+N+PE																																					
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250 V, 16 A																																							



IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	<p>In Denmark, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.</p> <p>If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.</p>		N/A
3.2.1.1	<p>In Spain, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994.</p> <p>Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994.</p> <p>If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.</p>		N/A
3.2.1.1	<p>In the United Kingdom, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 – The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations.</p> <p>NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.</p>		N/A
3.2.1.1	<p>In Ireland, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 – National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.</p>		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.4	In Switzerland , for requirements see 3.2.1.1 of this annex.		N/A
3.2.5.1	In the United Kingdom , a power supply cord with conductor of 1,25 mm ² is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A
3.3.4	In the United Kingdom , the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm ² to 1,5 mm ² nominal cross-sectional area.		N/A
4.3.6	In the United Kingdom , the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.	Refer to Enclosure No.:2	P
4.3.6	In Ireland , DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 – National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.	Refer to Enclosure No.:2	P

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	<p>In Finland, Norway and Sweden TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment:</p> <ul style="list-style-type: none"> • STATIONARY PLUGGABLE EQUIPMENT TYPE A that <ul style="list-style-type: none"> ○ is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and ○ has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and ○ is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT. 		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.1	<p>In Finland, Norway and Sweden, add the following text between the first and second paragraph of the compliance clause:</p> <p>If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. <p>If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"> - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. <p>It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2.</p> <p>A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 132400; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400, in the sequence of tests as described in EN 132400. 		N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.2	In Finland, Norway and Sweden , the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N/A
7.2	In Finland, Norway and Sweden , for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.	Unit not intended for connection to cable distribution system.	N/A
7.3	In Norway and Sweden , there are many buildings where the screen of the coaxial cable is normally not connected to the earth in the building installation.		N/A
7.3	In Norway , for installation conditions see EN 60728-11:2005.		N/A
ZC	A-DEVIATIONS (informative)		P
1.5.1	Sweden (Ordinance 1990:944) Add the following: NOTE In Sweden, switches containing mercury are not permitted.	No switch.	N/A
1.5.1	Switzerland (Ordinance on environmentally hazardous substances SR 814.081, Annex 1.7, Mercury – Annex 1.7 of SR 814.81 applies for mercury.) Add the following: NOTE In Switzerland, switches containing mercury such as thermostats, relays and level controllers are not allowed.	No switch.	N/A

IEC/EN 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1	<p>Denmark (Heavy Current Regulations)</p> <p>Supply cords of CLASS I EQUIPMENT, which is delivered without a plug, must be provided with a visible tag with the following text:</p> <p style="text-align: center;">Vigtigt! Lederen med grøn/gul isolation må kun tilsluttes en klemme mærket</p> <p style="text-align: center;"> eller </p> <p>If essential for the safety of the equipment, the tag must in addition be provided with a diagram, which shows the connection of the other conductors, or be provided with the following text:</p> <p>“For tilslutning af de øvrige ledere, se medfølgende installationsvejledning.”</p>		N/A
1.7.2.1	<p>Germany (Gesetz über technische Arbeitsmittel und Verbraucherprodukte (Geräte- und Produktsicherheitsgesetz – GPSG) [Law on technical labour equipment and consumer products], of 6th January 2004, Section 2, Article 4, Clause (4), Item 2).</p> <p>If for the assurance of safety and health certain rules during use, amending or maintenance of a technical labour equipment or readymade consumer product are to be followed, a manual in German language has to be delivered when placing the product on the market.</p> <p>Of this requirement, rules for use even only by SERVICE PERSONS are not exempted.</p>	Operation instructions provided in German language.	P
1.7.5	<p>Denmark (Heavy Current Regulations)</p> <p>With the exception of CLASS II EQUIPMENT provided with a socket outlet in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-4a, CLASS II EQUIPMENT shall not be fitted with socket-outlets for providing power to other equipment.</p>		N/A
1.7.13	<p>Switzerland (Ordinance on chemical hazardous risk reduction SR 814.81, Annex 2.15 Batteries)</p> <p>Annex 2.15 of SR 814.81 applies for batteries.</p>		N/A
5.1.7.1	<p>Denmark (Heavy Current Regulations, Chapter 707, clause 707.4)</p> <p>TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE EQUIPMENT TYPE B.</p>		N/A

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

1.5.1	TABLE: list of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity1)	
Transformer (T1)	Dee Van or GlobTek GTX-1	90E165000-xxH ("xx" to denote the part number, can be any alphanumeric character for marketing purposes only)	Pri. Winding (pin 2-6): Φ0.2mmx105Ts Primary winding (pin 4-NC): Φ0.19mmx2px19Ts Sec. Winding (pin A-B): Φ0.30mmx2px7Ts Class B	Applicable part of IEC 60950-1 and according to IEC 60085	Tested with appliance	
Triple insulated wire used in T1	Totoku	TIW-E	Class B	IEC/EN 60950-1	TUV Rheinland J9551153	
(alternative)	Young Chang	STW-B	Class B	IEC/EN 60950-1	TUV PS B04 05 53008 001	
(alternative)	Great Leoflon	TRW(B)	Class B	IEC/EN 60950-1	VDE	
(alternative)	Cosmolink	TIW-M	Class B	IEC/EN 60950-1	VDE	
(alternative)	Furukawa	TEX,E	Class B	IEC/EN 60950-1 E206440	VDE, UL	
Magnet wire	Huiyang Golden Ocean	UEW-X	130°C	-	UL	
(alternative)	WaTai	UEW	130°C	-	UL	
(alternative)	Changcheng Goldstar	UEW	130°C	-	UL	
(alternative)	Evertop	UEW	130°C	-	UL	
Bobbin	Hitachi	CP-J-8800	PF, 150°C,V-0, min. thickness: 0.4mm	UL94	UL	
(alternative)	E I Dupont	FR530	PF, 155°C,V-0, min. thickness: 0.4mm	UL94	UL	
Tubing used in T1	Fluo Tech	TFT	300V, 200°C	-	UL	
Insulation tape	Nitto Denko	354, 355G	130°C	-	UL	
(alternative)	Symbio	MY130	130°C	-	UL	
(alternative)	3M	Various	130°C min,	-	UL	
Line inductor	Dee Van	30D001230-xxH ("xx" to denote the part number, can be any alphanumeric character for marketing purposes only)	Min. 1 mH, 00.09mmx230Ts, 130°C		Tested with appliance	
Mylar sheet	Sumitomo	HT-200	PVC, V-0, 150°C, min. thickness: 0.4mm	UL94	UL	
(alternative)	General Electric	FR700	PVC, V-0, 130°C, min. thickness: 0.4mm	UL94	UL	

IEC/EN 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity1)
Fuse(F1)	Lanson	FXXX250V	F1AL, AC250V, sub-miniature fuse	IEC/EN 60127-1 IEC/EN 60127-3	VDE
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity1)
(alternative)	Conquer	PGU	F1AL, AC250V, sub-miniature fuse	IEC/EN 60127-1 IEC/EN 60127-3	VDE
(alternative)	WALTER	FAP	F1AL, AC250V, sub-miniature fuse	IEC/EN 60127-1 IEC/EN 60127-3	VDE
Opto-coupler (U2)	Lite-on	LTV817	d _{ti} =0.45mm, Int./ext. cr.= 6.5/8.0mm	VDE 0884 I IEC/EN 60950-1	VDE
(alternative)	Sharp	PC817, PC123	d _{ti} =0.8mm, Int./ext. cr.= 5.2/7.8mm	VDE 0884 IEC/EN 60950-1	VDE
(alternative)	Everlight	EL817	d _{ti} =0.5mm, Int./ext. cr.= 6.0/7.7mm,	VDE 0884 IEC/EN 60950-1	VDE
(alternative)	Cosmo	KP1010, K1010	d _{ti} =0.5mm, Int./ext. cr.= 5.3/8.0mm,	VDE 0884 IEC/EN 60950-1	VDE
(alternative)	Q.T.C Corporation	H11A817B	Cr. > 7.0mm; D _{ti} > 1mm	VDE 0884 IEC/EN 60950-1	VDE
(alternative)	BRIGHT	BPC817B ;	Cr. =Min. 7.0mm D _{ti} > 0.5mm	VDE 0884 IEC/EN 60950-1	VDE
Enclosure	GE	SE1X, SE100X	PPHOX, V-1, 80°C, min. thickness: 2.0mm	UL94	UL
PCB	Chian You	02V0-1	V-0, 130°C min. thickness: 1.5mm	UL94	UL
(alternative)	Various	Various	V-0, 130°C min. thickness: 1.5mm	UL94	UL
Primary lead wire	Xinya Electronic	1007	80°C, 300V, VW-1, 24AWG	-	UL
(alternative)	Various	Various	80°C, 300V, VW-1, min. 24AWG	—	UL
Electrolytic Capacitor (C1)	Various	Various	3.3-22μF, Min. 400V, 105°C	—	Tested with appliance
Foam	Holy Foam Enterprise	FR212	HF-1	UL94	UL
(alternative)	Various	Various	HF-1	UL94	UL
Shrinkable tube	Shenzhen Woer	RSFR	125°C, VW-1, 600V	—	UL

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

Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾
(alternative)	Various	Various	Min. 125°C, VW-1	-	UL
Euro-Plug	GlobTek	GlobTek	AC250V, 2.5A	EN 50075	TÜV Rheinland J 9924394

Comments:

- 1) an asterisk indicates a mark which assures the agreed level of surveillance
- 2) + means, that components from other vendor and other model number, but with the same rating and equivalent approvals are accepted.

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

1.6.2	TABLE: electrical data (in normal conditions)						P
fuse #	I _{rated} (A)	U (V)	P (W)	I (mA)	I _{fuse} (mA)	condition/status	
F1	--	90		143,9	143,9	Rated load at 50Hz	
F1	--	90		145,2	145,2	Rated load at 60Hz	
F1	0,3	100		131,1	131,1	Rated load at 50Hz	
F1	0,3	100		133,2	133,2	Rated load at 60Hz	
F1	0,3	240		73,7	73,7	Rated load at 50Hz	
F1	0,3	240		75,1	75,1	Rated load at 60Hz	
F1	--	254,4		70,9	70,9	Rated load at 50Hz	
F1	--	254,4		72,3	72,3	Rated load at 60Hz	

Comment: The steady-state input current did not exceed the rated current at the rated voltage by more than 10% under the maximum normal load (5,2Vdc@1000mA for GT-81082-0506.5-1.5-USB-W2E).

2.1.1.5	TABLE: Energy hazards, Maximum Output Voltage, Current , and Voltampere measurement				P
<p><i>The sample was connected to 254,4 Vac and 60 Hz. With the unit operating normally, a variable resistor was connected across the points noted beside. The current through the resistor and voltage across the resistor were monitored using suitable meters. The resistance was adjusted to obtain maximum VA at a voltage exceeding 2 V.</i></p>					
Output Tested	Max. Volts	Max. Amps.	Max. VA	Hazard Energy Yes/No	
USB output (plus to minus)	5,29	1,665	8,8	No	

2.2.2	TABLE: Voltages under normal conditions				P
<p><i>The unit was connected to 240 V ac , and 60 Hz. The output were loaded to the rated value. The voltage at each secondary winding was recorded. If the voltage exceeded 42.4 Vpk or 60 V dc, the measurement were taken again after the next component in series with the secondary until the voltage measured was less 42.4 Vpk or 60 Vdc.</i></p>					
Model	Transformer Designation	Location	Maximum Voltage (Vpk/dc)	Voltage Limiting Component	
GT-81082-0506.5-1.5-USB-W2E	T1	Pin A to Pin B	25,2Vpk / 9,8Vrms	SELV	

Comment: All secondary voltages are within SELV limits.

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

2.5	TABLE: Limited power source			P
<i>The maximum available output power was measured at nominal condition and with single fault conditions. The unit was connected to main nominal input voltage (240 Vac)</i>				
Location of measurement	Condition	Voltage (V)	Test Current in A	Calculated power (VA)
USB output	Nominal load	5,2	1,0	5,2
USB output	Max Load	5,29	1,665	8,8
USB output	Single fault: Secondary current shunt shorted (U2 sec)	0 (unit shut down immediately)	0	0
USB output	Single fault: Primary current shunt shorted (U2 prim)	0 (unit shut down immediately)	0	0
Comments:				

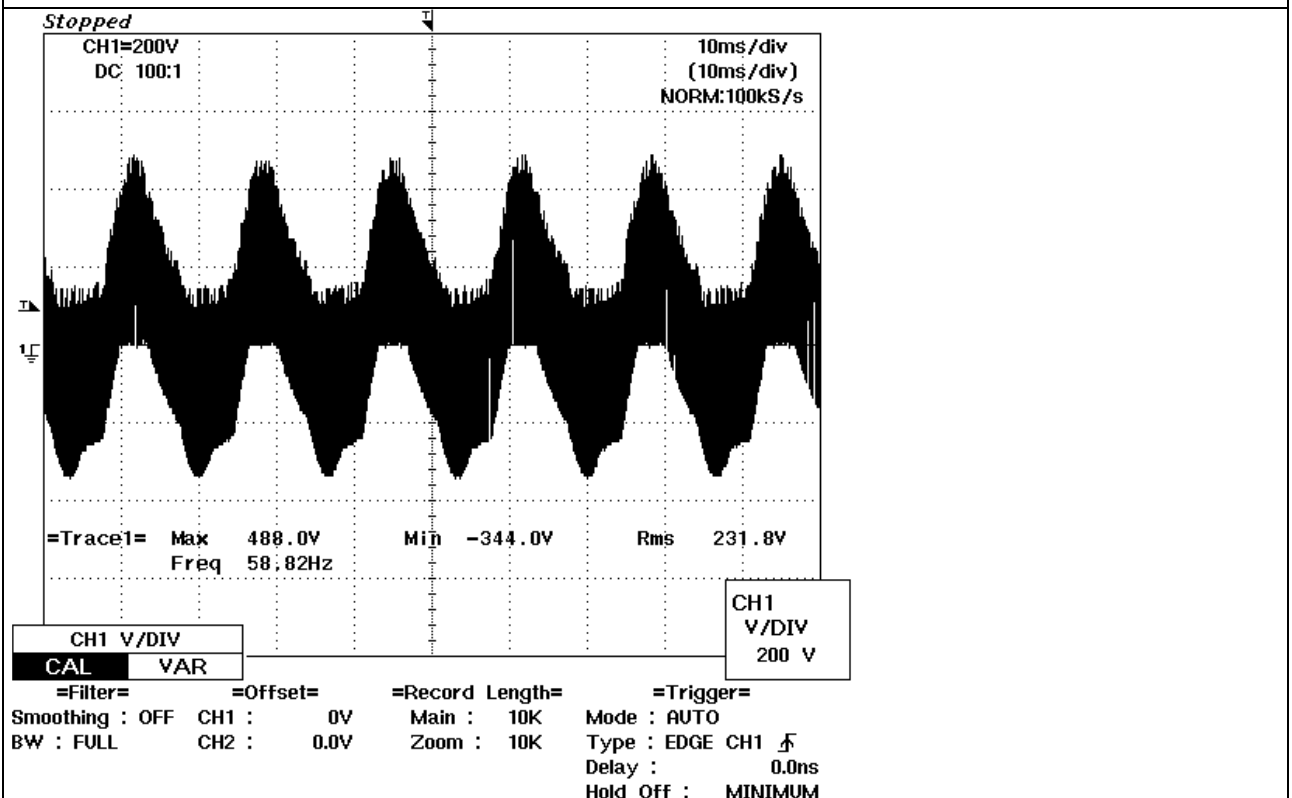
2.9.1, 2.9.2, 5.2.2	TABLE: Humidity test Model: GT-81082-0506.5-1.5-USB-W2E			P
<p>A humidity chamber was maintained within 1°C of temperature "t" at a temperature of 25,0°C. The unit and any other separate components were brought to a temperature between t and t + 4°C They were then placed in the chamber and held at a relative humidity of 93% for a period of 48 hours. Prior to conditioning, parts of the unit (covers) which could be removed without the use of tools were removed and separately placed in the chamber. During conditioning, cable entrances and/or a conduit openings were left open. During this treatment, the unit was not energized.</p> <p>While still in the humidity chamber, but after all parts have been placed back on the unit, a dielectric potential was applied and maintained for a period of one minute between the points indicated below. During this test, all switching devices (switches, relays, triacs, etc.) in the primary circuit were closed.</p>				
Location	Insulation type	Potential used		
Primary to Secondary	reinforced	3000Vac		
Primary to Enclosure	reinforced	3000Vac		
<p>Comment: There was no breakdown.</p>				

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

2.10.2	Table: working voltage measurement	P
--------	------------------------------------	---

Location	RMS voltage	Peak voltage	Comments
T1 transformer			
Pin 1 to Pin A	223,9	488	
Pin 1 to Pin B	231,8	488	Maximum
Pin 2 to Pin A	178,8	352	
Pin 2 to Pin B	178.2	344	
Pin 3 to Pin A	180,2	368	
Pin 3 to Pin B	178,6	355	

Input voltage: 240Vac; 60Hz
 Test Condition was : rated load
 Minus of the output and Neutral were connected together.



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Clause	Requirement + Test	Result - Remark	Verdict

2.10.3 and 2.10.4	TABLE: clearance and creepage distance measurements					P
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)
Between poles before the fuse (functional)	340	240	1,5	4,0	2,5	4,0
Across poles of the fuse (functional)	340	240	1,5	3,1	2,5	3,1
Primary to Primary after the fuse(functional)	340	240	Method C was used			
Primary component core TI (with 10N) to secondary components (with 10N) (Reinforced)	488	231	4,2	>10*	5,0	>10*
Primary to Secondary (Reinforced) transformer (PCB)	488	231	4,2	9,0	5,0	9,0
Primary to Secondary on PCB (reinforced) optocoupler	340	240	4,0	6,0	5,0	6,0
Primary to Enclosure (Reinforced)	340	240	4,0	**	5,0	**

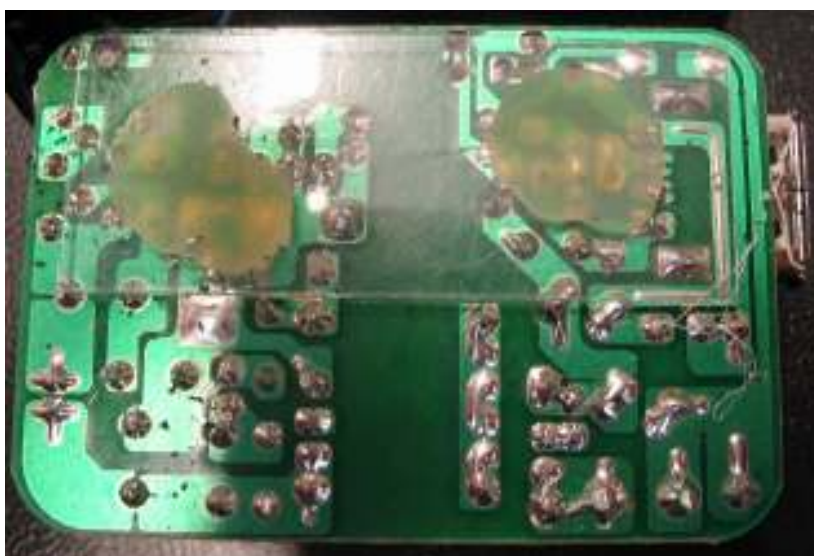
Comment: *insulation in transformer is achieved by use of triple insulated wire on secondary side, core is considered as primary, distance from core to secondary components is >10mm

**Enclosure has thickness of 2,0 mm which is adequate for reinforced insulation

Notes:

Glued components-safety relevant: D4, R9. R10, C3, C8

Layout



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

2.10.3, 4.2.2, 4.2.3, 4.2.4	TABLE: Steady force test (internal spacings push test)		P
<p>Components and parts, other than parts serving as an enclosure, are subjected to a steady force of $10\text{ N} \pm 1\text{ N}$.</p> <p>Parts of an enclosure located in Operator Access Area, which are protected by a cover or door, are subjected to a steady force of $30\text{ N} \pm 3\text{ N}$ for a period of 5 s, applied by means of a straight unjointed version of the test finger, to the part on or within the equipment.</p> <p>External enclosures are subjected to a steady force of $250\text{ N} \pm 10\text{ N}$ for a period of 5 s, applied in turn to the top, bottom and sides of the enclosure fitted to the equipment, by means of a suitable test tool providing contact over a circular plane surface 30 mm in diameter. However, this test is not applied to the bottom of an enclosure of equipment having a mass of more than 18 kg.</p>			
Part	Thickness	Force	Observation
Components	--	10N	for glued components see 2.10.3 and 2.10.4
Outer Enclosure	2,0	250 N	No damage
Comments:			

2.10.5	TABLE: distance through insulation measurements			P
distance through insulation di at/of:	Up (V)	test voltage (V)	required di (mm)	di (mm)
Enclosure	340	3000 ac	0,4	2,0
Photo-coupler (reinforced insulation)	340	3000 ac	0,4	1)
Mylar sheet (reinforced insulation)	340	3000 ac	0,4	0,4
Note(s):				
1) refer to Cl.: 1.5.1				

IEC/EN 60950-1									
Clause	Requirement + Test							Result - Remark	Verdict
4.3.8	TABLE: Batteries								N/A
The tests of 4.3.8 are applicable only when appropriate battery data is not available									
Is it possible to install the battery in a reverse polarity position?									
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. Current	Manuf. Specs.		Meas. Current	Manuf. Specs.	Meas. Current	Manuf. Specs.	Meas. Current	Manuf. Specs.
Max. current during normal condition									
Max. current during fault condition									
Test results:								Verdict	
- Chemical leaks									
- Explosion of the battery									
- Emission of flame or expulsion of molten metal									
- Electric strength tests of equipment after completion of tests									
Supplementary information: There is no battery in the unit.									

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: maximum temperatures: vertical position					P
	test voltage (V)	90V	254,4	90V	254,4	—
	Frequency (Hz)	60	50	60	50	—
	t _{amb1} (°C)	--	--	--	--	—
	t _{amb2} (°C)	25,2	25,2	40,0	40,0	—
	maximum temperature T of part/at::	T (°C)				allowed T _{max} (°C)
	Transistor U1, PCB	70,3	65,9	85,1	80,7	130
	Diode D1, PCB	60,8	54,4	75,6	69,2	130
	Transformer T1winding	66,7	67,4	81,5	82,2	110
	Transformer T1 core	61,8	63,0	76,6	77,8	110
	Optocoupler U2	67,2	66,5	82,0	81,3	100
	Secondary diode D4. PCB	71,7	72,4	86,5	87,2	130
	Electrolytic Capacitor C4	58,0	53,6	72,8	68,4	105
	Mylar sheet	57,4	56,7	72,2	71,5	150
	Enclosure outside maximum	48,2	47,1	63,0	61,9	95
	Output voltage (Vdc)	5,24	5,25	5,24	5,25	
	Output Current (Adc)	1,0	1,0	1,0	1,0	

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: maximum temperatures: horizontal position					P
	test voltage (V)	90V	264	90V	264	—
	Frequency (Hz)	60	50	60	50	—
	t _{amb1} (°C)	--	--	--	--	—
	t _{amb2} (°C)	26,6	26,2	40,0	40,0	—
	maximum temperature T of part/at::	T (°C)				allowed T _{max} (°C)
	Transistor U1, PCB	68,7	66,0	82,1	79,8	130
	Diode D1, PCB	60,2	53,0	73,6	66,8	130
	Transformer T1winding	66,7	66,9	80,1	80,7	110
	Transformer T1 core	63,9	64,6	77,3	78,4	110
	Optocoupler U2	73,4	72,6	86,8	86,4	100
	Secondary diode D4. PCB	75,2	75,8	88,6	89,6	130
	Electrolytic Capacitor C4	53,4	50,4	66,8	64,2	105
	Mylar sheet	61,6	60,1	75,0	73,9	150
	Enclosure outside maximum	51,2	49,6	64,6	63,2	95
	Output voltage (Vdc)	5,25	5,26	5,25	5,26	
	Output Current (Adc)	1,0	1,0	1,0	1,0	

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 above.

With a rated maximum ambient temperature of 40 °C, the maximum temperature rises are calculated as follows:

- Transformer T1: Class B → T_{max} = 120°C - 10°C = 110°C (thermocouple method)
- Electrolytic Capacitor 105 °C
- PCB 130 °C
- Primary lead wire 80 °C
- Enclosure (inside) 80 °C
- Opto-coupler 100 °C
- Mylar sheet 150°C
- Operator touchable surface with maximum temperature rise of 95°C.

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

4.5.5	TABLE: ball pressure test of thermoplastic parts		P
	allowed impression diameter (mm)	≤ 2 mm	—
Part		test temperature (°C)	impression diameter (mm)
Enclosure material GE Plastics SE1X. SE100X		125	1,0
Comment: The impression diameter caused by the ball did not exceed 2 mm.			
Note(s): The bobbin material of T1 is phenolic, no test is required.			

4.7	TABLE: resistance to fire			P
part	manufacturer of material	type of material	thickness (mm)	flammability class
Comment: Approved materials are used. See list of safety critical components.				

5.1	TABLE: Touch current and protective conductor current			P
Parts tested	Input	Measured voltage (U ₂)	Calculated current (mA)	Comments/Verdict
L/N to enclosure with metal foil	254,4 Vac / 60 Hz	--	0,01	P
L/N to +/- output	254,4 Vac / 60 Hz	--	0,01	P
Comments: The measured touch current did not exceed 0,25 mA.				

5.2	TABLE: electric strength tests, impulse tests and voltage surge tests		P
test voltage applied between:		test voltage (V) a.c. / d.c.	breakdown Yes / No
Primary to Secondary (reinforced)		3000Vac	No
Primary to Enclosure (reinforced)		3000Vac	No
Supplementary information: for measurement to enclosure aluminium foil was wrapped around enclosure			

IEC/EN 60950-1							
Clause	Requirement + Test				Result - Remark		Verdict
5.3	TABLE: fault condition tests					P	
	ambient temperature (°C)				25,0°C		—
	model/type of power supply				GT-81082-0506.5-1.5-USB-W2E		—
	manufacturer of power supply				Globtek		—
	rated markings of power supply				+ 5,0 Vdc / 1A		—
component No.	fault	test voltage (V)	test time	fuse No.	fuse current (A)	result	
SELV reliability Testing							
Output Diode D4	Short	254.4	>10min	F1	0.03	Unit cycle protection immediately, no hazards.	
C3	Short	254.4	>10min	F1	0,03	Unit protection immediately, no hazards.	
Primary circuit of U2	Short	254.4	>10min	F1	0,03	Unit protection immediately, no hazards.	
Primary circuit of U2	Open	254.4	>10min	F1	0.04	Unit cycle protection immediately, no hazards.	
Secondary circuit of U2	Short	254.4	>10min	F1	0.03	Unit cycle protection immediately, no hazards.	
Secondary circuit of U2	Open	254.4	>10min	F1	0.04	Unit cycle protection immediately, no hazards.	
Method C – functional insulation (clause 5.3.4)							
Rectifier diode D1 AC to plus	short	254.4	1s	F1	> 8	F1 opened immediately, no hazards.	
Capacitor C5	short	254.4	1s	F1	> 8	F1 opened immediately, no hazards.	
Capacitor C1	short	254.4	>10min	F1	0.03	Unit cycle protection immediately, no hazards.	
Diode D3	short	254.4	>10min	F1	0.03	Unit cycle protection immediately, no hazards.	
Additional Component faults							
Pin D-S of U1	short	254.4	1s	F1	> 8	F1 opened immediately, no hazards.	
Pin DN-UV of U1	short	254.4	1s	F1	> 8	F1 opened immediately, no hazards.	

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

component No.	fault	test voltage (V)	test time	fuse No.	fuse current (A)	result
Annex C Transformer overload / short (clause 5.3.3)						
Secondary winding of T1	Short	254.4	>10min	F1	0.04	Unit cycle protection immediately, no hazards.
Misuse						
Output	Short	254.4	>10min	F1	0,03	Unit cycle protection immediately, no hazard
Output	Overload	254.4	60min	F1	0,118	Overload with 5,42V@1,52A transformer winding 90°C at 26°C ambient, no hazards.
Output	Overload	90	60min	F1	0,173	Overload with 5,32V@1,17A transformer winding 88°C at 26°C ambient. no hazards.
Supplementary information						
<p><i>There was no flame, extensive smoke or melted metal.</i></p> <p><i>Dielectric testing was performed after abnormal testing.</i></p>						

Enclosure No. 1

National differences to IEC60950-1:2005

(Total 11 Pages including this Cover Page)

IEC 60950-1:2005			
Clause	Difference – Test	Result – Remark	Verdict
KOREA- Differences to IEC 60950-1, Second Edition (2005)			
1.5.101	Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305).	Refer to Enclosure No.:2	P
8: EMC	The apparatus shall comply with the relevant CISPR standards	End product consideration.	N/A

IEC 60950-1 / EN 60950-1			
Clause	Difference – Test	Result – Remark	Verdict
AUSTRALIA-Differences to IEC 60950-1:2001 (national differences for IEC 60950-1:2005 do not exist)			
Annex ZZ (normative) Variations to IEC 60950-1:2001 for application in Australia and New Zealand			
ZZ.1 Introduction			
This Annex sets out variations between this Standard and IEC 60950-1:2001. These variations indicate national variations for purposes of the IECEE CB Scheme and will be published in the IECEE CB Bulletin. These variations are indicated within the body of the Standard.			
ZZ.” Variations			
The variations are as follows :			
1.2	Between the definitions for ‘Person, service’ and ‘Range, rated frequency’ insert the following: Ignition source 1.2.12.201	Considered.	P
1.2.12.15	After the definition of 1.2.12.15, add the following: 1.2.12.201 potential ignition source: Possible fault which can start a fire if the open-circuit voltage measured across an interruption or faulty contact exceeds a value of 50 V (peak) a.c. or d.c. and the product of the peak value of this voltage and the measured r.m.s current under normal operating conditions exceeds 15 VA. Such a faulty contact or interruption in an electrical connection includes those which may occur in conductive patterns on printed boards. NOTE 201 An electronic protection circuit may be used to prevent such a fault from becoming a POTENTIAL IGNITION SOURCE. NOTE 202 This definition is from AS/NZS 60065:2003.	See abnormal testing.	P
1.5.1	Add the following to the end of first paragraph: ‘or the relevant Australian/New Zealand Standard’.		P
1.5.2	Add the following to the end of first and third dash items: ‘or the relevant Australian/New Zealand Standard’.	Refer to Enclosure No.:2	P
2.1	Delete the Note.	Deleted	P
3.2.3	Delete Note 2.	Not permanently connected equipment.	N/A

IEC 60950-1 / EN 60950-1					
Clause	Difference – Test		Result – Remark	Verdict	
3.2.5.1	Modify Table 3B as follows: Delete the first four rows and replace with		No cord provided.	N/A	
	RATED CURRENT OF EQUIPMENT A	Minimum conductor sizes			
		Nominal cross-sectional area mm ²			AWG or Kcmil (cross-sectional area in mm ²)
		See note 1			
	Over 0.2 up to and including 3	0,5 ¹⁾			18 (0,8)
Over 3 up to and including 7,5	0,75	16 (1,3)			
Over 7,5 up to and including 10	(0,75) ²⁾	1,00	16 (1,3)		
Over 10 up to and including 16	(1,0) ³⁾	1,5	14 (2)		
	Replace footnote 1) with the following: 1) This nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord, or cord guard, enters the appliance, and the entry to the plug does not exceed 2 m (0,5 mm ² three-core supply flexible cords are not permitted; see AS/NZS 3191). Delete Note 1.			N/A	
4.3.13.5	Add the following to the end of the first paragraph: ' or AS/NZS 2211.1'.			P	
4.7	Add the following paragraph: For alternative tests refer to Clause 4.7.201.			P	
4.7.201	Add the following after Clause 4.7.3.6. 4.7.201 Resistance to fire – Alternative tests 4.7.201.1 General Parts of non-metallic material shall be resistant to ignition and spread of fire. This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames originating from inside the apparatus, or the following: Components that are contained in an enclosure having a flammability category of FV-0 according to AS/NZS 4695.707 and having openings only for the connecting wires filling the openings completely, and for ventilation not exceeding 1 mm in width regardless of length. The following parts which would contribute negligible fuel to a fire: small mechanical parts, the mass of which does not exceed 4 g, such as mounting parts, gears, cams, belts and bearings; small electrical components, such as capacitors with a volume not exceeding 1 750 mm ³ , integrated circuits, transistors and optocoupler packages, if these components are mounted on material of flammability category FV-1, or better, according to AS/NZS 4695.707. NOTE In considering how to minimize propagation of fire and what 'small parts' are,		The flame rating of the components was evaluated to the requirements of IEC. - The PCB board is specified min. V-1. - Enclosure flame rating is specified min. V-1. - Bobbin flame rating is specified min. V-0. Therefore no needle test was considered as required.	P	

IEC 60950-1 / EN 60950-1				
Clause	Difference – Test		Result – Remark	Verdict
	<p>account should be taken of the cumulative effect of small parts adjacent to each other for the possible effect of propagating fire from one part to another.</p> <p>Compliance shall be checked by the tests of 4.7.201.2, 4.7.201.3, 4.7.201.4 and 4.7.201.5.</p> <p>For the base material of printed boards, compliance shall be checked by the test of 4.7.201.5.</p> <p>The tests shall be carried out on parts of non-metallic material which have been removed from the apparatus. When the glow wire test is carried out, the parts shall be placed in the same orientation as they would be in normal use.</p> <p>These tests are not carried out on internal wiring.</p> <p>4.7.201.2 Testing of non-metallic materials Parts of non-metallic material shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 550°C.</p> <p>Parts for which the glow-wire test cannot be carried out, such as those made of soft or foamy material, shall meet the requirements specified in ISO 9772 for category FH-3 material. The glow-wire test shall be not carried out on parts of material classified at least FH-3 according to ISO 9772 provided that the sample tested was not thicker than the relevant part.</p> <p>4.7.201.3 Testing of insulating materials Parts of insulating material supporting POTENTIAL IGNITION SOURCES shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 750°C.</p>			
	<p>The test shall be also carried out on other parts of insulating material which are within a distance of 3mm of the connection.</p> <p>NOTE Contacts in components such as switch contacts are considered to be connections.</p> <p>For parts which withstand the glow-wire test but produce a flame, other parts above the connection within the envelope of a vertical cylinder having a diameter of 20 mm and a height of 50 mm shall be subjected to the needle-flame test. However, parts shielded by a barrier which meets the needle-flame test shall not be tested.</p> <p>The needle-flame test shall be made in accordance with AS/NZS 4695.2.2 with the following modifications:</p>			N/A
	Clause of AS/NZS 4695.2.2	Change		N/A
	5 Severities	Replace with: The duration of application of the test flame shall be 30 s ±1 s.		
	8 Test procedure			

IEC 60950-1 / EN 60950-1			
Clause	Difference – Test	Result – Remark	Verdict
	<p>8.2 Replace the first sentence with: The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1.</p> <p>8.4 The first paragraph does not apply. Addition: If possible, the flame shall be applied at least 10 mm from a corner.</p> <p>8.5 Replace with: The test shall be made on one specimen. If the specimen does not</p> <p>10 Evaluation of test results Replace with: The duration of burning (tb) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.</p>		
	<p>The needle-flame test shall not be carried out on parts of material classified as V-0 or V-1 according to IEC 60695-11-10, provided that the sample tested was not thicker than the relevant part.</p> <p>4.7.201.4 Testing in the event of non-extinguishing material If parts, other than enclosures, do not withstand the glow wire tests of 4.7.201.3, by failure to extinguish within 30 s after the removal of the glow-wire tip, the needle-flame test detailed in 4.7.201.3 shall be made on all parts of non-metallic material which are within a distance of 50 mm or which are likely to be impinged upon by flame during the tests of 4.7.201.3. Parts shielded by a separate barrier which meets the needle-flame test need not be tested.</p> <p>NOTE 1 - If the enclosure does not withstand the glow-wire test the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing.</p> <p>NOTE 2 - If other parts do not withstand the glow-wire test due to ignition of the tissue paper and if this indicates that burning or glowing particles can fall onto an external surface underneath the equipment, the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing.</p> <p>NOTE 3 - Parts likely to be impinged upon by the flame are considered to be those within the envelope of a vertical cylinder having a radius of 10 mm and a height equal to the height of the flame, positioned above the point of the material supporting, in contact with, or in close proximity to, connections.</p> <p>4.7.201.5 Testing of printed boards The base material of printed boards shall be subjected to the needle-flame test of Clause 4.7.201.3. The flame shall be applied to the edge of the board where the heat sink effect is lowest when the board is positioned as in normal use.</p>		N/A

IEC 60950-1 / EN 60950-1			
Clause	Difference – Test	Result – Remark	Verdict
	<p>The flame shall not be applied to an edge, consisting of broken perforations, unless the edge is less than 3 mm from a POTENTIAL IGNITION SOURCE.</p> <p>The test is not carried out if the — Printed board does not carry any POTENTIAL IGNITION SOURCE; Base material of printed boards, on which the available apparent power at a connection exceeds 15 VA operating at a voltage exceeding 50 V and equal or less than 400 V (peak) a.c. or d.c. under normal operating conditions, is of flammability category FV-1 or better according to AS/NZS 4695.707, or the printed boards are protected by an enclosure meeting the flammability category FV-0 according to AS/NZS 4695.707, or made of metal, having openings only for connecting wires which fill the openings completely; or Base material of printed boards, on which the available apparatus power at a connection exceeds 15 VA operating at a voltage exceeding 400 V (peak) a.c. or d.c. under normal operating conditions, and base material of printed boards supporting spark gaps which provides protection against overvoltages, is of flammability category FV-0 according to AS/NZS 4695.707 or the printed boards are contained in a metal enclosure, having openings only for connecting wires which fill the openings completely. Compliance shall be determined using the smallest thickness of the material.</p> <p>NOTE – Available apparent power is the maximum apparent power which can be drawn from the supplying circuit through a resistive load whose value is chosen to maximise the apparent power for more than 2 min when the circuit supplied is disconnected.</p>		
6.2.2	<p>Add the symbol NZ in the right hand margin beside the first paragraph.</p> <p>Add the following after the first paragraph: In Australia (this variation does not apply in New Zealand), compliance with 6.2.2 shall be checked by the tests of both 6.2.2.1 and 6.2.2.2. Delete the note.</p>	No TNV	N/A

IEC 60950-1 / EN 60950-1			
Clause	Difference – Test	Result – Remark	Verdict
6.2.2.1	<p>Add the symbol NZ in the right hand margin beside the first paragraph including Note 1. Delete Note 2</p> <p>Add the following after the first paragraph: In Australia (this variation does not apply in New Zealand), the electrical separation is subjected to 10 impulses of alternating polarity, using the impulse test generator of annex N for 10/700µs impulses. The interval between successive impulses is 60 s and the initial voltage, U_c, is: for 6.2.1 a):7.0 kV for hand-held telephones and for headsets and 2.5 kV for other equipment; and for 6.2.1 b) and 6.2.1 c):1.5 kV. NOTE 201 – The 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines. NOTE 202 – The value of 2.5 kV for 6.2.1 a) was chosen to ensure the adequacy of the insulation concerned and does not necessarily simulate likely overvoltages.</p>	No TNV	N/A
6.2.2.2	<p>Add the symbol NZ in the right hand margin beside the second paragraph. Delete the Note.</p> <p>Add the following after the second paragraph: In Australia (this variation does not apply in New Zealand), the a.c. test voltage is: for 6.2.1 a):3 kV; and for 6.2.1 b) and 6.2.1 c):1.5 kV. NOTE 201 – Where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used. NOTE 202 – The 3 kV and 1.5 kV values have been determined considering the low frequency induced voltages from the power supply distribution system.</p>	No TNV	N/A
Annex P	<p>Add the following Normative References to Annex P: IEC 60065, Audio, Video and similar electronic apparatus—Safety requirements AS/NZS 3191, Approval and test specification—Electric flexible cords AS/NZS 3112, Approval and test specification—Plugs and socket-outlets AS/NZS 4695.707, Fire hazard testing of electrotechnical products—Methods of test for the determination of the flammability of solid electrical insulating materials when exposed to an igniting source</p>	Considered. IEC/UL approved material and components are used.	P
Index	<p>Between the entries for 'polyimide insulating material' and 'powder' insert the following: potential ignition source 1.12.201, 4.7.201.3, 4.7.201.5</p>		P

IEC 60950-1 / EN 60950-1			
Clause	Difference – Test	Result – Remark	Verdict
JAPAN- Differences to IEC 60950, Third Edition (1999) (National differences to IEC 60950-1:2005 do not exist)			
1.2	Addition: Add the following terms. Equipment, Class 0I 1.2.4.101 Material, VTM 1.2.12.101	Considered.	P
1.2.4.101	Addition: CLASS 0I EQUIPMENT: Equipment where protection against electric shock is achieved by: a) using BASIC INSULATION, and b) providing a means of connecting to the protective earthing conductor in the building wiring those conductive parts that are otherwise capable of assuming HAZARDOUS VOLTAGES if the BASIC INSULATION fails, and c) using a supply cord without earthing conductor and a plug without earthing wire although the equipment has externally an earth terminal or a lead wire for earthing. Equipment provided with a cord set having a two-pin type plug with a lead wire for earthing is also regarded as Class 0I. NOTE – Class 0I equipment may have a part constructed with Double Insulation or Reinforced Insulation as well as an operating part as SELV circuit.	Equipment is rated class II.	N/A
1.2.12.1	Replacement: FLAMMABILITY CLASSIFICATION OF MATERIALS: The recognition of the burning behaviour of materials and their ability to extinguish if ignited. Materials are classified as in 1.2.12.2 to 1.2.12.9, and 1.2.12.101 when tested in accordance with annex A. NOTE 1 - When applying the requirements in this standard, HF-1 CLASS FOAMED MATERIALS are regarded as better than those of CLASS HF-2, and HF-2 better than HBF. NOTE 2 - Similarly, other MATERIALS, including rigid (engineering structural) foam of CLASSES 5V or V-0 are regarded as better than those of CLASS V-1, V-1 better than V-2, and V-2 better than HB. NOTE 3 - Similarly, for thin MATERIALS, VTM-0 Class materials are regarded as better than those of VTM-1 Class , and VTM-1 better than VTM-2.	IEC/UL approved materials are used.	N/A

IEC 60950-1 / EN 60950-1			
Clause	Difference – Test	Result – Remark	Verdict
1.2.12.10 1	Addition: VTM CLASS MATERIAL: Thin MATERIALS fulfill the specified conditions during the test of clause A.101 applied for materials that the test and evaluation of clauses A.6 to A.10 is difficult to enforce. Materials are classified to three classifications as VTM-0, VTM-1 and VTM-2 according to the conditions after the removal of the test flame.	IEC/UL approved materials are used.	N/A
1.7.101	Addition: Marking for CLASS 0I EQUIPMENT For CLASS 0I EQUIPMENT, the following instruction shall be indicated on the visible place of the mains plug or the main body: “Provide an earthing connection” Moreover, for CLASS 0I EQUIPMENT, the following instruction shall be indicated on the visible place of the main body or written in the operating instructions: “Provide an earthing connection before the mains plug is connected to the mains. And, when disconnecting the earthing connection, be sure to disconnect after pulling out the mains plug from the mains.”		N/A
2.1.1.1	Replacement: Replace “IEC 60083” to “IEC 60083 or JIS C 8303” in 2.1.1.1 b).	Considered.	P
2.6.3.1	Addition: Add the following after 1st paragraph. This also applies to the conductor of lead wire for protective earthing of CLASS 0I EQUIPMENT.		N/A
2.6.4.1	Replacement: Replace 2nd sentence in 1st paragraph. For CLASS I EQUIPMENT with a DETACHABLE POWER SUPPLY CORD, the earthing terminal in the appliance inlet is regarded as the main protective earthing terminal.		N/A
2.6.5.4	Replacement: Replace 1st sentence. Protective earthing connections of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the following:		N/A
2.6.101	Addition: Earthing of CLASS 0I EQUIPMENT Plugs with a lead wire for earthing shall not be used for equipment having a rated voltage exceeding 150V. For plugs with a lead wire for earthing, the lead wire shall not be earthed by a clip. CLASS 0I EQUIPMENT shall be provided with an earthing terminal or lead wire for earthing in the external where easily visible.		N/A
3.2.5	Delete 1) in Table 3B.		N/A

IEC 60950-1 / EN 60950-1																											
Clause	Difference – Test	Result – Remark	Verdict																								
4.2.8	<p>Addition: Add the following informative remark after the last sentence. Remark - IEC 61965 is also applicable instead of IEC 60065.</p>		N/A																								
4.5.1	<p>Addition: Add the following to suffix 5) as specified in “Conditions applicable to Table 4A, Parts 1 and 2”. With regard to Table 4A, insulating materials complying with Japanese requirements (refer to Japanese differences for the current IEC 60335-1 (3rd Edition) in CB Bulletin 101B) are also acceptable. Add a suffix 7) in “Conditions applicable to Table 4A, Parts 1 and 2”. In the right column of Table 4A, Part 1, add suffix 7) to “50” (K), corresponding to “- without T – marking” in the left column so as to become “50 7)”. Add 7) to Table 4A, Part 2 as follows. 7) This value shall apply only to wiring or cords complying with relevant IEC standards. Others shall comply with Japanese requirements (refer to Japanese differences for the current IEC 60335-1 (3rd Edition) in CB Bulletin 101B).</p>	Added	P																								
4.7.3.2	<p>Addition: Add the following in 7th paragraph. - for thin materials, e.g., flexible printed boards, etc., used inside equipment, be of FLAMMABILITY CLASS VTM-2 or better.</p>	Added	N/A																								
5.1.6	<p>Replacement: Replace Table 5A.</p> <table border="1" data-bbox="386 1352 831 1626"> <thead> <tr> <th>Type of equipment</th> <th>Tabular A of measuring instrument connected to accessible parts and circuits not connected to protective earth</th> <th>Maximum TOUCH CURRENT mA rms</th> <th>Maximum PROTECTIVE CONDUCTOR CURRENT</th> </tr> </thead> <tbody> <tr> <td>ALL equipment</td> <td></td> <td>0.25</td> <td>—</td> </tr> <tr> <td>TABLET (FIXED) MOUNTABLE (other than HAND-HELD) and PROTECTIVE EQUIPMENT (of any CLASS I EQUIPMENT)</td> <td>Equipment main protective earthing terminal</td> <td>0.25 3.0</td> <td>—</td> </tr> <tr> <td>PROTECTIVE EQUIPMENT (of any CLASS I EQUIPMENT)</td> <td>Equipment main protective earthing terminal (if any)</td> <td>0.25</td> <td>—</td> </tr> <tr> <td>— not subject to the conditions of 5.1.7</td> <td></td> <td>—</td> <td>0.5% of input current</td> </tr> <tr> <td>TABLET (FIXED) MOUNTABLE (other than HAND-HELD) and PROTECTIVE EQUIPMENT (of any CLASS I EQUIPMENT)</td> <td>Equipment main protective earthing terminal (if any)</td> <td>0.25 1.0</td> <td>—</td> </tr> </tbody> </table> <p><small>* If peak values of TOUCH CURRENT are measured, the maximum values obtained by multiplying them in all tables by 1.414</small></p>	Type of equipment	Tabular A of measuring instrument connected to accessible parts and circuits not connected to protective earth	Maximum TOUCH CURRENT mA rms	Maximum PROTECTIVE CONDUCTOR CURRENT	ALL equipment		0.25	—	TABLET (FIXED) MOUNTABLE (other than HAND-HELD) and PROTECTIVE EQUIPMENT (of any CLASS I EQUIPMENT)	Equipment main protective earthing terminal	0.25 3.0	—	PROTECTIVE EQUIPMENT (of any CLASS I EQUIPMENT)	Equipment main protective earthing terminal (if any)	0.25	—	— not subject to the conditions of 5.1.7		—	0.5% of input current	TABLET (FIXED) MOUNTABLE (other than HAND-HELD) and PROTECTIVE EQUIPMENT (of any CLASS I EQUIPMENT)	Equipment main protective earthing terminal (if any)	0.25 1.0	—	Considered	P
Type of equipment	Tabular A of measuring instrument connected to accessible parts and circuits not connected to protective earth	Maximum TOUCH CURRENT mA rms	Maximum PROTECTIVE CONDUCTOR CURRENT																								
ALL equipment		0.25	—																								
TABLET (FIXED) MOUNTABLE (other than HAND-HELD) and PROTECTIVE EQUIPMENT (of any CLASS I EQUIPMENT)	Equipment main protective earthing terminal	0.25 3.0	—																								
PROTECTIVE EQUIPMENT (of any CLASS I EQUIPMENT)	Equipment main protective earthing terminal (if any)	0.25	—																								
— not subject to the conditions of 5.1.7		—	0.5% of input current																								
TABLET (FIXED) MOUNTABLE (other than HAND-HELD) and PROTECTIVE EQUIPMENT (of any CLASS I EQUIPMENT)	Equipment main protective earthing terminal (if any)	0.25 1.0	—																								
5.3.8.2	<p>Replacement: Replace 3rd Item as follows. - BASIC INSULATION between the PRIMARY CIRCUIT and accessible conductive parts of CLASS I or 0I EQUIPMENT;</p>	Considered	N/A																								
Annex A	<p>Addition: Add the subclause A.101 with the title “Flammability tests for classifying materials VTM” and the following: Thin sheet materials shall comply with ISO 9773.</p>		N/A																								

IEC 60950-1 / EN 60950-1															
Clause	Difference – Test	Result – Remark	Verdict												
Annex G	<p>Addition:</p> <p>Add the following to the Note for Table G.1.</p> <p>2. In Japan, MAINS TRANSIENT VOLTAGE for equipment with a Nominal AC MAINS SUPPLY VOLTAGE of 100V is to be decided based on the column where Nominal AC MAINS SUPPLY VOLTAGE in Table G.1 is 150V.</p>		N/A												
Annex P	<p>Addition:</p> <p>Add "IEC 61965:2000, Mechanical Safety for Cathode Ray Tubes".</p>		N/A												
Annex U	<p>Replacement:</p> <p>Replace 2nd paragraph.</p> <p>This annex covers to round winding wires having diameters between 0.05 mm and 5.00 mm.</p>	All TIW used are approved.	N/A												
U.2.1	<p>Replacement:</p> <p>Electric strength</p> <p>The test sample is prepared according to IEC 60851-5:1997, 4.4.1 (for a twisted pair). The sample is then subjected to the test of 5.2.2 of this standard, with a test voltage not less than twice the appropriate voltage in table 5B (see 5.2.2) of this standard. However, the minimum values shall be as follows:</p> <ul style="list-style-type: none"> - for BASIC INSULATION or SUPPLEMENTARY INSULATION, 3000 V, or; - for REINFORCED INSULATION, 6000 V. 		N/A												
U.2.2	<p>Replacement:</p> <p>Flexibility and adherence</p> <p>Test 8 of IEC 60851-3:1996, 5.1.1, using the mandrel diameters of table U.1. The test sample is then examined in accordance with IEC 60851-3:1996, 5.1.1.4, followed by the test of 5.2.2 of this standard except applying the test voltage between the wire and the mandrel. A test voltage shall not be less than twice the appropriate voltage in table 5B (see 5.2.2) of this standard. However, the minimum values shall be as follows:</p> <ul style="list-style-type: none"> - for BASIC INSULATION or SUPPLEMENTARY INSULATION, 1500 V, or; - for REINFORCED INSULATION, 3000 V. 		N/A												
Table U.1	<p>Replacement:</p> <p>Mandrel diameter</p> <table border="1" data-bbox="389 1630 852 1731"> <thead> <tr> <th>Nominal Conductor diameter mm</th> <th>Mandrel diameter mm ± 0.2 mm</th> </tr> </thead> <tbody> <tr> <td>0.50 – 0.38</td> <td>4.0</td> </tr> <tr> <td>0.36 – 0.40</td> <td>6.0</td> </tr> <tr> <td>0.50 – 0.74</td> <td>8.0</td> </tr> <tr> <td>0.75 – 2.40</td> <td>10.0</td> </tr> <tr> <td>2.50 – 5.00</td> <td>4 times of the diameter of conductor¹⁾</td> </tr> </tbody> </table> <p>¹⁾ in compliance with IEC 60317-43</p> <p>The tension to be applied to the wire during winding on the mandrel is calculated from the wire diameter to be equivalent to 118 Mpa ± 10 % (118 N/mm² ± 10 %).</p>	Nominal Conductor diameter mm	Mandrel diameter mm ± 0.2 mm	0.50 – 0.38	4.0	0.36 – 0.40	6.0	0.50 – 0.74	8.0	0.75 – 2.40	10.0	2.50 – 5.00	4 times of the diameter of conductor ¹⁾		N/A
Nominal Conductor diameter mm	Mandrel diameter mm ± 0.2 mm														
0.50 – 0.38	4.0														
0.36 – 0.40	6.0														
0.50 – 0.74	8.0														
0.75 – 2.40	10.0														
2.50 – 5.00	4 times of the diameter of conductor ¹⁾														

Enclosure No. 2

Additional tests on plug portion

(Total 10 Pages including this Cover Page)

AS/NZS 3112:2004+A1: 2006 (partial)			
Clause	Requirement – Test	Result – Remark	Verdict

2.2.4	Table: Dimension of plugs					P
Dimension (mm)	≤10A	measured 10A	15A	20A	Tolerance	
A	6,35	6,2	6,35	9,08	±0,15	
B	6,35	--	9,08	9,08	±0,15	
C*	1,63	1,60	1,63	1,63	+0,15 -0,05	
D	7,92	7,92	7,92	7,92	--	
E	10,31	--	10,31	10,31	--	
F	17,06	17,0	17,06	17,06	±0,4	
G	19,94	--	19,94	19,94	±0,8	
N	--	--	--	3,18	--	
P	4,75	--	--	--	±0,05	
R	0,35	0,4	0,35	0,35	±0,05	
S	0,90	1,0	0,90	0,90	+0,10	
T	>0,60	>0,6	>0,60	>0,60	--	
V	6	--	6/11+	11	--	

Dimension (mm)	10A	measured	Tolerance
H	6,35	6,2	±0,15
L*	1,63	1,60	±0,15
J	6,35	--	--
K	17,06	--	±0,4
M	12,70	--	--

*Dimension C and L apply to all pins

+All pins rated 15A = 6mm; Earth pins of 15A plug: 11mm

2.8.1	Table: Projection from plug face centered			P
		Measured (mm)	Allowed (mm)	P
	Left	18,0	$\leq 21,9$ or $\geq 27,0$	P
	Right	18,0	$\leq 21,9$ or $\geq 27,0$	P
	Up	12,5	$\leq 21,9$ or $\geq 27,0$	P
	Down	12,5	$\leq 21,9$ or $\geq 27,0$	P

EN 50075 (partial)				
Clause	Requirement - Test		Result - Remark	Verdict
European plug dimension check according to EN 50075				
7	Dimensions			P
	Plug shall comply with Standard Sheet 1			P
	Between two pins (pin base)	18.0-19.2 mm	18.4 mm	P
	Between two pins (pin top)	17.0-18.0 mm	17.5 mm	P
	Diameter of pin (metallic part)	4 ^{+0.06} mm	3,98 mm	P
	Diameter of pin (pin base)	max. 4.0 mm	3.84 mm	P
	Diameter of pin (middle part)	max. 3.8 mm	3.46 mm	P
	Pin length	19 ^{+0.5} mm	19.12 mm	P
	Length of pin except metal part	10 ^{+1.0} mm	10.34 mm	P
	Shape of pin top		Round shape	P
	Length of plug base	35.3 ^{+0.7} mm	35.28 mm	P
	Width of plug base	13.7 ^{+0.7} mm	14,2 mm	P
	Diagonal dimension of plug base within a distance of 18mm	<26.1 ^{+0.5} mm	26.2 mm	P
		<26.1 ^{+0.5} mm	26.1 mm	

Note: Only the dimensions of Euro-plug have been measured and recorded since it is a certified plug (see table 1.5.1).

IEC 60906-2 (Partial)			
Clause	Requirement □ Test	Result - Remark	Verdict

The Japanese plug dimensions according to IEC 60906-2

Standard Sheet 3: 15A, 125Vac. Two pole plug (reversible)			P
Disposition of pins			P
Between two pins	$12,7^{+/-0,13}$ mm	12,73 mm	P
Shape of pins			P
Length	15,58-18,24 mm	16,0 mm	P
Width	6,10-6,60 mm	6,24 mm	P
Thickness	$1,52^{+/-0,13}$ mm	1,48 mm	P
Optional hole in pin			N/A
Diameter	$3,2^{+/-0,2}$ mm	3,22 mm	N/A
Height of pole	$11,8^{+/-0,4}$ mm	12,16 mm	N/A
Diameter of chamfer	$4^{+/-0,2}$ mm	3,90 mm	N/A

Additional Tests

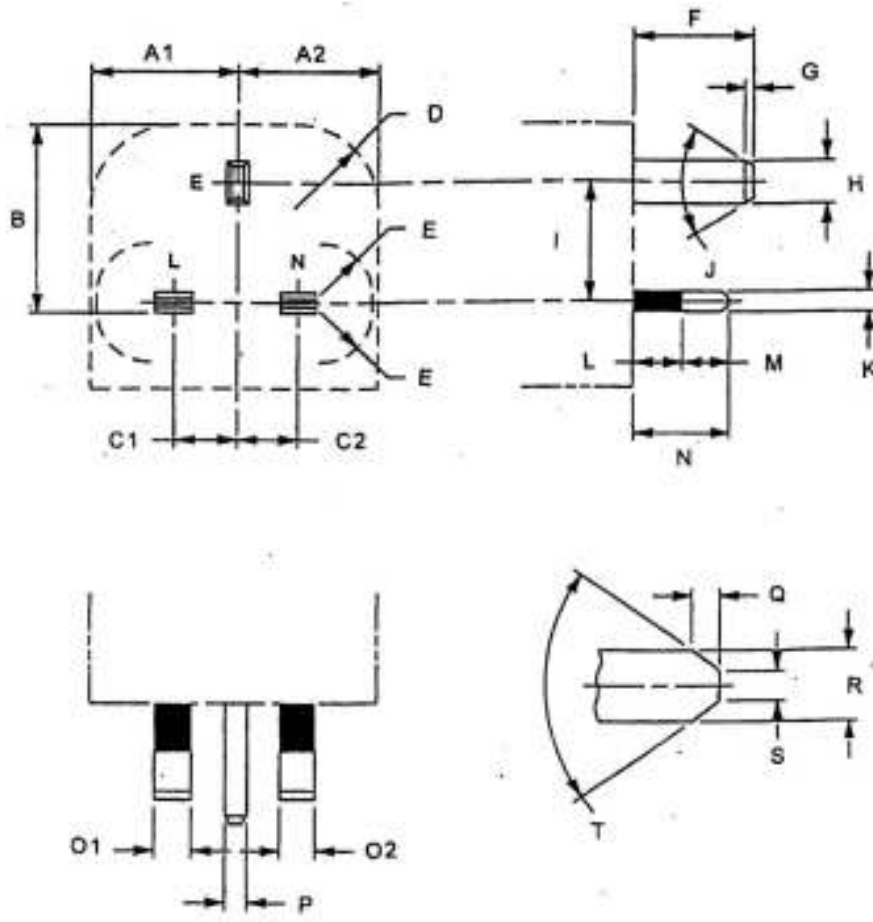
KSC 8305 (Partial)			
Clause	Requirement □ Test	Result - Remark	Verdict

Korean plug dimension check according to KSC 8305

7	Dimensions			P
	Plugs shall comply with Standard Sheet 1			P
	Between two pins	18.8-19.2 mm	19.15 mm	P
	Diameter of pin (metallic part)	4.74 - 4.86 mm	4.76 mm	P
	Diameter of pin (pin base)	4.58 - 4.62mm	4.63 mm	P
	Diameter of pin (middle part)	4.3 mm max.	4.20 mm	P
	Pin length	18.5-19.5 mm	19.15 mm	P
	Length of pin base plastic part	10.0-11.0 mm	10.23 mm	P
	Shape of pin top		round shape	P
	Length of plug base	34.6-36.0 mm	34,88 mm	P
	Width of plug base	13.0-14.4 mm	14.10 mm	P
	Diagonal dimension of plug base	25.6-26.6 mm	26,13 mm	P
	Side clamp angel	45°	45° -	P
	Side round radius	5-6 m m	5.50 mm	P

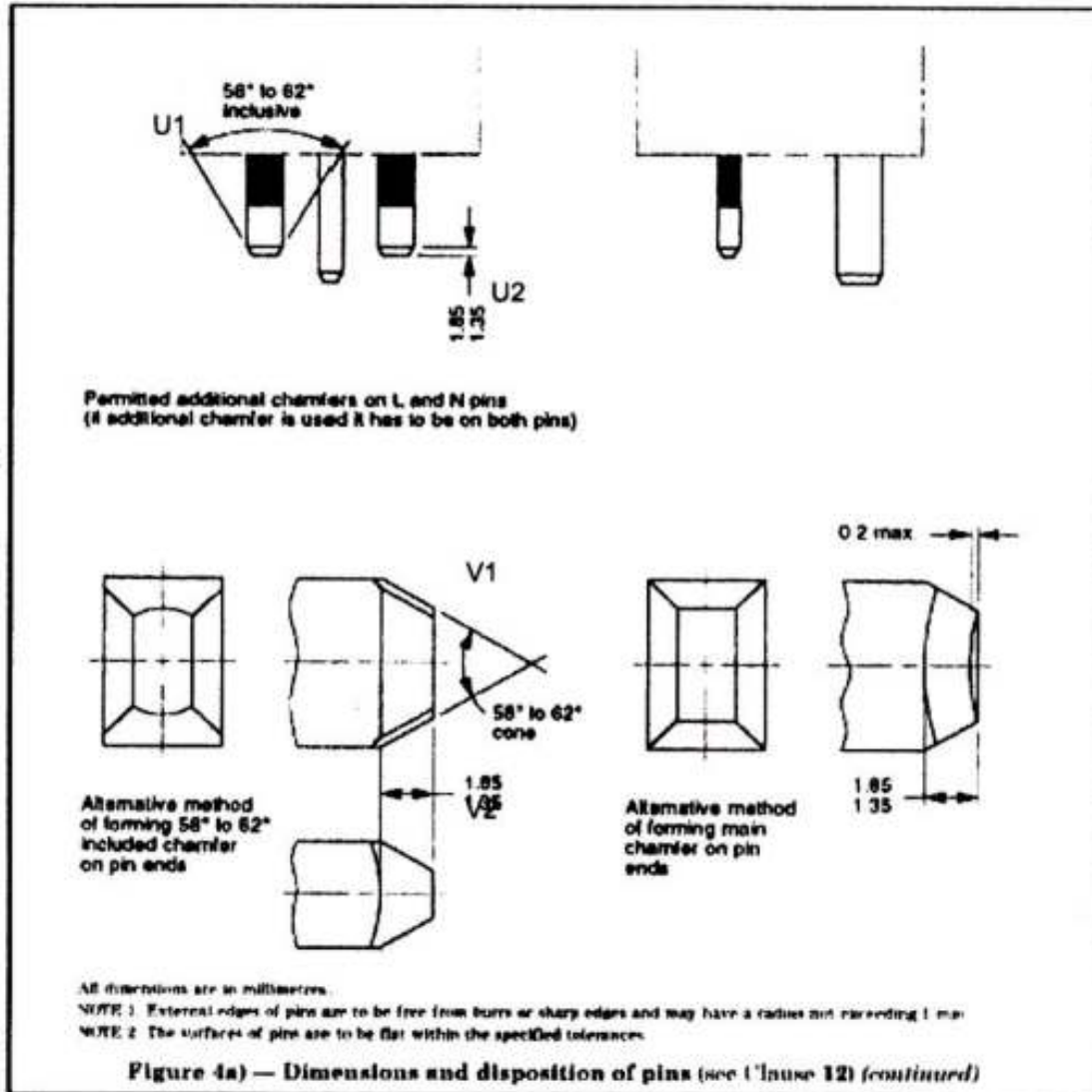
Additional Tests

BS1363:PART 1: 1995 + AMD 9541 + AMD14539 (Partial)			
Clause	Requirement □ Test	Result - Remark	Verdict

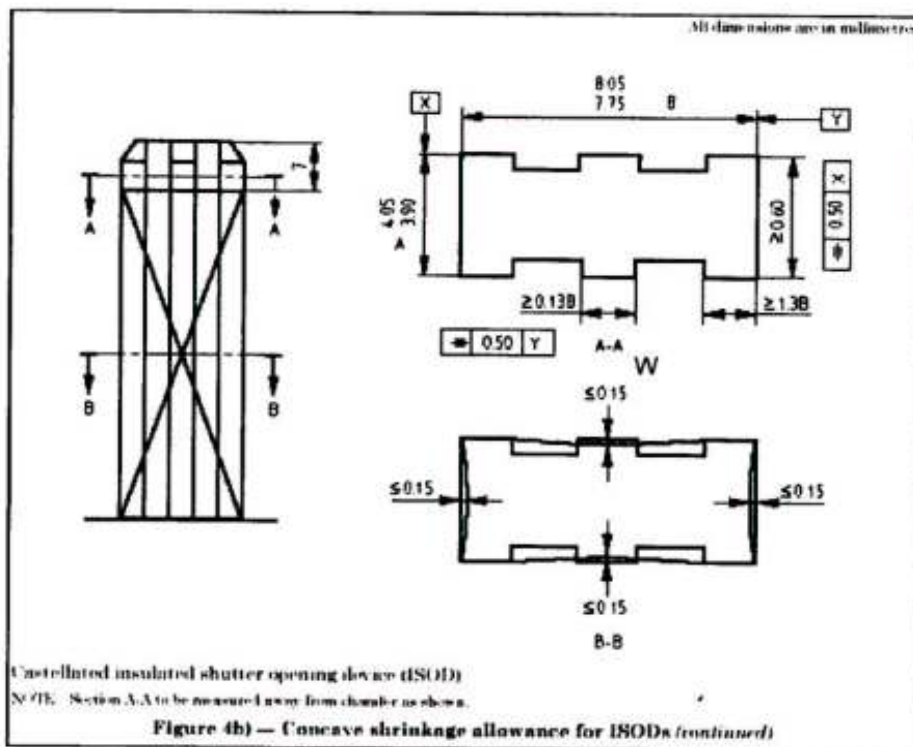
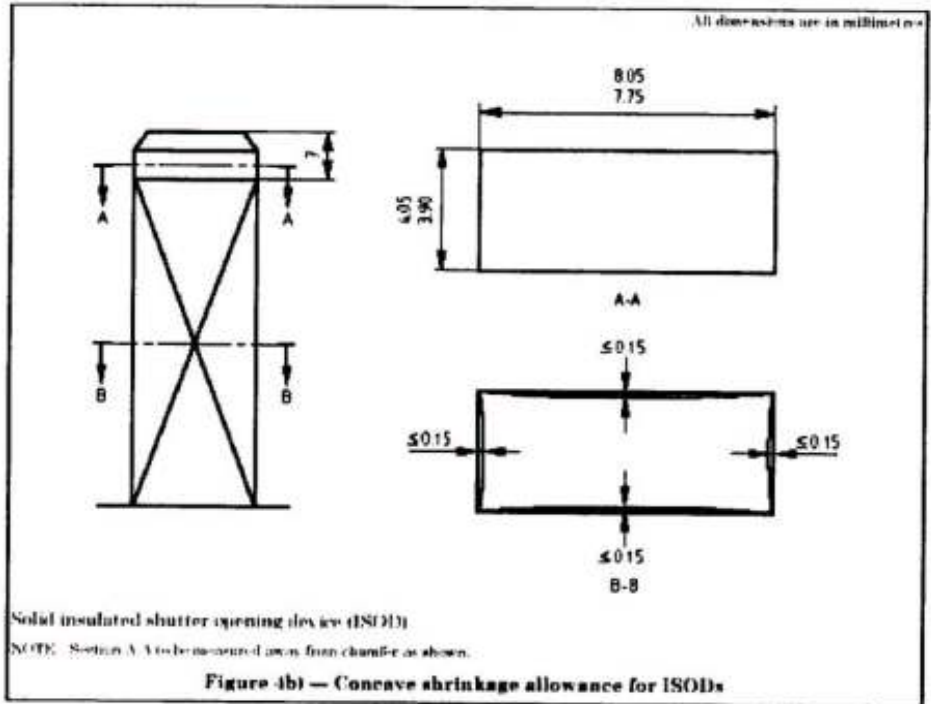


All dimensions are in millimetres.
 Dimensions and disposition of pins (see clause 12)

BS1363:PART 1: 1995 + AMD 9541 + AMD14539 (Partial)			
Clause	Requirement □ Test	Result - Remark	Verdict



BS1363:PART 1: 1995 + AMD 9541 + AMD14539 (Partial)			
Clause	Requirement □ Test	Result - Remark	Verdict



BS1363:PART 1: 1995 + AMD 9541 + AMD14539 (Partial)			
Clause	Requirement <input type="checkbox"/> Test	Result - Remark	Verdict
12.2	TABLE : DIMENSIONS		P
Item	Measured Values (mm)		Limit(mm)
A1	24.03		25.37max
A2	24.39		25.37max.
B	32,83		34.6max.
C1	11.16		11.05-11.18
C2	11.11		11.05-11.18
D	Fit the Figure 5 gauge		R15min
E	9.98		R9.5min
F	22.83		22.23-23.23
G	1.74		1.35-1.85
H	7.88		7.80-8.05
I	22.29		22.10-22.36
J	60,9		58° to 62°
K	3.96		3.90-4.05
L	9,30		9.5max.
M	8,97		9.2max.
N	17.35		17.2-18.2
O1	6.25		6.22-6.48
O2	6.26		6.22-6.48
P	9,93		3.90-4.05
Q	1,48		1.35-1.85
R	4,02		3.90-4.05
S	1,45		1.2-2.0
T	66,6		60°<=T <=80°
U1	--		58° to 62°
U2	1.58		1.35-1.85
V1	N		58° to 62°
V2	N		1.35-1.85
W	0		<=0.15
X	3.93		3.90-4.05
Y	7.97		7.75-8.05

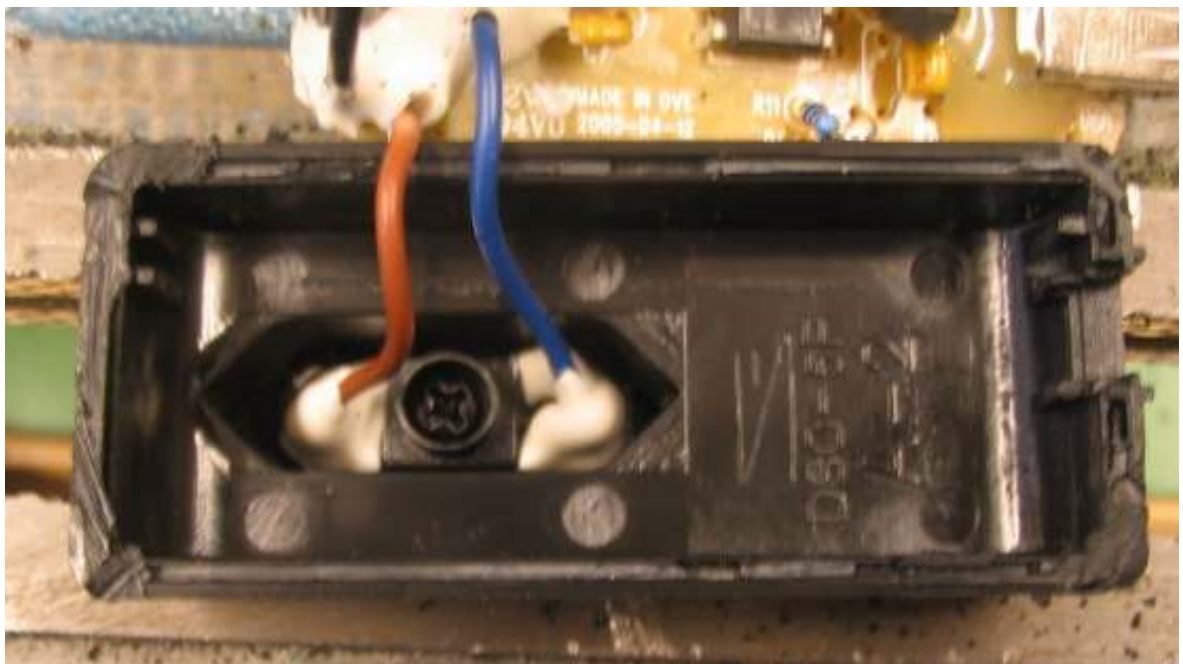
Additional Tests

Enclosure No. 3

Pictures, Drawings and Transformer Data Sheets

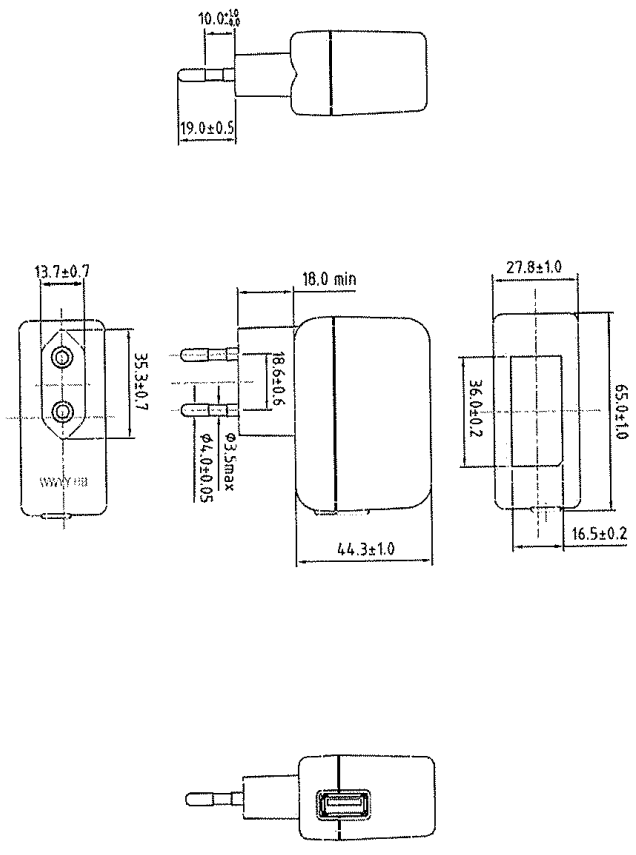
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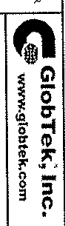
European plug





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REV	DESCRIPTION	DATE	APPROVED



Part Name: Globtek, Inc. will not be liable for the safety and performance of these power supplies if unauthorized access and repair occurs. End user should consult applicable instructions for the product.	DASH NO.	PART NO.	REV.	DESCRIPTION	NOTES
Limitation of Use: Globtek products are not authorized for use as mission critical components, nuclear or aircraft applications without prior written approval from the CEO of Globtek, Inc.	TABULATION BLOCK				
Revision: REVISION A A	TOLERANCES: DIMENSIONS ANGULAR MM ±0.05 IN ±0.01				
Sheet: SHEET 1 2	SIZE: A				
Drawn by:	DATE:	FCN No.:	MODEL NO.:	 GlobTek, Inc. 186 Veterans Dr. Northvale, NJ 07647 Tel. 201.784.1000 Fax 201.784.0111 www.globtek.com	
APPRVD BY:	DATE:	SCALE:	PART NO.:		
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Korean plug



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DASH NO.	PART NO.	REV.	DESCRIPTION	NOTES								
			TABULATION BLOCK									

DRAWN: DATE:	APPROVED BY: DATE:	SCALE:	PART NO.:	REV. A

INITBY: 1 2 **DATE:** **SCALE:** **PART NO.:** **REV. A**

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Australian plug



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DASH NO.	PART NO.	REV.	DESCRIPTION	NOTES
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				A

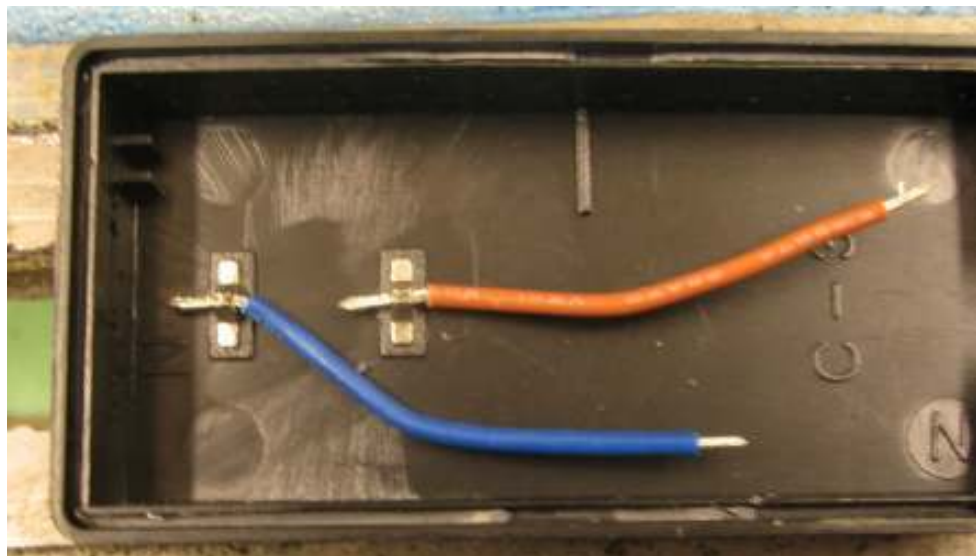
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				A

TOLERANCES:
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 FRACTIONS ANGULAR
 DECIMALS ANGULAR
 ANG. ± 0.05
 ANG. ± 0.05
 ANG. ± 0.05

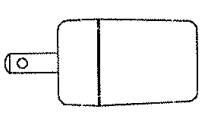
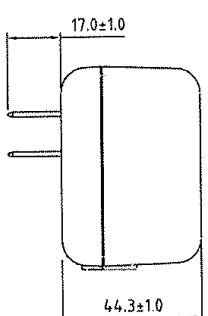
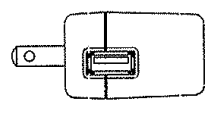
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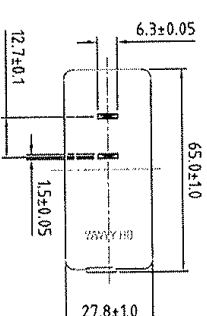
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Japanese plug



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	REV	DESCRIPTION	DATE	APPROVED

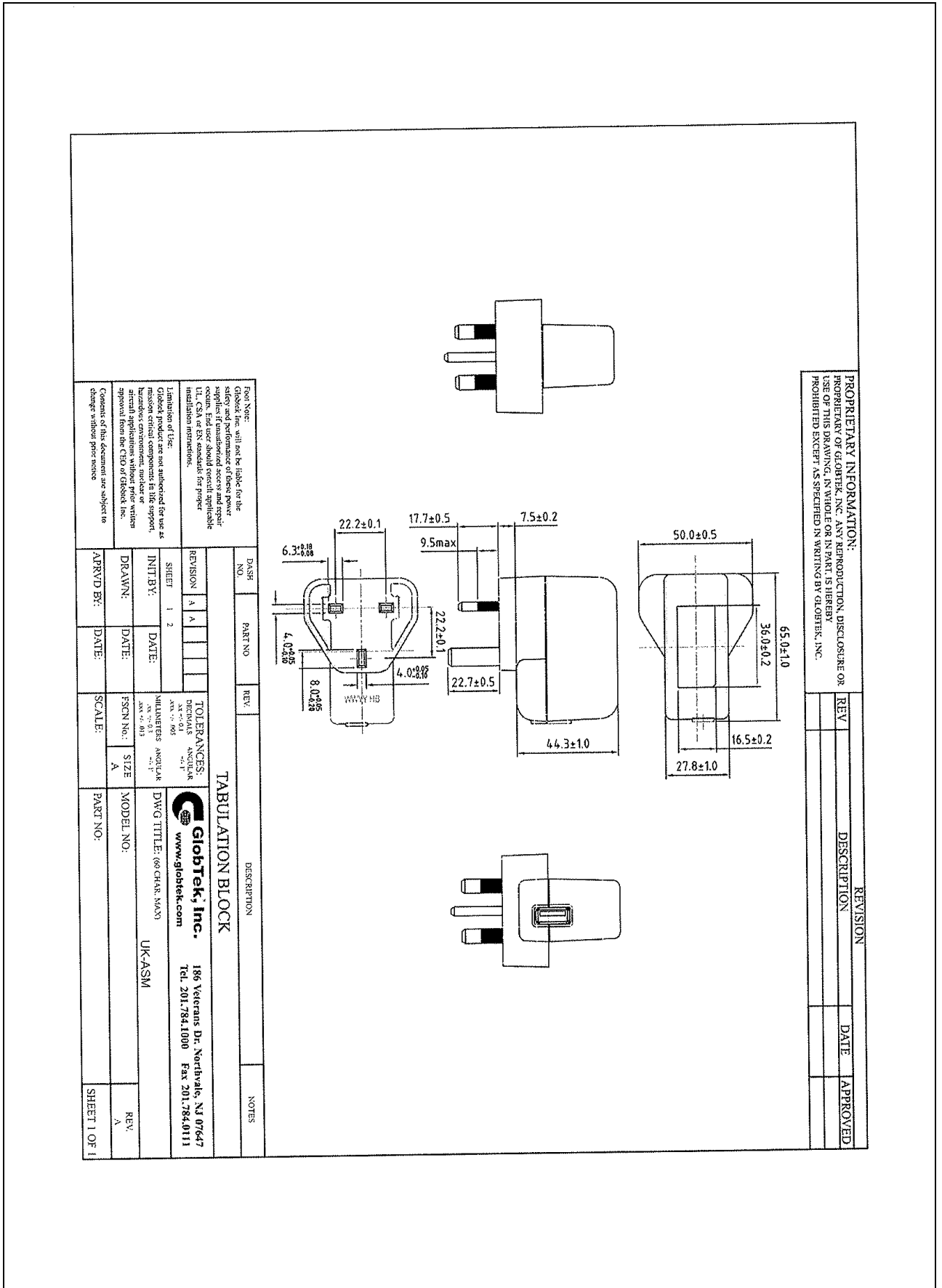






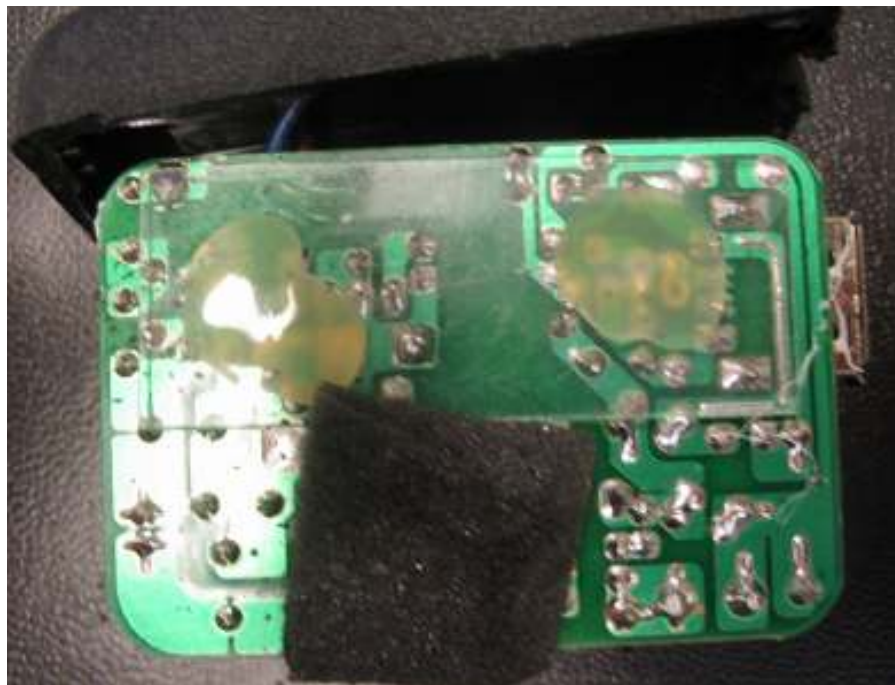
From User: GlobTek, Inc. will not be liable for the safety and performance of these power supplies if unauthorised access and repair occurs. End user should consult applicable UL, CSA or IEC standards for proper installation instructions. GlobTek product are not authorized for use as mission critical components in life support, hazardous environment, nuclear or aircraft applications without prior written approval from the CEO of GlobTek, Inc. Consents of this document are subject to change without prior notice.	DASH NO. PART NO. REV. DESCRIPTION NOTES	TABULATION BLOCK		
SHEET 1 2 INTBY: DATE: MULTIPLES ANGULAR DRAWN: DATE: PSGN No. SIZE MODEL NO. JPN-A-SSM	TOLERANCES: DECIMALS ANGULAR www.globtek.com 186 Veterans Dr. Northvale, NJ 07647 Tel. 201.784.1000 Fax 201.784.0111			
APPROV BY: DATE: SCALE: PART NO. SHEET 1 OF 1				

UK plug



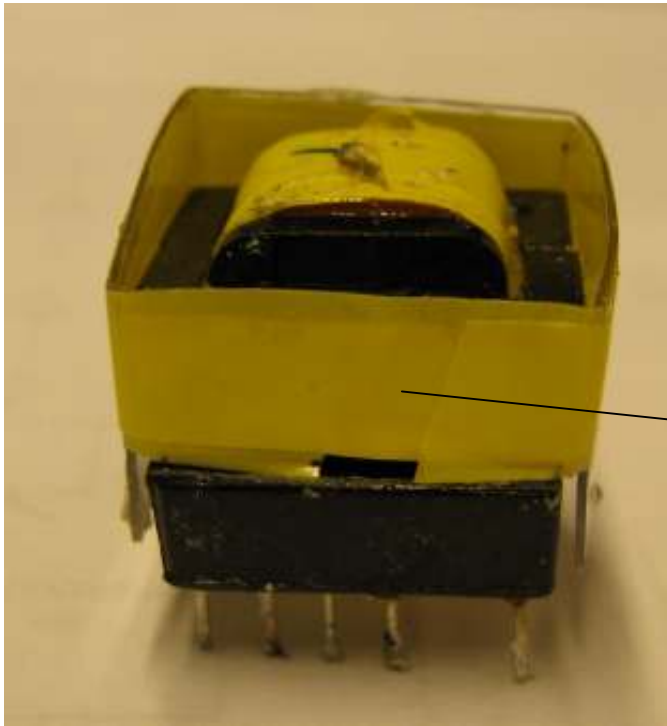


For all models



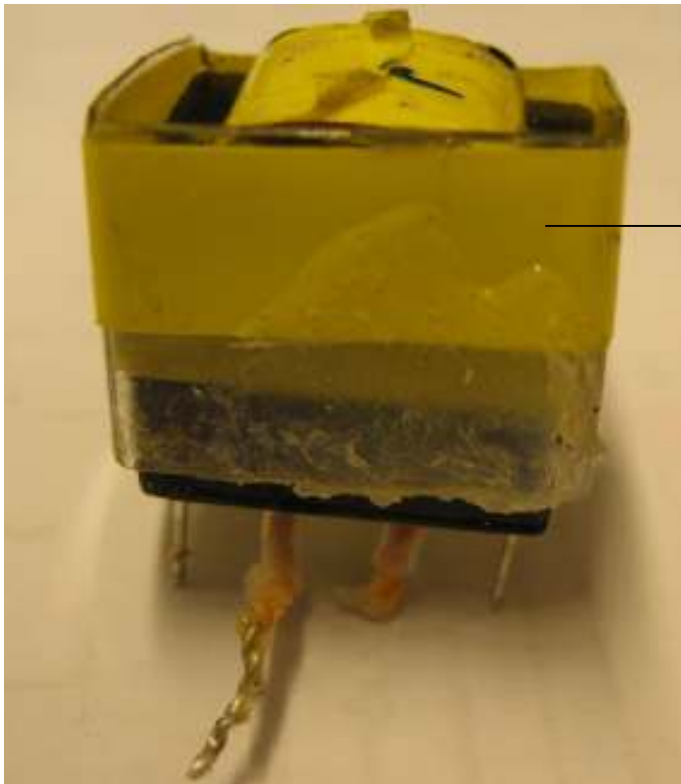


Transformer T1 construction



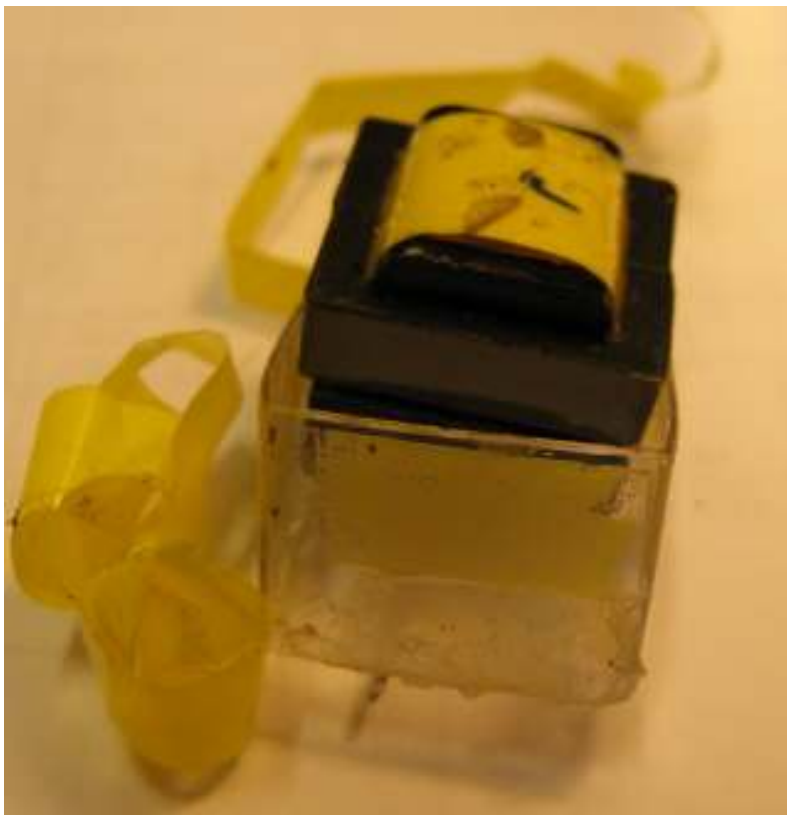
Four layers of Insulation tape on core

Primary side

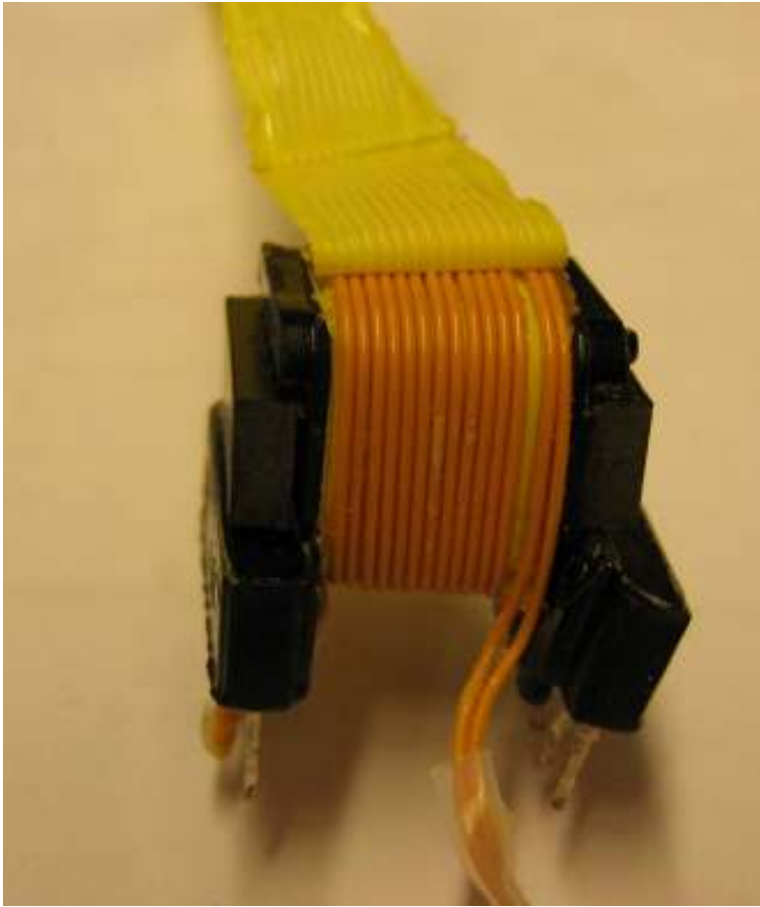


Additional Mylar sheet 0,4mm

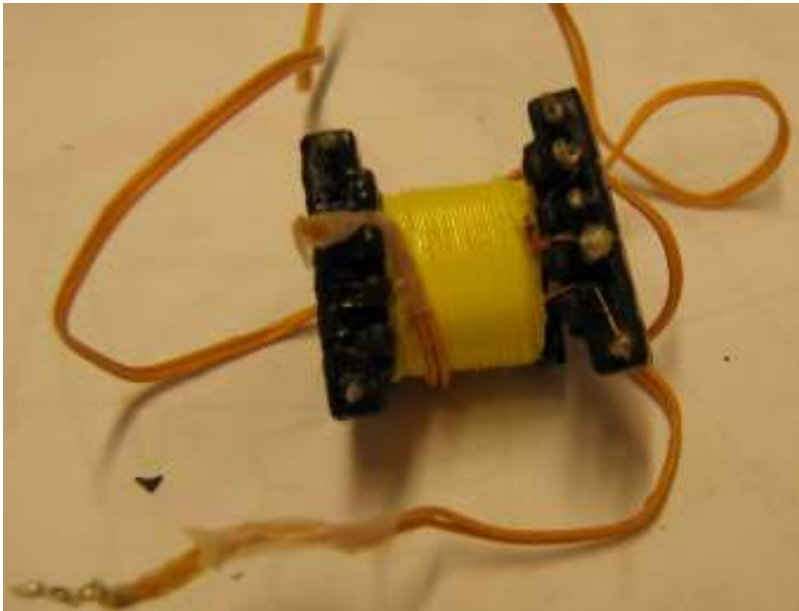
Secondary side

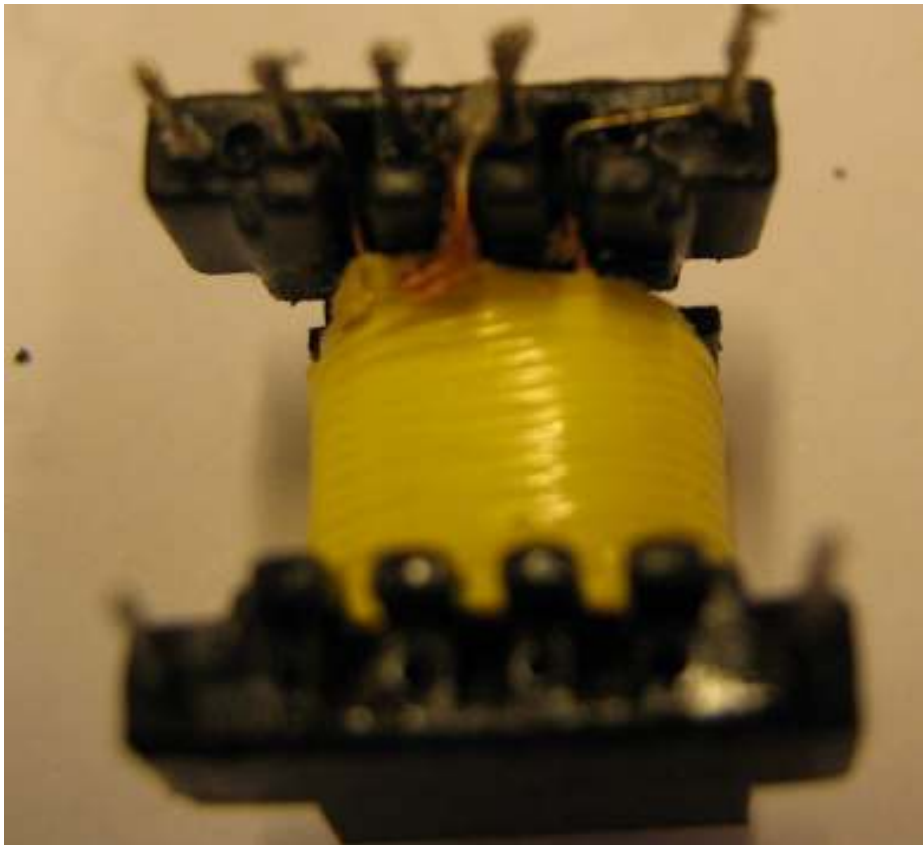


Three layers of Insulation tape on Secondary TIW

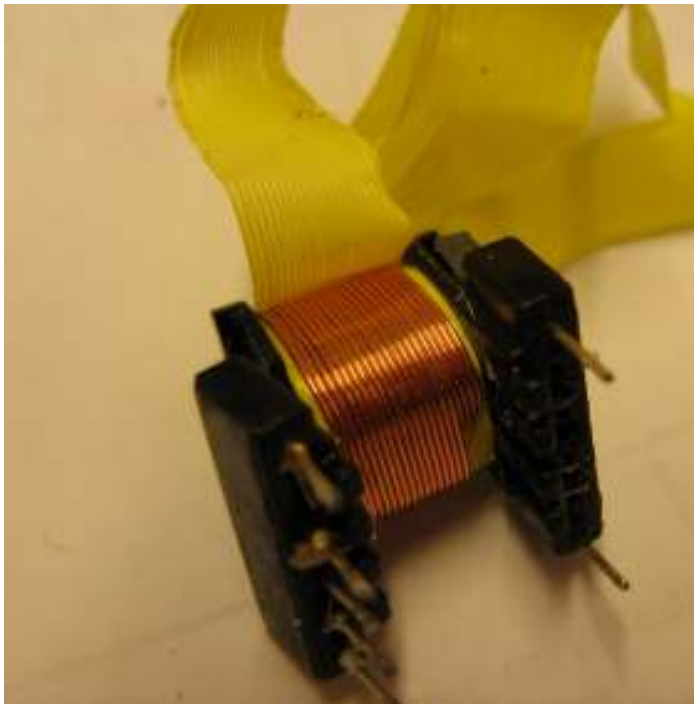


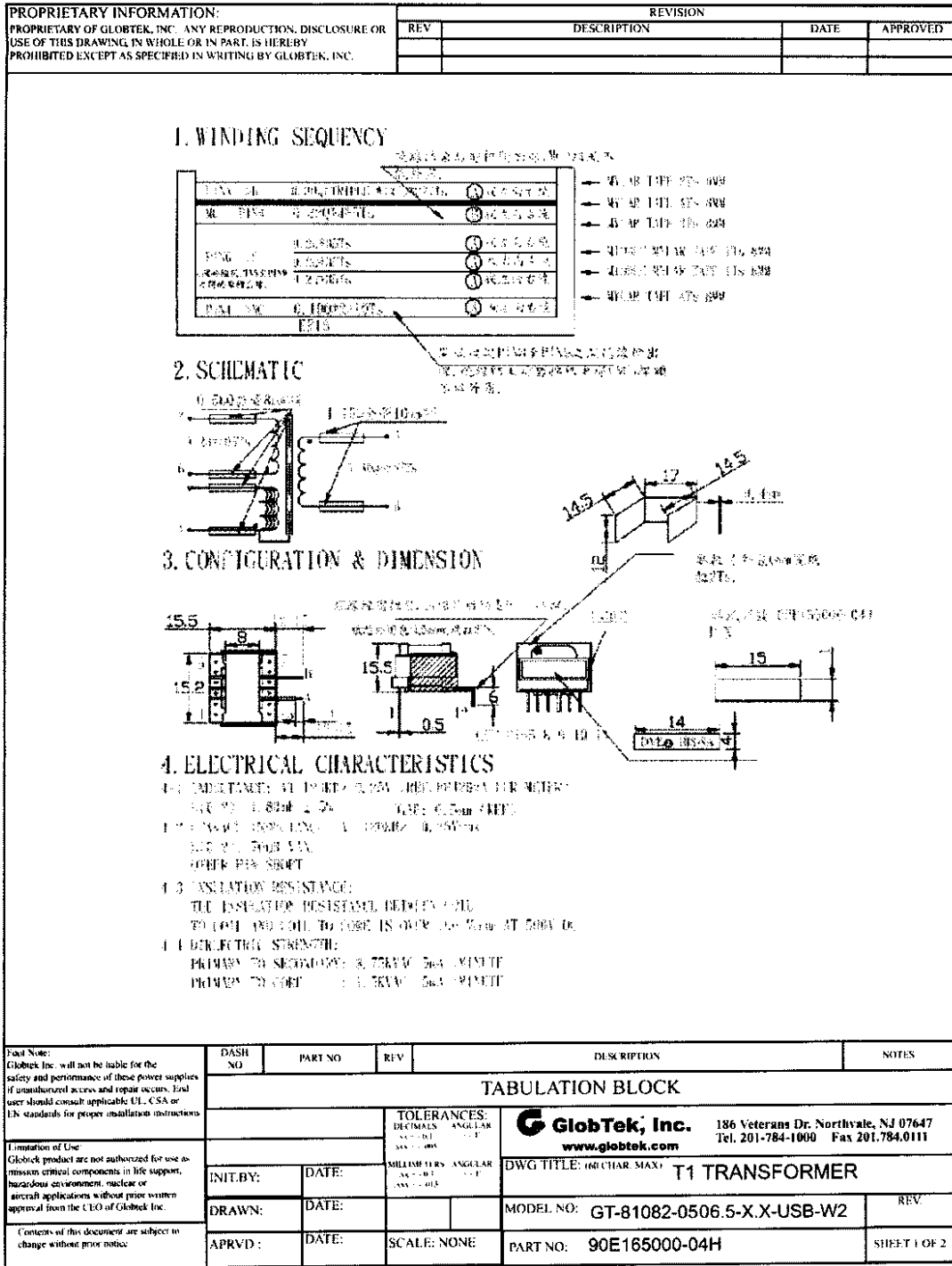
Tubed ends of Secondary TIW Fly wire






Six layers between Secondary TIW and Primary





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REV	DESCRIPTION			DATE	APPROVED		
A	INITIAL RELEASE						

ITEM	DESCRIPTION	MATERIAL	SUPPLIER
1	CORE	FERRITE EF16	TDK(PC40), THOMSON (B1) TDK1N(2500B), FUJI (H63B) PHILIPS(3C85), FDK (6H20) JNCR2KBD), TDG(TP4)
2	BOBBIN	CP-J-8800, 0.39mm MIN Rynite FR530	HITACHI E42956 Dupont E41938
3	PIN	TINNED COPPER WIRE	OPTIONAL
4	MAGNET WIRE (PRI. WINDING) TRIPLE WIRE (SEC. WINDING)	UEW	GOLDEN OCEAN E225143 WATAI E243939 CHANGHENG GOLDSTAR E237312 EVERTOP E225543 FURUKAWA E206440 TOTOKU E166483
5	INSULATION TAPE	354/355G MY130	NITTO DENKO E34833 FOUR PILLARS E50292
6	VANISH	WA-238A #880, #754XL	HITACHI E72979 MEIDEN CHEMICAL UNIKDAT E202574
7	TUBE	TEF-TW-300	ZEUS UL FILE NO. E64007

DASH NO	PART NO	REV	DESCRIPTION	NOTES
TABULATION BLOCK				
REVISION	A	A		
SHEET	1	2		
INIT. BY:	DATE:	TOLERANCES: DIMENSIONS ANGULAR MM - .01 .05 MILLIMETERS ANGULAR MM - .01 .05		 186 Veterans Dr. Northvale, NJ 07647 Tel. 201-784-1000 Fax 201-784-0111 www.globtek.com
DRAWN:	DATE:	FSCN No.:	SIZE A	
APRVD BY:	DATE:	SCALE:	MODEL NO:	REV. A
			PART NO:	SHEET 2 OF 2
			90E165000-04H	