Ref. Certif. No.

DK-30565-UL

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

CERTIFICAT D'ESSAI OC

Product Produit	SWITCHING POWER SUPPLY
Name and address of the applicant Nom et adresse du demandeur	DELTA ELECTRONICS INC 3 TUNGYUAN RD CHUNGLI INDUSTRIAL ZONE TAOYUAN COUNTY, 32063 Taiwan
Name and address of the manufacturer Nom et adresse du fabricant	DELTA ELECTRONICS INC 3 TUNGYUAN RD CHUNGLI INDUSTRIAL ZONE TAOYUAN COUNTY, 32063 Taiwan
Name and address of the factory Nom et adresse de l'usine Note: *When more than one factory, please report on page 2* Note: *Lorsque il y plus d'une usine, veuillez utiliser la 2ème page*	DELTA ELECTRONICS (JIANGSU) LTD. NO 1688 JIANGXING EAST RD WUJIANG ECONOMIC DEVELOPMENT ZONE WUJIANG CITY, 215200 JIANGSU PROVINCE China ☒ Additional Information on page 2
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	Input: 100-240V~, 0.3A, 50-60Hz Output: 24Vdc, 0.42A
Trademark (if any) Marque de fabrique (si elle existe)	DELTA ELECTRONICS, INC.
Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur	
Model / Type Ref. Ref. De type	DRC-24V10W1A
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire,, peuvent être indiqués sur la 2ème page	Additionally evaluated to EN 60950-1: 2006 / A11: 2009 / A1: 2010 / A12: 2011; National Differences specified in the CB Test Report. ☐ Additional Information on page 2
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 60950-1(ed.2), IEC 60950-1(ed.2);am1
As shown in the Test Report Ref. No. which forms part of this Certificate Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat	E131881-A1594-CB-1 issued on 2013-01-24

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**

☐ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
☒ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK
☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2013-01-24

Signature:

Jan-Erik Storgaard

Factories:

DELTA ELECTRONICS (THAILAND) PUBLIC CO LTD
909 SOI 9, MOO 4,PATTANA 1RD
BANGPOO INDUSTRIAL ESTATE (E P Z)
TAMBOL PHRAKSA AMPHUR MUANG
SAMUTPRAKARN, 10280 Thailand

DELTA ELECTRONICS POWER (DONGGUAN) CO LTD
DELTA INDUSTRIAL ESTATE
SHIJIE TOWN
DONGGUAN, 523308 GUANGDONG China

Additional information (if necessary)
Information complémentaire (si nécessaire)

- ☐ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
- ☒ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK
- ☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
- ☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/ncbnames

Date: 2013-01-24

Signature:

Jan-Erik Storgaard

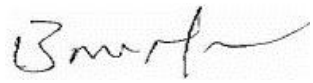
Test Report issued under the responsibility of:

TEST REPORT
IEC 60950-1
Information technology equipment - Safety - Part 1: General requirements

Report Reference No ..... :	E131881-A1594-CB-1
Date of issue ..... :	2013-01-24
Total number of pages ..... :	61
CB Testing Laboratory ..... :	Underwriters Laboratories Taiwan Co., Ltd.
Address ..... :	260 Da-Yeh Road, 112 Peitou Taipei City, Chinese Taipei
Applicant's name ..... :	DELTA ELECTRONICS INC
Address ..... :	3 TUNGYUAN RD CHUNGLI INDUSTRIAL ZONE TAOYUAN COUNTY 32063 TAIWAN
Test specification:	
Standard ..... :	IEC 60950-1:2005 (2nd Edition); Am 1:2009
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC60950_1B
Test Report Form originator ..... :	SGS Fimko Ltd
Master TRF ..... :	2010-04

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description ..... :	SWITCHING POWER SUPPLY
Trade Mark ..... :	DELTA ELECTRONICS, INC.
Manufacturer ..... :	DELTA ELECTRONICS INC 3 TUNGYUAN RD CHUNGLI INDUSTRIAL ZONE TAOYUAN COUNTY 32063 TAIWAN
Model/Type reference ..... :	DRC-24V10W1A
Ratings ..... :	Input: 100-240V~, 0.3A, 50-60Hz Output: 24Vdc, 0.42A

Testing procedure and testing location:			
[x]	**CB Testing Laboratory**		
	Testing location / address..... :	Underwriters Laboratories Taiwan Co., Ltd. 260 Da-Yeh Road, 112 Peitou Taipei City, Chinese Taipei	
[ ]	**Associated CB Test Laboratory**		
	Testing location / address..... :		
	Tested by (name + signature) ..... :	Neilson Chiu	
	Approved by (name + signature) ... :	Brian Hsu	
[ ]	**Testing Procedure: TMP**		
	Tested by (name + signature) ..... :		
	Approved by (+ signature) ..... :		
	Testing location / address..... :		
[ ]	**Testing Procedure: WMT**		
	Tested by (name + signature) ..... :		
	Witnessed by (+ signature)..... :		
	Approved by (+ signature) ..... :		
	Testing location / address..... :		
[ ]	**Testing Procedure: SMT**		
	Tested by (name + signature) ..... :		
	Approved by (+ signature) ..... :		
	Supervised by (+ signature) ..... :		
	Testing location / address..... :		
[ ]	**Testing Procedure: RMT**		
	Tested by (name + signature) ..... :		
	Approved by (+ signature) ..... :		
	Supervised by (+ signature) ..... :		
	Testing location / address..... :		

List of Attachments

National Differences (41 pages)

Enclosures (28 pages)

Summary Of Testing

Unless otherwise indicated, all tests were conducted at Underwriters Laboratories Taiwan Co., Ltd. 260 Da-Yeh Road, 112 Peitou Taipei City, Chinese Taipei.

	Tests performed (name of test and test clause)	**Testing location / Comments**
	End Product Reference Page	
	General Guidelines	

Power Supply Reference Page

Guide Information Page - Maximum Output Voltage, Current, and Volt Ampere Measurement (1.2.2.1)

Input: Single-Phase (1.6.2)

SELV Reliability Test Including Hazardous Voltage Measurements (2.2.2, 2.2.3, 2.2.4, Part 22 6.1)

Limited Current Circuit Measurement (2.4.1, 2.4.2)

Limited Power Source Measurements (2.5)

Humidity (2.9.1, 2.9.2, 5.2.2)

Determination of Working Voltage; Working Voltage Measurement (2.10.2)

Transformer and Wire /Insulation Electric Strength (2.10.5.13)

Steady Force (4.2.1 - 4.2.4)

Heating (4.5.1, 1.4.12, 1.4.13)

Ball Pressure (4.5.5, 4.5)

Touch Current (Single-Phase; TN/TT System) (5.1, Annex D)

Electric Strength (5.2.2)

Component Failure (5.3.1, 5.3.4, 5.3.7)

Abnormal Operation (5.3.1 - 5.3.9)

Power Supply Output Short-Circuit/Overload (5.3.7)

Summary of Compliance with National Differences:

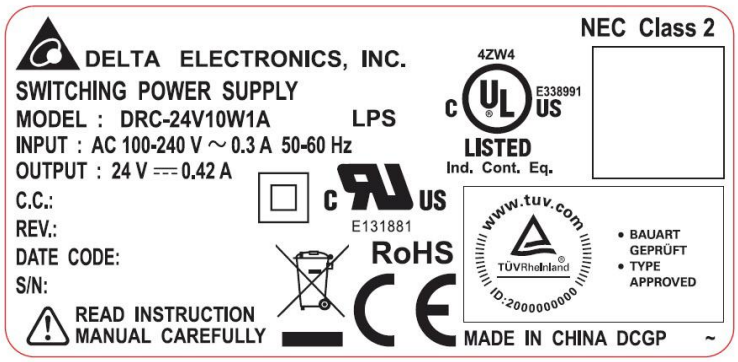
Countries outside the CB Scheme membership may also accept this report.

List of countries addressed: AT, BE, BG, BY, CA, CH, CN, CZ, DE, DK, ES, EU, FI, FR, GB, GR, HU, IL, IT, JP, KR, NL, NO, PL, RO, SE, SG, SI, SK, UA, US

The product fulfills the requirements of: N/A

Copy of Marking Plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



Test item particulars :	
Equipment mobility ..... :	for building-in
Connection to the mains ..... :	Determined in end product
Operating condition ..... :	continuous
Access location ..... :	Determined in end product
Over voltage category (OVC) ..... :	OVC II
Mains supply tolerance (%) or absolute mains supply values ..... :	+10%, -10%
Tested for IT power systems ..... :	No
IT testing, phase-phase voltage (V) ..... :	N/A
Class of equipment ..... :	Class II (double insulated)
Considered current rating of protective device as part of the building installation (A) ..... :	20
Pollution degree (PD) ..... :	PD 2
IP protection class ..... :	IP X0
Altitude of operation (m) ..... :	Up to 2000
Altitude of test laboratory (m) ..... :	Up to 2000
Mass of equipment (kg) ..... :	Approx. 0.058
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(s) of receipt of test item ..... :	2013-01-07
Date(s) of Performance of tests ..... :	2013-01-09 to 2013-01-24
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 testing laboratory. "(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report. Throughout this report a point is used as the decimal separator.	
Manufacturer's Declaration per Sub Clause 6.25 of IECEE 02:	Yes
The application for obtaining a CB Test Certificate includes more than one factory and a declaration form the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... When differences exist, they shall be identified in the General Product Information section.	
Name and address of Factory(ies):	DELTA ELECTRONICS (THAILAND) PUBLIC CO., LTD. 909 SOI 9 MOO 4, BANGPOO INDUSTRIAL ESTATE (E.P.Z.), PATTANA 1 RD., TAMBOL PHRAKSA, AMPHUR MUANG,

SAMUTPRAKARN 10280, THAILAND.
DELTA ELECTRONICS POWER (DONGGUAN) CO., LTD.
DELTA INDUSTRIAL ESTATE, SHIJIE TOWN, DONGGUAN CITY, GUANGDONG PROVINCE 523308 CHINA

DELTA ELECTRONICS (JIANGSU) LTD.
NO. 1688, JIANGXING EAST ROAD, WUJIANG ECONOMIC DEVELOPMENT ZONE, WUJIANG CITY, JIANGSU PROVINCE, 215200 CHINA

GENERAL PRODUCT INFORMATION:

Report Summary

All applicable tests according to the referenced standard(s) have been carried out.

Product Description

Electronic components mounted on PWB and housed with a plastic enclosure

Model Differences

N/A

Additional Information

N/A

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 55 degree C
- The means of connection to the mains supply is: To be determined in end product.
- The product is intended for use on the following power systems: TN
- The equipment disconnect device is considered to be: determined in end product.
- The product was investigated to the following additional standards: EN 60950-1:2006 + A11:2009 + A1:2010+A12:2011 (which includes all European national differences, including those specified in this test report).
- The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): 24Vdc output
- LEDs provided in the product are considered low power devices: Yes
- Unless otherwise specified, all tests are performed on the equipment with installed F1 fuses, by Conquer, Type UDA-P, Rated T1A H, AC 250V representing worse case among all fuses submitted under this investigation. --
- The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS) and also as a NEC Class 2 output: 24Vdc output --
- Test orientation of the heating test is required by client according to end product use: Output side upward --

Engineering Conditions of Acceptability

When installed in an end-product, consideration must be given to the following:

- The following Production-Line tests are conducted for this product: Electric Strength
- The end-product Electric Strength Test is to be based upon a maximum working voltage of: Primary-SELV: 252Vrms, 502Vpk
- The following secondary output circuits are SELV: 24Vdc output
- The following secondary output circuits are at non-hazardous energy levels: 24Vdc output
- The following secondary output circuits are supplied by a Limited Power Source: 24Vdc output
- The power supply terminals and/or connectors are: Suitable for factory wiring only
- The maximum investigated branch circuit rating is: 20 A
- The investigated Pollution Degree is: 2
- The following magnetic devices (e.g. transformers or inductor) are provided with an OBJY2 insulation system with the indicated rating greater than Class A (105°C): T1 (Class B)
- The following end-product enclosures are required: Mechanical, Fire, Electrical
- The equipment is suitable for direct connection to: AC mains supply
- After applying 10N, the Insulation distances (cl.: 4.0mm, cr.=5.0mm) of reinforced insulation should be investigated as follows: Fuse (F1) and user accessible parts --

Abbreviations used in the report:

- normal condition	N.C.	- single fault condition	S.F.C
- operational insulation	OP	- basic insulation	BI
- basic insulation between parts of opposite polarity:	BOP	- supplementary insulation	SI
- double insulation	DI	- reinforced insulation	RI

Indicate used abbreviations (if any)

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1	**GENERAL**		Pass
1.5	Components		Pass
1.5.1	General		Pass
	Comply with IEC 60950-1 or relevant component standard	(see appended table 1.5.1)	Pass
1.5.2	Evaluation and testing of components	Components certified to IEC harmonized standard and checked for correct application. Components not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950-1 and the relevant component Standard. 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.	Pass
1.5.3	Thermal controls		N/A
1.5.4	Transformers	See Annex C	Pass
1.5.5	Interconnecting cables	No interconnecting cables provided as part of the equipment.	N/A
1.5.6	Capacitors bridging insulation	- Primary-to-secondary capacitors are subclass Y1. (Double insulation and reinforced insulation were considered)	Pass
1.5.7	Resistors bridging insulation		Pass
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	Only for functional insulation.	Pass
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits	For R31, R32, R33 and R34	Pass
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		N/A
1.5.8	Components in equipment for IT power systems		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
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
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A
1.6	**Power interface**		Pass
1.6.1	AC power distribution systems		Pass
1.6.2	Input current	The steady state input current of the equipment did not exceed the RATED CURRENT by more than 10% under NORMAL LOAD. (See appended table 1.6.2)	Pass
1.6.3	Voltage limit of hand-held equipment		N/A
1.6.4	Neutral conductor		Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7	**Marking and instructions**		Pass
1.7.1	Power rating and identification markings	Rating marking readily visible to operator.	Pass
1.7.1.1	Power rating mark		Pass
	Multiple mains supply connections.....:		N/A
	Rated voltage(s) or voltage range(s) (V) ..:	100-240	Pass
	Symbol for nature of supply, for d.c. only .:	AC supply	N/A
	Rated frequency or rated frequency range (Hz) .....:	50-60	Pass
	Rated current (mA or A) .....:	0.3A	Pass
1.7.1.2	Identification markings		Pass
	Manufacturer's name or trademark or identification mark .....:	DELTA ELECTRONICS, INC. or E131881.	Pass
	Model identification or type reference .....:	DRC-24V10W1A	Pass
	Symbol for Class II equipment only.....:	60417-1-IEC-5172 symbol marked.	Pass
	Other markings and symbols.....:	Additional symbols may be provided when submitted for National Approval.	Pass
1.7.2	Safety instructions and marking	Building-in equipment, shall be evaluated in the final system assembly.	N/A
1.7.2.1	General		N/A
1.7.2.2	Disconnect devices		N/A
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT Power distribution systems		N/A
1.7.2.5	Operator access with a tool		N/A
1.7.2.6	Ozone		N/A
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment .....:		N/A
	Method and means of adjustment; reference to installation instructions .....:		N/A
1.7.5	Power outlets on the equipment.....:	No standard power outlets are provided.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) .....:	Fuse marking provided as follows: F1 T1A H/250V	Pass
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals:	Class II	N/A
1.7.7.2	Terminals for a.c. mains supply conductors	It should be evaluated in end product.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators		Pass
1.7.8.1	Identification, location and marking .....:	The function of controls affecting safety is obvious regardless of language.	Pass
1.7.8.2	Colours.....:	Only functional indicators use color.	Pass
1.7.8.3	Symbols according to IEC 60417 .....:		N/A
1.7.8.4	Markings using figures .....:		N/A
1.7.9	Isolation of multiple power sources .....:	There is only one connection to hazardous voltages.	N/A
1.7.10	Thermostats and other regulating devices:	No thermostats or similar regulating devices.	N/A
1.7.11	Durability	All markings provided on UL Recognized Component labels suitable for surface they are applied upon and meet the durability test.	Pass
1.7.12	Removable parts	Only functional indicators use color.	Pass
1.7.13	Replaceable batteries.....:	There are no lithium batteries in the equipment.	N/A
	Language(s).....:		-
1.7.14	Equipment for restricted access locations:	Building-in equipment, shall be evaluated in the final system assembly.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2	**PROTECTION FROM HAZARDS**		Pass
2.1	Protection from electric shock and energy hazards		Pass
2.1.1	Protection in operator access areas	Only evaluated energy hazards of output connectors. others shall be evaluated in the final system assembly.	Pass
2.1.1.1	Access to energized parts		N/A
	Test by inspection .....:		N/A
	Test with test finger (Figure 2A) .....:		N/A
	Test with test pin (Figure 2B) .....:		N/A
	Test with test probe (Figure 2C).....:	No TNV present.	N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm) .....:		-
2.1.1.4	Access to hazardous voltage circuit wiring		N/A
2.1.1.5	Energy hazards .....:	The output of the power supply is not an energy hazard. ((see appended table 2.1.1.5 for details)	Pass
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment		N/A
	Measured voltage (V); time-constant (s) ..:		-
2.1.1.8	Energy hazards - d.c. mains supply		N/A
	a) Capacitor connected to the d.c. mains supply.....:		N/A
	b) Internal battery connected to the mains supply.....:		N/A
2.1.1.9	Audio amplifiers.....:		N/A
2.1.2	Protection in service access areas	Building-in equipment, shall be evaluated in the final system assembly.	N/A
2.1.3	Protection in restricted access locations	Building-in equipment, shall be evaluated in the final system	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
		assembly.	
2.2	**SELV circuits**		Pass
2.2.1	General requirements	SELV levels are maintained after single fault condition.	Pass
2.2.2	Voltages under normal conditions (V) .....:	All accessible voltages are less than 42.4Vpeak or 60Vdc and are classified as SELV.	Pass
2.2.3	Voltages under fault conditions (V) .....:	Under fault conditions voltages never exceed 71Vpeak and 120Vdc and do not exceed 42.4Vpeak or 60Vdc for more than 0.2 sec.	Pass
2.2.4	Connection of SELV circuits to other circuits.....:	SELV circuits are only connected to other secondary.	Pass
2.3	**TNV circuits**		N/A
2.3.1	Limits		N/A
	Type of TNV circuits.....:		-
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions.....:		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed .....:		-
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed .....:		-
2.3.5	Test for operating voltages generated externally		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.4	**Limited current circuits**		Pass
2.4.1	General requirements		Pass
2.4.2	Limit values	0.7mA	Pass
	Frequency (Hz) .....:	60	-
	Measured current (mA) .....:	- No load: 0.312 mA - Rated load: 0.304 mA	-
	Measured voltage (V) .....:	--	-
	Measured circuit capacitance (nF or uF) ..:	2200pF	-
2.4.3	Connection of limited current circuits to other circuits		N/A
2.5	**Limited power sources**		Pass
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network limited output under normal operating and single fault condition		Pass
	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 for details)	-
	Current rating of overcurrent protective device (A) .....:		-
	Use of integrated circuit (IC) current limiters.....:		-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6	**Provisions for earthing and bonding**		N/A
2.6.1	Protective earthing	Class II	N/A
2.6.2	Functional earthing	Class II	N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm²), AWG.....:		-
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm²), AWG.....:		-
	Protective current rating (A), cross-sectional area (mm²), AWG.....:		-
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (ohm), voltage drop (V), test current (A), duration (min).....:		N/A
2.6.3.5	Colour of insulation .....:		N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type, nominal thread diameter (mm).....:		-
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A
2.7	**Overcurrent and earth fault protection in primary circuits**		Pass
2.7.1	Basic requirements	Protective devices are integrated in the equipment.	Pass
	Instructions when protection relies on building installation	Pluggable Type A.	N/A
2.7.2	Faults not covered in 5.3.7	Protection against faults covered in 5.3 is fitted as an integral part of the equipment.	Pass
2.7.3	Short-circuit backup protection	The equipment is pluggable Type A.	Pass
2.7.4	Number and location of protective devices:	One protective device in the "LIVE" phase.	Pass
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel.....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.8	**Safety interlocks**		N/A
2.8.1	General principles		N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
	Protection against extreme hazard		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches, relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm).....:		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A
2.9	**Electrical insulation**		Pass
2.9.1	Properties of insulating materials	See below.	Pass
2.9.2	Humidity conditioning	Humidity treatment performed for a period of 120 hours. The following transformers also tested with 120 hours: T1 (See Table 1.5.1 for the mfr. and type)	Pass
	Relative humidity (%), temperature (°C)...:	93% , 40 degree C	-
2.9.3	Grade of insulation	Insulation in equipment complies with sub-clause 2.10, 5.2.	Pass
2.9.4	Separation from hazardous voltages		Pass
	Method(s) used .....:	Method 1	-

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Clause	Requirement + Test	Result - Remark	Verdict
2.10	**Clearances, creepage distances and distances through insulation**		Pass
2.10.1	General	Pollution degree 2 applicable.	Pass
2.10.1.1	Frequency .....:	Refer to the Rating information at the beginning of this Test Report.	Pass
2.10.1.2	Pollution degrees .....:	Pollution degree 2	Pass
2.10.1.3	Reduced values for functional insulation	The functional insulation complied with clause 5.3.4.	Pass
2.10.1.4	Intervening unconnected conductive parts		Pass
2.10.1.5	Insulation with varying dimensions		N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage		Pass
2.10.2.1	General		Pass
2.10.2.2	RMS working voltage	(see appended table 2.10.2 for details)	Pass
2.10.2.3	Peak working voltage	((see appended table 2.10.2 for details)	Pass
2.10.3	Clearances	(see appended table 2.10.3 and 2.10.4 for details)	Pass
2.10.3.1	General		Pass
2.10.3.2	Mains transient voltages		Pass
	a) AC mains supply .....:	Overvoltage Category II	Pass
	b) Earthed d.c. mains supplies .....:		N/A
	c) Unearthed d.c. mains supplies .....:		N/A
	d) Battery operation.....:		N/A
2.10.3.3	Clearances in primary circuits	(see appended table 2.10.3 and 2.10.4 for details)	Pass
2.10.3.4	Clearances in secondary circuits		N/A
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply.....:	1500Vpeak for one step lower to secondary circuit of Overvoltage Category II from table 2J	Pass

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.7	Transients from d.c. mains supply.....:		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems..:		N/A
2.10.3.9	Measurement of transient voltage levels		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply .....:		N/A
	For a d.c. mains supply .....:		N/A
	b) Transients from a telecommunication network		N/A
2.10.4	Creepage distances	(see appended table 2.10.3 and 2.10.4 for details)	Pass
2.10.4.1	General		Pass
2.10.4.2	Material group and comparative tracking index		Pass
	CTI tests.....:	Material group IIIb: 100 <= CTI < 175;	-
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4 for details)	Pass
2.10.5	Solid insulation		Pass
2.10.5.1	General		Pass
2.10.5.2	Distances through insulation	(see appended table 2.10.5 for details)	Pass
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices	Optocouplers are UL certified components.	Pass
2.10.5.5	Cemented joints	Conduct tested in 2.10.11	Pass
2.10.5.6	Thin sheet material - General		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
	Electric strength test.....:		-
2.10.5.10	Thin sheet material - alternative test procedure		N/A
	Electric strength test.....:		-

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.5.11	Insulation in wound components	Triple insulated wire used in T1 secondary windings.	Pass
2.10.5.12	Wire in wound components	Triple insulated wire used in T1 secondary windings.	Pass
	Working voltage .....:	(see appended table 2.10.2 for details)	Pass
	a) Basic insulation not under stress .....:		N/A
	b) Basic, supplementary, reinforced insulation.....:		N/A
	c) Compliance with Annex U .....:	(see appended table 1.5.1)	Pass
	Two wires in contact inside wound component; angle between 45° and 90° ..:	Physical separation in the form of insulating sleeving provided to release mechanical stress at the crossover point.	Pass
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		Pass
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	Pass
2.10.6.2	Coated printed boards		N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs).....:		N/A
2.10.7	Component external terminations		N/A
2.10.8	Tests on coated printed boards and coated components		N/A

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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	See clause 2.10.11 for details. T1 was 115 degree C.	Pass
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A
2.10.11	Tests for semiconductor devices and cemented joints	10 cycles of 2.10.9 was conducted for three samples of each optical isolator. One sample was hi-potted 4,800Vac after the last period at 115 degree C. The other two samples was hi-potted 4,800Vac after total ten cycles thermal cycling and 120 hours humidity test at 95% relative humidity and 40 degree C.	Pass
2.10.12	Enclosed and sealed parts		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3	**WIRING, CONNECTIONS AND SUPPLY**		Pass
3.1	General		N/A
3.1.1	Current rating and overcurrent protection	No wirings and interconnecting cables.	N/A
3.1.2	Protection against mechanical damage		N/A
3.1.3	Securing of internal wiring		N/A
3.1.4	Insulation of conductors		N/A
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure		N/A
3.1.7	Insulating materials in electrical connections		N/A
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors		N/A
	10 N pull test		N/A
3.1.10	Sleeving on wiring		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.2	**Connection to mains supply**		N/A
3.2.1	Means of connection	Building-in equipment, shall be evaluated in the final system assembly.	N/A
3.2.1.1	Connection to an a.c. mains supply	Building-in equipment, shall be evaluated in the final system assembly.	N/A
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections	Single supply	N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter of cable and conduits (mm) .....:		-
3.2.4	Appliance inlets		N/A
3.2.5	Power supply cords	Building-in equipment, shall be evaluated in the final system assembly.	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	Building-in equipment, shall be evaluated in the final system assembly.	N/A
3.2.8	Cord guards		N/A
	Diameter of minor dimension D (mm); test mass (g) .....:		-
	Radius of curvature of cord (mm).....:		-
3.2.9	Supply wiring space		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.3	**Wiring terminals for connection of external conductors**		N/A
3.3.1	Wiring terminals	Building-in equipment, shall be evaluated in the final system assembly.	N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm^2) .....:		-
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type and nominal thread diameter (mm).....:		-
3.3.6	Wiring terminals design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A
3.4	**Disconnection from the mains supply**		N/A
3.4.1	General requirement	Building-in equipment, shall be evaluated in the final system assembly.	N/A
3.4.2	Disconnect devices		N/A
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized		N/A
3.4.5	Switches in flexible cords		N/A
3.4.6	Number of poles - single-phase and d.c. equipment		N/A
3.4.7	Number of poles - three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources	Single power supply	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.5	**Interconnection of equipment**		Pass
3.5.1	General requirements		Pass
3.5.2	Types of interconnection circuits .....:	Interconnection circuits of SELV through secondary output connectors.	Pass
3.5.3	ELV circuits as interconnection circuits		N/A
3.5.4	Data ports for additional equipment		N/A
4	**PHYSICAL REQUIREMENTS**		Pass
4.1	Stability		N/A
	Angle of 10°	Building-in equipment, shall be evaluated in the final system assembly.	N/A
	Test force (N) .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.2	**Mechanical strength**		Pass
4.2.1	General		Pass
	Rack-mounted equipment		N/A
4.2.2	Steady force test, 10 N	10N applied to components	Pass
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N	Building-in equipment, shall be evaluated in the final system assembly.	N/A
4.2.5	Impact test	Building-in equipment, shall be evaluated in the final system assembly.	N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm).....:	Building-in equipment, shall be evaluated in the final system assembly.	N/A
4.2.7	Stress relief test	Building-in equipment, shall be evaluated in the final system assembly.	N/A
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
4.2.11	Rotating solid media		N/A
	Test to cover on the door .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.3	**Design and construction**		Pass
4.3.1	Edges and corners	Building-in equipment, shall be evaluated in the final system assembly.	N/A
4.3.2	Handles and manual controls; force (N) ...:		N/A
4.3.3	Adjustable controls		N/A
4.3.4	Securing of parts	Building-in equipment, shall be evaluated in the final system assembly.	N/A
4.3.5	Connection by plugs and sockets	IEC 60083 or IEC 60320 type connectors not used for SELV circuits.	Pass
4.3.6	Direct plug-in equipment	Not direct plug-in equipment.	N/A
	Torque .....:		N/A
	Compliance with the relevant mains plug standard .....:		N/A
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries	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 or gases.	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		Pass

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.13.1	General		Pass
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg) .....:		-
	Measured high-voltage (kV) .....:		-
	Measured focus voltage (kV).....:		-
	CRT markings .....:		-
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N/A
	Part, property, retention after test, flammability classification .....:		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....:		N/A
4.3.13.5	Lasers (including laser diodes) and LEDs	This product contains only visible indicator LEDs (Class 1) operating in the range of 400 - 700 nm wavelength. No IEC60825-1 evaluation was deemed necessary. Additional review may be required at the discretion of the accepting NCB.	Pass
4.3.13.5.1	Lasers (including laser diodes)		N/A
	Laser class .....:		-
4.3.13.5.2	Light emitting diodes (LEDs)		Pass
4.3.13.6	Other types.....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.4	**Protection against hazardous moving parts**		N/A
4.4.1	General	No moving parts.	N/A
4.4.2	Protection in operator access areas.....:		N/A
	Household and home/office document/media shredders		N/A
4.4.3	Protection in restricted access locations ..:		N/A
4.4.4	Protection in service access areas		N/A
4.4.5	Protection against moving fan blades		N/A
4.4.5.1	General		N/A
	Not considered to cause pain or injury. a):		N/A
	Is considered to cause pain, not injury. b):		N/A
	Considered to cause injury. c).....:		N/A
4.4.5.2	Protection for users		N/A
	Use of symbol or warning.....:		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning.....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.5	**Thermal requirements**		Pass
4.5.1	General		Pass
4.5.2	Temperature tests	(see appended table 4.5 for details)	Pass
	Normal load condition per Annex L .....:	Operated in the most unfavorable way of operation given in the operating instructions until steady conditions established.	-
4.5.3	Temperature limits for materials	(See appended table 4.5 for details)	Pass
4.5.4	Touch temperature limits		Pass
4.5.5	Resistance to abnormal heat.....:	(See appended table 4.5.5 for details) - Transformer T1 Bobbin is made of phenolic resin were considered acceptable without further tests.	Pass

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Clause	Requirement + Test	Result - Remark	Verdict
4.6	**Openings in enclosures**		N/A
4.6.1	Top and side openings	Building-in equipment, shall be evaluated in the final system assembly.	N/A
	Dimensions (mm) .....:		-
4.6.2	Bottoms of fire enclosures	Building-in equipment, shall be evaluated in the final system assembly.	N/A
	Construction of the bottom, dimensions (mm).....:		-
4.6.3	Doors or covers in fire enclosures	Building-in equipment, shall be evaluated in the final system assembly.	N/A
4.6.4	Openings in transportable equipment		N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm) .....:		-
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C), time (weeks).....:		-

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Clause	Requirement + Test	Result - Remark	Verdict
4.7	**Resistance to fire**		Pass
4.7.1	Reducing the risk of ignition and spread of flame		Pass
	Method 1, selection and application of components wiring and materials	(see appended table 4.7) - Fire enclosure should be evaluated and provided in the end product.	Pass
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure	- Fire enclosure should be evaluated and provided in the end product.	N/A
4.7.2.1	Parts requiring a fire enclosure	- Fire enclosure should be evaluated and provided in the end product.	N/A
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		Pass
4.7.3.1	General		Pass
4.7.3.2	Materials for fire enclosures	- Fire enclosure should be evaluated and provided in the end product.	N/A
4.7.3.3	Materials for components and other parts outside fire enclosures		N/A
4.7.3.4	Materials for components and other parts inside fire enclosures	All internal materials are rated V-2 or better or are mounted on a PWB rated V-1 or better.	Pass
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		Pass
5.1	Touch current and protective conductor current		Pass
5.1.1	General	See below	Pass
5.1.2	Configuration of equipment under test (EUT)	Equipment designed for connection to only one power sources.	Pass
5.1.2.1	Single connection to an a.c. mains supply	Single connection to an a.c. mains supply	Pass
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit	Single phase equipment intended only for connection to star TN system.	Pass
5.1.4	Application of measuring instrument	Using measuring instrument as in annex D.1.	Pass
5.1.5	Test procedure		Pass
5.1.6	Test measurements	See below.	Pass
	Supply voltage (V).....:	(see appended table 5.1 for details)	-
	Measured touch current (mA).....:	(see appended table 5.1 for details)	-
	Max. allowed touch current (mA).....:	(see appended table 5.1 for details)	-
	Measured protective conductor current (mA) .....:	--	-
	Max. allowed protective conductor current (mA) .....:	--	-
5.1.7	Equipment with touch current exceeding 3,5 mA		N/A
5.1.7.1	General .....:		N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	distribution system		
	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**		Pass
5.2.1	General	(see appended table 5.2 for details)	Pass
5.2.2	Test procedure	No insulation breakdown detected during the test.	Pass

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Clause	Requirement + Test	Result - Remark	Verdict
5.3	**Abnormal operating and fault conditions**		Pass
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3 for details)	Pass
5.3.2	Motors		N/A
5.3.3	Transformers	(see Annex C)	Pass
5.3.4	Functional insulation .....:	Functional insulation complies with the requirements (a), (b), or (c)	Pass
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE .....:		N/A
5.3.7	Simulation of faults	(see appended table 5.3 for details)	Pass
5.3.8	Unattended equipment		N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	Electric Strength tests performed after abnormal and fault tests. No fire, emission of molten metal or deformation was noted during the tests.	Pass
5.3.9.1	During the tests	No fire, emission of molten metal or deformation was noted during the tests.	Pass
5.3.9.2	After the tests	Electric Strength tests performed after abnormal and fault tests.	Pass
6	**CONNECTION TO TELECOMMUNICATION NETWORKS**		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements		N/A
	Supply voltage (V).....:		-
	Current in the test circuit (mA).....:		-
6.1.2.2	Exclusions.....:		N/A

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

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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 .....:		N/A
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s) .....:		-
	Sample 2 burning time (s) .....:		-
	Sample 3 burning time (s) .....:		-
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N/A
A.2.1	Samples, material .....:		-
	Wall thickness (mm) .....:		-
A.2.2	Conditioning of samples; temperature (°C) .....:		N/A
A.2.3	Mounting of samples .....:		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C.....:		-
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s) .....:		-
	Sample 2 burning time (s) .....:		-
	Sample 3 burning time (s) .....:		-
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Sample 1 burning time (s) .....:		-
	Sample 2 burning time (s) .....:		-
	Sample 3 burning time (s) .....:		-
A.3	Hot flaming oil test (see 4.6.2)		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
B	**ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)**		N/A
B.1	General requirements		N/A
	Position .....:		-
	Manufacturer .....:		-
	Type .....:		-
	Rated values .....:		-
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days) .....:		-
	Electric strength test: test voltage (V).....:		-
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.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) .....:		-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
C	**ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)**		Pass
	Position .....:	Transformer: T1	-
	Manufacturer .....:	(see appended table 1.5.1 for details)	-
	Type .....:	(see appended table 1.5.1 for details)	-
	Rated values .....:	(see appended table 1.5.1 for details)	-
	Method of protection .....:	Internal protection.	-
C.1	Overload test	(see appended table 5.3)	Pass
C.2	Insulation		Pass
	Protection from displacement of windings :	Triple insulated wire used in T1 secondary windings.	Pass
D	**ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)**		Pass
D.1	Measuring instrument		Pass
D.2	Alternative measuring instrument		N/A
E	**ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)**		N/A
F	**ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)**		Pass

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Clause	Requirement + Test	Result - Remark	Verdict
G	**ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES**		N/A
G.1	Clearances		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply .....:		N/A
G.2.2	Earthed d.c. mains supply .....:		N/A
G.2.3	Unearthed d.c. mains supply.....:		N/A
G.2.4	Battery operation.....:		N/A
G.3	Determination of telecommunication network transient voltage (V) :.....:		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.4.1	Mains transients and internal repetitive peaks.....:		N/A
G.4.2	Transients from telecommunication networks.....:		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	Measurement of transient voltages (V)		N/A
	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 .....:		-

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Clause	Requirement + Test	Result - Remark	Verdict

K	**ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)**		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V) .....:		N/A
K.3	Thermostat endurance test; operating voltage (V).....:		N/A
K.4	Temperature limiter endurance; operating voltage (V).....:		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A

L	**ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)**		Pass
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment		Pass

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Clause	Requirement + Test	Result - Remark	Verdict
M	**ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)**		N/A
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringing signal		N/A
M.3.1.1	Frequency (Hz) .....:		-
M.3.1.2	Voltage (V) .....:		-
M.3.1.3	Cadence; time (s), voltage (V).....:		-
M.3.1.4	Single fault current (mA).....:		-
M.3.2	Tripping device and monitoring voltage....:		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V) .....:		N/A
N	**ANNEX N, IMPULSE TEST GENERATORS (see 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**		Pass
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

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Clause	Requirement + Test	Result - Remark	Verdict
S	**ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)**		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	**ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)**		N/A
	.....:		-
U	**ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		Pass
	.....:	Triple insulated wire used in T1 secondary windings.	-
V	**ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)**		Pass
V.1	Introduction		Pass
V.2	TN power distribution systems		Pass
W	**ANNEX W, SUMMATION OF TOUCH CURRENTS**		N/A
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A
X	**ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)**		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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)**		Pass
AA	**ANNEX AA, MANDREL TEST (see 2.10.5.8)**		N/A
BB	**ANNEX BB, CHANGES IN THE SECOND EDITION**		Pass
CC	**ANNEX CC, EVALUATION OF INTEGRATED CIRCUIT (IC) CURRENT LIMITERS**		N/A
CC.1	General		N/A
CC.2	Test program 1.....:		N/A
CC.3	Test program 2.....:		N/A
DD	**ANNEX DD, REQUIREMENTS FOR THE MOUNTING MEANS OF RACK-MOUNTED EQUIPMENT**		N/A
DD.1	General		N/A
DD.2	Mechanical strength test, variable N .....:		N/A
DD.3	Mechanical strength test, 250 N, including end stops.....:		N/A
DD.4	Compliance .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

EE	**ANNEX EE, HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS**		N/A
EE.1	General		N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols .....:		N/A
	Information of user instructions, maintenance and/or servicing instructions:		N/A
EE.3	Inadvertent reactivation test .....:		N/A
EE.4	Disconnection of power to hazardous moving parts		N/A
	Use of markings or symbols .....:		N/A
EE.5	Protection against hazardous moving parts .....:		N/A
	Test with test finger (Figure 2A)		N/A
	Test with wedge probe (Figure EE1 and EE2) .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	**TABLE: list of critical components**				Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (Edition or year)	mark(s) of conformity[1])
1. Plastic Enclosure	SABIC INNOVATIVE PLASTICS B V	945	V-0, 120 degree C, 1.3mm min. thickness. See Enclosure ID 4-01, 4-02 and 4-03 for details.	UL 94, UL 746C	UL, --
1a. Plastic Enclosure (Alternate)	SABIC INNOVATIVE PLASTICS JAPAN L L C	945	V-0, 120 degree C, 1.3mm min. thickness. See Enclosure ID 4-01, 4-02 and 4-03 for details.	UL 94, UL 746C	UL, --
1b. Plastic Enclosure (Alternate)	SABIC INNOVATIVE PLASTICS US L L C	945	V-0, 120 degree C, 1.3mm min. thickness. . See Enclosure ID 4-01, 4-02 and 4-03 for details.	UL 94, UL 746C	UL, --
1c. Plastic Enclosure (Alternate)	BAYER MATERIALSCIENCE AG	6485	V-1, 115 degree C, 1.3mm min. thickness. See Enclosure ID 4-01, 4-02 and 4-03 for details.	UL 94, UL 746C	UL, --
2. Terminal Block (CN1)	SWITCHLAB INC	MB310-500	16A, 300Vac (for UL), 250Vac (for VDE), 70 degree C (for VDE)	IEC/EN 60998-1, IEC/EN 60998-2-1 , UL 486	UL, VDE
3. PWB	Interchangeable	Interchangeable	min. V-0, 130 degree C min.	UL 796, UL 94	UL, --
4. Fuse (F1)	LITTELFUSE INC (for UL); Suzhou Littelfuse OVS Ltd. (for CCC, VDE)	0215001(for CCC), 215-Series (for VDE), 215 (for UL)	T1AH, AC 250V	IEC/EN 60127-2, IEC /EN 60127-1, UL 248-1, UL 248-14, CSA C22.2 no. 248-1-00, CSA C22.2 no. 248-14-00, GB9364.1-1997, GB9364.2-1997	UL, VDE, CCC
4a. Fuse (F1) (Alternate)	CONQUER ELECTRONICS CO LTD (for UL); Conquer Electronics Co., Ltd. (for CCC,	UDA-P	T1AH, AC 250V	IEC/EN 60127-2, IEC/EN 60127-1, UL 248-1, UL 248-14, CSA-C22.2 No. 248-1-00, CSA-C22.2	UL, VDE, CCC

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Clause	Requirement + Test	Result - Remark	Verdict

	VDE)			No. 248-14-00, GB9364.1-1997, GB9364.2-1997	
5. Bridging Resistors (R31, R32, R33, R34)	Kamaya Electric co., Ltd	RVC32	27M ohm, 1/4W, distances between terminations 1.26mm minimum	--	--, --
5a. Bridging Resistors (R31, R32, R33, R34) (Alternate)	Yageo corporation	2322 790xxxxxx	27M ohm, 1/4W, distances between terminations 1.26mm minimum	--	--, --
6. Y-Capacitors (CY1)	Murata Mfg. Co., Ltd. (for VDE); MURATA MFG CO LTD (for UL); Murata Manufacturing Co., Ltd. (for CQC)	KX	CY1=220pF max., 250Vac min., Y1 type, 125 degree C min., Comply with IEC 60384-14	IEC 60384-14: 1993 + A1, IEC/EN 60384-14: 2005, DIN EN 60384-14: 2006, UL 1414, GB/T14472-1998	UL, VDE, CQC
6a. Y-Capacitors (CY1) (Alternate)	Walsin Technology Corp.(for VDE); WALSIN TECHNOLOGY CORP (for UL); Walsin Technology Corporation (for CQC)	AH	CY1=220pF max., 250Vac min., Y1 type, 125 degree C min., Comply with IEC 60384-14	IEC 60384-14: 1993 + A1, IEC/EN 60384-14: 2005, DIN EN 60384-14: 2006, UL 1414, CAN/CSA-E60384-1, CAN/CSA-E60384-14, GB/T 14472-1998	UL, VDE, CQC
6b. Y-Capacitors (CY1) (Alternate)	TDK-EPC Corporation or TDK Corporation (for VDE), TDK-EPC CORP (for UL)	CD	CY1=220pF max., 250Vac min., Y1 type, 125 degree C min., Comply with IEC 60384-14	IEC 60384-14: 1993 + A1, IEC/EN 60384-14: 2005, UL 1414, GB/T14472-1998	UL, VDE, CQC
7. Line Filter (FL1)	Interchangeable	Interchangeable	Open type construction, min. 130 degree C. See Enclosure I D 4-05 for details.	--	--, --

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8. Isolating Transformer (T1)	Delta Electronics (Wuhu) Co., Ltd.; Delta Electronics (Chen Zhou) Co., Ltd.; Delta Electronics (Thailand) Public Co., Ltd. ; Delta Electronics (Jiangsu) Co., Ltd.	MV-MP12568	Open type construction with ferrite core, see Enclosure ID 4-06 for construction and material list.	Test within the unit	--, --
8-1. Insulation System	DELTA ELECTRONICS, INC.	MP-130I	Class B	UL1446	UL, --
9. Bridge Rectifier (BD1)	Interchangeable	Interchangeable	800V min., 1A	--	--, --
10. Thermistor (NTC61)	Interchangeable	Interchangeable	470k ohm, at 25 degree C	--	--, --
11. Electrolytic Capacitor (C1, C2)	Interchangeable	Interchangeable	10uF, 400V min., 105 degree C min.	--	--, --
12. Transistors (Q1)	Interchangeable	Interchangeable	620V min., 3.8A.	--	--, --
13. Optocoupler (IC51)	LITE-ON TECHNOLOGY CORP	LTV-816M (for UL, N, CQC); LTV-816 (for VDE)	dti>0.6 mm, ext. cr.>7.0mm, int cr.>5.2mm, thermal cycling tested, isolation: min. AC 4800V, 110 degree C	DIN EN 60747-5-2(VDE 0884 Teil 2)2003-01, EN 60950-1, UL 1577, GB4943.1-2011, GB8898-2011	UL, VDE, FI, CQC, S
13a. Optocoupler (IC51) (Alternate)	Renesas Electronics Corporation (for UL, VDE, S)	PS2561DL1-1, PS2561DL1-1xx (for CCC)	dti.>0.4 mm, ext. cr.>8.0mm, Int.cr.>4.0mm, thermal cycling test, 110 degree C, isolation: AC 4800V min. Humidity 120h.	DIN EN 60747-5-2(VDE 084 Teil 2):2003-01, IEC/EN 60065, IEC/EN 60950-1, UL 1577, GB4943.1-2011, GB8898-2011	UL, S, VDE, CQC
13b. Optocoupler (IC51) (Alternate)	EVERLIGHT ELECTRONICS CO LTD (for UL), Everlight Electronics Co., Ltd (for VDE, FI)	EL816 (for UL and CQC); EL816 V (for VDE); EL816.("."=A-Z or blank or number) (for N)	dti.>0.5mm, ext. cr.≧7.6mm, int. cr.≧6.0mm, thermal cycling test ,110 degree C, isolation: AC 4800V min. Humidity test	DIN EN 60747-5-2(VDE 084 Teil 2):2003-01, IEC/EN 60065, IEC/EN 60950-1, IEC/EN 60335-1, UL 1577, GB4943.1-2011,	UL, VDE, FI, CQC, N

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Clause	Requirement + Test	Result - Remark	Verdict

			120h	GB8898-2011	
13c. Optocoupler (IC51) (Alternate)	SHARP CORP ELECTRONIC COMPONENTS AND DEVICES GROUP (for UL); Sharp Corporation (for VDE, S)	PC123	dti>0.4mm, ext>8.0mm, int cr.>4.0mm, thermal cycling test, isolation: AC 5000V min., 110 degree C, Humidity 120h.	DIN EN 60747-5-2(VDE 084 Teil 2):2003-01, UL 1577, IEC/EN 60065, IEC/EN 60335-1, IEC/EN 60950-1, GB4943.1-2011, GB8898-2011	UL, VDE, S, D, CQC, FI
13d. Optocoupler (IC51) (Alternate)	TOSHIBA CORP, SEMICONDUCTOR CO DISCRETE SEMICONDUCTOR DIV (for UL); Toshiba Corporation Semicon. Co. Discrete Div (for VDE); Toshiba Corporation Semiconductor Company (for S)	TLP781/TLP781F	dti>0.5 mm, ext. cr. > 8.0 mm, int cr. > 5.0 mm, thermal cycling tested, isolation : AC 4800V min., 115 degree C .	DIN EN 60747-5-2(VDE 084 Teil 2):2003-01, UL 1577, IEC/EN 60950-1, IEC/EN 60335-1, GB4943-2001, GB8898-2001	UL, VDE, S, CQC
14. Thermistor (NTC1)	Interchangeable	Interchangeable	8 ohm, at 25 degree C	--	--, --
15. Power Limit Resistors (R11)	Interchangeable	Interchangeable	820m ohm, 1/2 W.	--	--, --
16. Internal plastic part	Interchangeable	Interchangeable	Min. V-2.	UL 94	UL, --
17. Glue	Interchangeable	Interchangeable	Rated V-2 min., See Enclosure ID 4-07 for details.	UL 94, UL 746C	UL, --
18. Connectors and Receptacles (Secondary SELV circuits)	Interchangeable	Interchangeable	Metal/Plastic, Copper alloy pins housed in bodies of plastic rated V-2 min.	UL 94	UL, --
19. Connectors and Receptacles (Secondary SELV circuits) (Alternate)	Interchangeable	Interchangeable	--	UL 498, UL 1977	UL, --
20. Heat sink (HS1)	Interchangeable	Interchangeable	Aluminum, see Enclosure ID 4-04 for dimension	--	--, --

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			details.		
21. Label	Interchangeable	Interchangeable	Min. 95 degree C if max. surface temperature not specified	UL 969	UL, --
Supplementary information: [1]) Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	**TABLE: Opto Electronic Devices**			Pass
Manufacturer.....:	--	--	--	
Type.....:	--	--	--	
Separately tested.....:	--	--	--	
Bridging insulation.....:	--	--	--	
External creepage distance.....:	--	--	--	
Internal creepage distance.....:	--	--	--	
Distance through insulation.....:	--	--	--	
Tested under following conditions.....:	--	--	--	
Input.....:	--	--	--	
Output.....:	--	--	--	
--	--	--	--	
supplementary information: See Table 1.5.1 for details.				

1.6.2	**TABLE: electrical data (in normal conditions)**					Pass
U (V)	I (A)	I rated (A)	P (W)	Fuse #	I fuse (A)	condition/status
90V/50 Hz	0.223	--	12.39	F1	0.223	Rated load
90V/60 Hz	0.225	--	12.39	F1	0.225	Rated load
100V/50 Hz	0.203	0.3	12.24	F1	0.203	Rated load
100V/60 Hz	0.205	0.3	12.21	F1	0.205	Rated load
240V/50 Hz	0.113	0.3	12.48	F1	0.113	Rated load
240V/60 Hz	0.113	0.3	12.51	F1	0.113	Rated load
254V/50 Hz	0.110	--	12.66	F1	0.110	Rated load
254V/60 Hz	0.110	--	12.68	F1	0.110	Rated load
264V/50 Hz	0.108	--	12.80	F1	0.108	Rated load
264V/60 Hz	0.109	--	12.82	F1	0.109	Rated load
supplementary information:						

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2.1.1.5 c) 1)	**TABLE: Max. V, A, VA test**				Pass
Voltage(rated) (V)	Current(rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
24Vdc	0.42	25.6	0.72	17.32	
supplementary information:					
--					

2.1.1.5 c) 2)	**TABLE: Stored energy**		N/A
Capacitance C (µF)	Voltage U (V)	Energy E (J)	
supplementary information:			

2.2	**TABLE: Evaluation of voltage limiting components in SELV circuits**		Pass
Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components
	V Peak	V d.c.	
T1 pin 7 to GND	94.0	--	--
After C101 TO GND	55.6	--	--
After D101 TO GND	--	24.0	D101, R101
Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)		
D101 short	0.2Vdc		
R101 short	24.0Vdc		
C101 short	5.9Vpeak		
supplementary information:			
--			

2.5	**TABLE: limited power sources**				Pass
Circuit output tested:	24Vdc output				
Measured Uoc (V) with all load circuits disconnected:	24.1Vdc				
	Isc (A)		VA		
	Meas.	Limit	Meas.	Limit	

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Clause	Requirement + Test	Result - Remark	Verdict

Normal condition	0.72	<= 8	17.32	<=100
Single fault: R11 short	1.35	<= 8	32.37	<=100
Single fault: R11 open	0	<= 8	0	<=100
Single fault: IC51 pin 1-2 short	0	<= 8	0	<=100
Single fault: IC51 pin 3-4 short	0	<= 8	0	<=100
Single fault: IC51 pin 4 short	0	<= 8	0	<=100
Single fault: C111 open	0.73	<= 8	17.51	<=100
Single fault: D61 open	0.72	<= 8	17.31	<=100
Single fault: R61 open	1.37	<= 8	32.60	<=100
supplementary information:				
Sc=short circuit, Oc-Open circuit				

2.10.2	**TABLE: working voltage measurement**		Pass
Location	RMS Voltage (V)	Peak voltage (V)	Comments
T1 pin 1 to pin 6	212	424	Rated load
T1 pin 1 to pin 7	211	360	Rated load
T1 pin 2 to pin 6	210	360	Rated load
T1 pin 2 to pin 7	212	384	Rated load
T1 pin 4 to pin 6	212	360	Rated load
T1 pin 4 to pin 7	215	440	Rated load
T1 pin 5 to pin 6	252	502	Rated load
T1 pin 5 to pin 7	236	480	Rated load
supplementary information:			
Test Voltage: 240 Vac, 60Hz			

2.10.3 and 2.10.4	**TABLE: clearance and creepage distance measurements**					Pass
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
See below	--	--	--	--	--	--
Functional:						
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
PWB P/N TDC-178: Line to Neutral (before current fuse (F1)	420	250	1.5	2.5	2.5	2.7
Line to Neutral (before current fuse (F1)	420	250	1.5	3.2	2.5	3.2
Two pins of current fuses (F1)	420	250	1.5	8.9	2.5	8.9
Basic/supplementary:						
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
--	--	--	--	--	--	--
Reinforced:						
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Primary (screws of CN1) to	420	250	4.0	9.5	5.0	9.5

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Clause	Requirement + Test	Result - Remark	Verdict

accessible parts						
Primary traces to accessible parts	420	250	4.0	5.3	5.0	5.3
Primary to secondary (two sides of CY1)	420	250	4.0	6.0	5.0	6.0
Primary to secondary (two sides of IC51)	420	250	4.0	6.6	5.0	6.6
Primary to secondary (between R31, R32, R33 and R34) (RI)	420	250	4.0	5.04 (=1.26 x 4)	5.0	5.04 (=1.26 x 4)
T1: Primary traces to secondary traces	502	252	4.4	6.3	5.2	6.3
T1: Primary windings/core to secondary windings	502	252	4.4	5.8	5.2	6.8
T1: Primary windings/core to secondary (C111)	502	252	4.4	6.7	5.2	6.7
supplementary information:						
The core of transformer (T1) is considered as primary windings, and triple insulated wire is used in secondary windings.						

2.10.5	**TABLE: distance through insulation measurements**				Pass
Distance through insulation (DTI) at/of:	U peak (V)	Urms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Enclosure (SABIC, Type 945) (RI)	420	250	3000Vac	0.4	1.3
Enclosure (BAYER, Type 6485) (RI)	420	250	3000Vac	0.4	1.3
Bobbin of T1 (RI)	420	250	3000Vac	0.4	0.4
supplementary information:					
1. FI= Functional insulation, BI= Basic insulation, SI= Supplementary insulation, RI= Reinforced insulation. 2. All above sources of Bobbin of T1 are checked and listed in table 1.5.1.					

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.	

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Clause	Requirement + Test	Result - Remark	Verdict

Test results:		Verdict
- Chemical leaks		N/A
- Explosion of the battery		N/A
- Emission of flame or expulsion of molten metal		N/A
- Electric strength tests of equipment after completion of tests		N/A
supplementary information:		

4.3.8	**TABLE: Batteries**			N/A
Battery Category (Lithium, NiMh, NiCad, Lithium ion, etc.).....:				
Manufacturer.....:				
Type/Model.....:				
Voltage.....:				
Capacity (mAh).....:				
Tested and Certified by (incl. Ref. No.).....:				
Circuit protection diagram (Refer indicated supplement of Enclosure-Miscellaneous).....:				
MARKINGS AND INSTRUCTIONS (1.7.12, 1.7.15)				
Location of replaceable battery.....:				
Language(s).....:				
Close to the battery.....:				
In the servicing instructions.....:				
In the operating instructions.....:				
In the operating instructions				
supplementary information:				
Additional devices may be described in Enclosure - Miscellaneous				

4.5	**TABLE: Thermal requirements**						Pass
	Supply voltage (V)..... :	--	--	--	--	--	—
	Ambient Tmin (°C) ..... :	--	--	--	--	--	—
	Ambient Tmax (°C) ..... :	--	--	--	--	--	—
Maximum measured temperature T of part/at:		T (°C)					allowed Tmax (°C)
--		90V/60Hz (Output side upward)	264V/60Hz (Output side upward)	--	--	--	--

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

1. Ambient		55.0	55.0	--	--	--	--
2. Terminal Block (CN1), L pin near CN2		62.6	60.9	--	--	--	70
3. PWB near NTC1		73.9	69.0	--	--	--	130
4. FL1 coil		82.5	78.6	--	--	--	130
5. PWB near HS1 and Q1		101.6	112.3	--	--	--	130
6. Capacitor (C2) near T1		93.8	93.7	--	--	--	105
7. CY1 body		87.6	92.5	--	--	--	125
8. IC51		86.3	86.4	--	--	--	110
9. T1 core		96.1	100.0	--	--	--	110
10. T1 coil		99.7	104.0	--	--	--	110
11. PWB near BD1		81.2	75.2	--	--	--	130
12. Capacitor (C111) near C112		83.3	86.1	--	--	--	105
13. PWB near D101		93.3	98.5	--	--	--	130
14. CN101 Body, pin +		89.1	89.9	--	--	--	105
15. Enclosure inside near T1 top side		94.3	96.0	--	--	--	115
16. Enclosure inside near T1 bottom side		91.2	92.5	--	--	--	115
17. Enclosure outside near T1 top side		86.8	87.4	--	--	--	115
18. Enclosure outside near T1 bottom side		83.5	84.1	--	--	--	115
temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	allowed T_{max} (°C)	insulation class
--	--	--	--	--	--	--	--
supplementary information:							
- The temperatures were measured under worst case normal mode defined in 1.2.2.1 and as described in 1.6.2 at voltages as described in 1.4.5. - With a specified ambient temperature of 55 degree C. - Load Conditions: Rated load							

4.5.5	**TABLE: Ball pressure test of thermoplastic parts**		Pass
	allowed impression diameter (mm) ..... :		—
part	test temperature (°C)	impression diameter (mm)	
Terminal Block (CN1) (SWITCHLAB INC, Type MB310-500)	125	1.504	
supplementary information:			
- Transformer T1 Bobbin is made of phenolic resin were considered acceptable without further tests.			

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

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Clause	Requirement + Test	Result - Remark	Verdict

5.1	**TABLE: touch current measurement**			Pass
Measured between:		Measured (mA)	Limit (mA)	Comments/Conditions
L/N and 24Vdc output		0.18	0.25	Fuse in, “e” – Close, “p1” – Normal
L/N and 24Vdc output		0.18	0.25	Fuse in, “e” – Close, “p1” – Reverse
L/N and Enclosure with metal foil		0.005	0.25	Fuse in, “e” – Close, “p1” – Normal
L/N and Enclosure with metal foil		0.005	0.25	Fuse in, “e” – Close, “p1” – Reverse
supplementary information:				
Supply voltage: 264Vac/60Hz				

5.2	**TABLE: electric strength tests, impulse tests and voltage surge tests**			Pass
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
See below		--	--	--
Functional:				
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
--		--	--	--
Basic/supplementary:				
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
--		--	--	--
Reinforced:				
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Primary to Secondary		DC	4242	No
Primary and Enclsorue with metal foil		AC	3000	No
AFTER HUMIDITY TEST		--	--	--
Primary to Secondary		DC	4242	No
Primary and Enclsorue with metal foil		AC	3000	No
T1: Primary winding/core and secondary winding		AC	3000	No
supplementary information:				
Conducted for each sources of Transformer in Table 1.5.1 after 120 hours humidity test at 40 degree C, 93% R.H.				

5.3	**TABLE: fault condition tests**		Pass
	ambient temperature (° C) ..... :	--	—
	Power source for EUT: Manufacturer, model/type, output rating ..... :	--	—

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

Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
--	--	--	--	--	--	5.3.1, 5.3.4, 5.3.7 - COMPONENT FAILURE TEST
BD1, AC to +	Short	240V/60Hz	--	F1	--	Unit shutdown immediately. Fuse (F1) open. NB, NC, NT
BD1, AC to -	Short	240V/60Hz	--	F1	--	Unit shutdown immediately. Fuse (F1) open. NB, NC, NT
C1 (=FL1 coil)	Short	240V/60Hz	--	F1	--	Unit shutdown immediately. Fuse (F1) open. NB, NC, NT
C1	Open	240V/60Hz	10 min	F1	0.103	Unit running normally. NB, NC, NT
Q1, G-S	Short	240V/60Hz	10 min.	F1	0.0015	Unit output shutdown immediately. NB, NC, NT
Q1, G-D	Short	240V/60Hz	10 min.	F1	0.019	Unit output shudown immediately. NB, NC, NT
Q1, D-S	Short	240V/60Hz	10 min.	F1	0.013	Unit output shutdown immediately. NB, NC, NT
NTC1	Short	240V/60Hz	3 hours 41 min.	F1	0.122	Unit running normally. T1 core: 75 degree C, T1 coil: 79 degree C, Ambient: 25 degree C. NB, NC, NT
R1	Short	240V/60Hz	10 min.	F1	0.0015	Unit output shutdown immediately. NB, NC, NT
R11	Short	240V/60Hz	10 min.	F1	0.112	Unit running normally. NB, NC, NT
R11	Open	240V/60Hz	10 min.	F1	0.0015	Unit output shutdown immediately. NB, NC, NT
IC31 pin 6-2	Short	240V/60Hz	10 min.	F1	0.0015	Unit output shutdown immediately. NB, NC, NT
IC31 pin 6-4	Short	240V/60Hz	10 min.	F1	0.0013	Unit output shutdown immediately. NB, NC, NT
IC51, pin 1-2	Short	240V/60Hz	10 min.	F1	0.0011	Unit output shutdown immediately. NB, NC, NT
IC51, pin 3-4	Short	240V/60Hz	10 min.	F1	0.0011	Unit output shutdown immediately. NB, NC, NT
IC51, pin 4	Open	240V/60Hz	10 min.	F1	0.0014	Unit output shutdown immediately. NB, NC, NT
R134	short	240V/60Hz	10 min.	F1	0.049	Unit output shutdown immediately. NB, NC, NT
T1 pin 1-2	Short	240V/60Hz	10 min.	F1	0.092	Unit output shutdown immediately. NB, NC, NT
T1 pin 4-5	Short	240V/60Hz	10 min.	F1	0.0033	Unit output shutdown

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

						immediately. NB, NC, NT
T1 pin 6-7	Short	240V/60Hz	10 min.	F1	0.112	Unit output shutdown immediately. NB, NC, NT
--	--	--	--	--	--	5.3.1 - 5.3.9 - ABNORMAL OPERATION TESTS
Ventilation openings	Blocked	240V/60Hz	3 hours	F1	0.113	T1 core: 79 degree C, T1 coil: 88 degree C, Ambient: 25 degree C. NB, NC, NT
--	--	--	--	--	--	5.3.7 - POWER SUPPLY OUTPUT SHORT-CIRCUIT/OVERLOAD TEST
24Vdc output	Overload	240V/60Hz	18 hours 23 min.	F1	0.180	Trip current: 0.72A. T1 core:105 degree C, T1 coil: 121 degree C, Ambient: 25 degree C. NB, NC, NT
24Vdc output	Short	240V/60Hz	10 min.	F1	0.012	Unit shutdown immediately. NB, NC, NT
supplementary information: Results Key: NB=No indication of dielectric breakdown; NC=Cheesecloth remained intact; NT=Tissue paper remained intact; IP=Internal protection operated (list component); CD=Components damaged (list damaged components); @ = Tests were repeated 2 more times (Totally 3 times) and get the same result; I/P = Input; O/P = Output						

C.2	**TABLE: transformers**						Pass
Loc.	Tested insulation	Working voltage peak /V (2.10.2)	Working voltage rms /V (2.10.2)	Required electric strength (5.2)	Required clearance / mm (2.10.3)	Required creepage distance / mm (2.10.4)	Required distance thr. insul. (2.10.5)
--	--	--	--	--	--	--	--
Loc.	Tested insulation			Test voltage / V	Measured clearance / mm	Measured creepage dist./mm	Measured distance thr. insul / mm; number of layers
--	--			--	--	--	--
Transformer type number				Enclosure - Miscellaneous ID			
--				--			
supplementary information: See Table 2.10.2, Table 2.10.3, Table 2.10.5 and Table 5.2 for details.							

Enclosure

National Differences

Austria**
Belarus*
Belgium**
Bulgaria**
China*
Czech Republic**
Denmark
Finland
France**
Germany
Greece**
Group
Hungary**
Israel
Italy**
Japan*
Korea
Netherlands**
Norway
Poland**
Romania**
Singapore*
Slovakia**
Slovenia**
Spain
Sweden
Switzerland
USA / Canada
Ukraine*
United Kingdom

* No National Differences Declared
** Only Group Differences

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
Denmark - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.2.4.1	In Denmark, certain types of Class I appliances (see sub-clause 3.2.1.1) may be provided with plug not establishing earthing continuity when inserted into Danish socket-outlets.	Class II	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.		N/A
1.7.5	For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a. (Heavy Current Regulations, Section 107-2-D1)		N/A
3.2.1.1	Supply cord 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. CLASS I EQUIPMENT provided with socket-outlets with earth contact 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. 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.	Building-in equipment, shall be evaluated in the final system assembly. .	N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
Finland - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.5.7.1	Resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.9.4	The third dashed sentence is applicable only to equipment as defined by annex, 6.1.2.2.		N/A
1.7.2.1	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 shall be: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"		N/A
2.3.2	Requirements according to this annex 6.1.2.1 and 6.1.2.2 apply.		N/A
2.10.5.13	Requirements according to this annex 6.1.2.1 and 6.1.2.2 apply.		N/A
5.1.7.1	Touch current measurement results exceeding 3,5 mA r.m.s are permitted only for the following equipment: - STATIONARY PLUGGABLE EQUIPMENT TYPE A that: (1) is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and (2) has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and (3) is provided with instructions for the installation		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	of that conductor by a SERVICE PERSON; - STATIONARY PLUGGABLE EQUIPMENT TYPE B - STATIONARY PERMANENTLY CONNECTED EQUIPMENT		
6.1.2.1	Add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - 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. Alternatively for components, 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 - 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. It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994 (EN 60384-14:2005), subclass Y2. A capacitor classified Y3 according to EN 132400 [EN 60384-14:2005], may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400 [EN 60384-14], which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	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 [EN 60384-14]; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400 [EN 60384-14], in the sequence of tests as described in EN 132400 [EN 60384-14].		
6.1.2.2	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 center, 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	Requirements according to this annex 6.1.2.1 and 6.1.2.2 apply with the term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A
Germany - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.7.2.1	According to GPSG, section 2, clause 4: If certain rules on the use, supplementation or maintenance of an item of technical work equipment or ready-to-use commodity must be observed in order to guarantee safety and health, instructions for use in German must be supplied when it is brought into circulation.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
Group - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.1.1	Replace the text of NOTE 3 by the following: NOTE 3 The requirements of EN60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the Safety of Multimedia Equipment. For television sets, EN60065 applies.		N/A
1.2.3	Add the following definition. 1.2.3.Z1 Portable Sound System Small battery powered audio equipment -whose prime purpose is to listen to recorded or boardcasted sound; and -that uses headphones or earphones that can be worn in or on or around the ears; and -that allows the user to walk around NOTE: Examples are mini-disk or CD players, MP3 audio players or similar equipment.		N/A
1.5.1	Add the following NOTE Z1: The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC		Pass
1.7.2.1	Delete NOTE Z1 and addd the following paragraph at the end of the subclause: In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a a warning that excessive sound pressure from earphones and headphones can cause hearing loss.		N/A
2.7.1	Replace the subclause as follows: Basic requirements 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): a) except as detailed in b) and c), protective		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; 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; 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. 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.		
2.7.2	Void		Pass
3.2.3	Delete the NOTE and conduit sizes in parentheses in Table 3A		N/A
3.2.5.1	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-F" In Table 3B, replace the first four lines by the following: 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 In the conditions applicable to table 3B, delete the words "in some countries" in condition a). In Note 1, applicable Table 3B, to delete the second sentence.		N/A
3.3.4			N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	In table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: "Over 10 up to and including 16 1.5 to 2.5 1.5 to by 4" Delete the fifth line: conductor sizes for 13 to 16A.		
4.3.13.6	Replace the existing NOTE by the following: 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 and 2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation). Standards taking into account this Recommendation which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A
H	Replace the last paragraph of this annex by: 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. Replace the notes as follows: NOTE - These values appear in Directive 96/29/Euratom. Delete NOTE 2.		N/A
Zx	Protection against excessive sound pressure from personal music players		N/A
Zx.1	General - This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players. A personal music player is a portable equipment for personal use, that:		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	- is designed to allow the user to listen to recorded or broadcast sound or video; and - primarily uses headphones or earphones that can be worn in or on or around the ears; and - allows the user to walk around while in use. NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment. A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause. The requirements in this sub-clause are valid for music or video mode only. The requirements do not apply: - while the personal music player is connected to an external amplifier; or - while the headphones or earphones are not used. NOTE 2 An external amplifier is an amplifier which is not part of the personal music player or the listening device, but which is intended to play the music as a standalone music player. The requirements do not apply to: - hearing aid equipment and professional equipment; NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment. - analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015. NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies. For equipment which is clearly designed or		

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	intended for use by young children, the limits of EN 71-1 apply.		
Zx.2	Equipment Requirements - No safety provision is required for equipment that complies with the following: - equipment provided as a package (personal music player with its listening device), where the acoustic output LAeq,T is ≤ 85 dBA measured while playing the fixed “programme simulation noise” as described in EN 50332-1; and - a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” as described in EN 50332-1. NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level LAeq,T is meant. See also Zx.5 and Annex Zx. All other equipment shall: a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and b) have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and c) provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output exceeding those mentioned above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and NOTE 2 Examples of means include visual or audible signals. Action from the user is always required.		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off. d) have a warning as specified in Zx.3; and e) not exceed the following: 1) equipment provided as a package (player with Its listening device), the acoustic output shall be ≤ 100 dBA measured while playing the fixed “programme simulation noise” described in EN 50332-1; and 2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ≤ 150 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” described in EN 50332-1. For music where the average sound pressure (long term LAeq,T) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song. NOTE 4 Classical music typically has an average sound pressure (long term LAeq,T) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA.		
Zx.3	Warning - The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following: - the symbol of Figure 1 (IEC 60417-6044) with a minimum height of 5 mm; and		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	- the following wording, or similar: “To prevent possible hearing damage, do not listen at high volume levels for long periods.” Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level		
Zx.4	Requirements for Listening devices (headphones and earphones)		N/A
Zx.4.1	Wired listening devices with analogue input With 94 dBA sound pressure output LAeq,T, the input voltage of the fixed “programme simulation noise” described in EN 50332-2 shall be ≥ 75 mV. This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control). NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.		N/A
Zx.4.2	Wired listening devices with digital input With any playing device playing the fixed “programme simulation noise” described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output LAeq,T of the listening device shall be ≤ 100 dBA. This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.). NOTE An example of a wired listening device with digital input is a USB headphone.		N/A
Zx.4.3	Wireless listening devices		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	In wireless mode: - with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and - respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and - with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.)set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output LAeq,T of the listening device shall be ≤ 100 dBA. NOTE An example of a wireless listening device is a Bluetooth headphone.		
Zx.5	Measurement Methods Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s. NOTE Test method for wireless equipment provided without listening device should be defined.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
Israel - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.6.1	Add Note: This clause is applicable subject to the Electricity Law, 1954, its regulations and revisions.	It should be checked in National Approval.	N/A
1.7	Add: Sub-clause 1.7.201 shall be added at the beginning of the clause.		N/A
1.7.2.1	Add: All the instructions and warnings related to safety shall also be written in the Hebrew language.		N/A
1.7.201	The marking in the Hebrew language shall be in accordance with the Consumer Protection Order (Marking of goods), 1983. In addition, the marking required by clause 1.7.1, the following details shall be marked in the Hebrew language. The details shall be marked on the apparatus or on its package, or on a label properly attached to the apparatus or on the package, by bonding or sewing, in a manner that the label cannot be easily removed. 1) name of the apparatus and its commercial designation; 2) Manufacturer's name and address. If the apparatus is imported, the importer's name and address; 3) Manufacturer's registered trademark,if any; 4) Name of the model and serial number, if any; 5) country of manufacturer	It should be checked in National Approval.	N/A
2.9.4	Add: Seven means of protection against electrocution are permitted according to the Electricity Law, 1954, and the Electricity Regulations (Earthing and means of protection against electricity of voltages up to 1,000V) 1991. The seven are 1) TN-S or TN-C-S 2) TT 3) IT		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	4) Isolated Transformer 5) Safety extra low voltage (SELV or ELV) 6) Residual current circuit breaker (30 ma = 1delta) 7) reinforced insulation; double insulation (Class II)		
2.201	Add: Prior to carrying out the tests in accordance with the clauses of this Standard, the compliance of the apparatus with the relevant requirements specified in the appropriate part of the standard series SI 961, shall be checked. The apparatus shall meet the requirements in the appropriate part of the standard series SI 961. If there are components of the apparatus for the prevention of electromagnetic interference, these components shall not reduce the safety level of the apparatus as required by this standard.		N/A
3.2.1.1	Add after the note: The feed plug shall comply with the requirements of Israel Standard SI 32 Part 1.1.		N/A
3.2.1.2	Add: At the end of the first paragraph add the following note: At the time of issue of the standard, there is no Israel Standard for connection accessories to d.c.		N/A

Korea - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.5.101	Plugs for the connection of the apparatus to the mains supply shall comply with the Korean requirement (KSC 8305)		N/A
8	EMC - The apparatus shall comply with the relevant CISPR standards		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
Norway - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.2.13.14	Requirements according to this annex 1.7.2.1 and 7.3 apply.		N/A
1.5.7.1	Resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.8	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	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	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 shall be: "Apparatet må tilkoples jordet stikkontakt"		N/A
1.7.2.1	In Norway, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: "Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing - and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)." NOTE: In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min. Translation to Norwegian (the Swedish text will also be accepted in Norway): “Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr - og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel-TV nettet."		
2.2.4	Requirements according to this annex, 1.7.2.1, 6.1.2.1 and 6.1.2.2 apply.		N/A
2.3.2	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		N/A
2.3.4	Requirements according to this annex, 1.7.2.1, 6.1.2.1 and 6.1.2.2 apply.		N/A
2.10.5.13	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
5.1.7.1	TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s are permitted only for the following equipment: - STATIONARY PLUGGABLE EQUIPMENT TYPE A that: (1) is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and (2) has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and (3) 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
6.1.2.1	Add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - 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. Alternatively for components, 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 - 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.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2. A capacitor classified Y3 according to EN 123400 [EN 60384-14:2005], may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400 [EN 60384-14], 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 [EN 60384-14]; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400 [EN 60384-14], in the sequence of tests as described in EN 132400 [EN 60384-14.]		
6.1.2.2	The exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT and 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	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply with the term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A
7.3	Refer to EN 60728-11:2005 for installation conditions		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
7.3	Requirements according to this annex 1.2.13.14 and 1.7.2.1 apply.		N/A

Spain - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
3.2.1.1	Supply cords of single-phase equipment having a rated current not exceeding 10A shall be provided with a plug according to UNE 20315:1994. Supply cords of single-phase equipment having a rated current not exceeding 2.5A shall be provided with a plug according to UNE-EN 50075:1993. CLASS 1 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. If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.		N/A

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

Sweden - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.2.13.14	Requirements according to this annex 1.7.2.1 and 7.3 apply.		N/A
1.5.7.1	Resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.9.4	The third dashed sentence is applicable only to equipment as defined by this annex, 6.1.2.2		N/A
1.7.2.1	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 shall be:"Apparaten skall anslutas till jordat uttag"		N/A
1.7.2.1	In Sweden, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: "Equipment connected to the protective earthing of the building installation through the mains		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	connection or through other equipment with a connection to protective earthing - and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)." NOTE: In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min. Translation to Swedish: "Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet."		
2.3.2	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		N/A
2.10.5.13	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		N/A
5.1.7.1	TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s are permitted only for the following equipment: STATIONARY PLUGGABLE EQUIPMENT TYPE A that: (1) is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and (2) has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and (3) is provided with instructions for the installation of that conductor by a SERVICE PERSON; - STATIONARY PLUGGABLE TYPE B - STATIONARY PERMANENTLY CONNECTED EQUIPMENT		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
6.1.2.1	Add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - 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. Alternatively for components, 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 - 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. It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2. A capacitor classified Y3 according to EN 132400 [EN 60384-14:2005], may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400 [EN 60384-14], 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 [EN 60384-14]; - the impulse test of 2,5 kV is to be performed		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	before the endurance test in EN 132400 [EN 60384-14], in the sequence of tests as described in EN 132400 [EN 60384-14.]		
6.1.2.2	The exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT and 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	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply with the term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A
7.3	Requirements according to this annex 1.2.13.14 and 1.7.2.1 apply.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
Switzerland - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
3.2.1.1	Supply cords of equipment having a RATED CURRENT not exceeding 10A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets: SEV 6532-2 1991 Plug Type 15 3P+N+PE SEV 6533-2 1991 Plug Type 11 L+N SEV 6534-2 1991 Plug Type 12 L+N+PE In general, EN 60309 applies for plugs for currents exceeding 10A. However, a 16A 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. SEV 5932-2 1998:Plug Type 25 3L+N+PE SEV 5933-2 1998:Plug Type 21 L+N SEV 5934-2 1998:Plug Type 23 L+N+PE		N/A
3.2.4	Requirements according to this annex 3.2.1.1 apply.		N/A

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

USA / Canada - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.1	Equipment able to be installed in accordance with the National Electrical Code ANSI/NFPA 70 and the Canadian Electrical Code, Part1, and when applicable, the National Electrical Safety Code, IEEE C2.		Pass
1.1.1	Equipment able to be installed in accordance with ANSI/NFPA 75 and NEC Art. 645 unless intended for use outside of computer room and provided with such instructions.		Pass
1.1.2	Equipment in wire-line communication facilities serving high-voltage electric power stations operating at greater than 1kV are excluded.		N/A
1.1.2	Special requirements apply to equipment intended for use outdoors.	Indoor use only	N/A
1.4.14	For PLUGGABLE EQUIPMENT TYPE A, the protection in the installation is assumed to be 20 A.		Pass
1.5.1	All IEC standards for components identified in Annex P.1 replaced by the relevant requirements of CSA and UL component standards in Annex P.1.		Pass
1.5.1	All IEC standards for components identified in Annex P.2 alternatively satisfied by the relevant requirements of CSA and UL component standards in Annex P.2.		Pass
1.5.5	Interconnecting cables acceptable for the application regarding voltage, current, temperature, flammability, mechanical serviceability and the like.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
1.5.5	For other than limited power and TNV circuits, the type of output circuit identified for output connector.		N/A
1.5.5	External cable assemblies that exceed 3.05 m in length to be types specified in the NEC and CEC.		N/A
1.5.5	Detachable external interconnecting cables 3.05 m or less in length and provided with equipment marked to identify the responsible organization and the designation for the cable.		N/A
1.5.5	Building wiring and cable for use in ducts, plenums and other air handling space subject to special requirements and excluded from scope.		N/A
1.5.5	Telephone line and extension cords and the like comply with UL 1863 and CSA C22.2 No. 233.		N/A
1.6.1.2	Equipment intended for connection to a d.c. power (mains) distribution system is subject to special circuit classification requirements (e.g., TNV-2)		N/A
1.6.1.2	Earthing of d.c. powered equipment provided.		N/A
1.7	Lamp replacement information indicated on lampholder in operator access area.		N/A
1.7.1	Special marking format for equipment intended for use on a supply system with an earthed neutral and more than one phase		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	conductor.		
1.7.1	Equipment voltage rating not higher than rating of the plug except under special conditions.		N/A
1.7.6	Special fuse replacement marking for operator accessible fuses.		N/A
1.7.7	Identification of terminal connection of the equipment earthing conductor.		N/A
1.7.7	Connectors and field wiring terminals for external Class 2 or Class 3 circuits provided with marking indicating minimum Class of wiring to be used.		N/A
1.7.7	Marking located adjacent to terminals and visible during wiring.		N/A
2.1.1.1	Bare TNV conductive parts in the interior of equipment normally protected against contact by a cover intended for occasional removal are exempt provided instructions include directions for disconnection of TNV prior to removal of the cover.		N/A
2.3.1.b	Other telecommunication signaling systems (e.g., message waiting) than described in 2.3.1(b) are subject to M.4.		N/A
2.3.1.b	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vp or 60 V d.c., the maximum current limit through a 2000 Ohm or greater resistor with loads disconnected is 7.1 mA peak or 30 mA d.c. under normal conditions.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
2.3.1.b	Limits for measurements across 5000 ohm resistor in the event of a single fault are replaced after 200 ms with the limits of M.3.1.4.		N/A
2.3.2.1	In the event of a single fault, the limits of 2.2.3 apply to SELV circuits and accessible conductive parts.		N/A
2.3.2.4	Enamel coating on signal transformer winding wire allowed as an alternative to Basic insulation in specific telecommunication applications when subjected to special construction requirements and routine testing.		N/A
2.5	Overcurrent protection device required for Class 2 and Class 3 limiting in accordance with the NEC, or for a Limited Power Source, not interchangeable with devices of higher ratings if operator replaceable.		N/A
2.6	Equipment having receptacles for output a.c. power connectors generated from an internal separately derived source have the earthed (grounded) circuit conductor suitably bonded to earth.	No receptacles.	N/A
2.6.3.3	For PLUGGABLE EQUIPMENT TYPE A, if a) b) or c) are not applicable, the current rating of the circuit is taken as 20 A		N/A
2.6.3.3	The first column on Table 2D requirement: “Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration."		N/A
2.6.3.4	Capacity of connection between earthing terminal and parts required to be earthed subject to		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	special conditions based on the current rating of the circuit.		
2.6.3.4	Protective bonding conductors and their terminals of non-standard constructions (e.g. PWB traces) evaluated to limited short-circuit test of CSA C22.2 No.0.4.		N/A
2.6.4.1	Field wiring terminals for earthing conductors suitable for wire sizes (gauge) used in US and Canada.		N/A
2.7.1	Data for selection of special external branch circuit overcurrent devices marked on the equipment.		N/A
2.7.1	Standard supply outlets protected by overcurrent device in accordance with the NEC, and CEC, Part 1.		N/A
2.7.1	Overcurrent protection for individual transformers that distribute power to other units over branch circuit wiring.		N/A
2.7.1	Additional requirements for overcurrent protection apply to equipment provided with panelboards.		N/A
2.7.1	Non-motor-operated equipment requiring special overcurrent protective device marked with device rating.		N/A
2.10.5.12	Multi-layer winding wire subject to UL component wire requirements in addition to 2.10.5.12 and Annex U.		Pass

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
3.1.1	Permissible combinations of internal wiring/external cable sizes for overcurrent and short circuit protection.		N/A
3.1.1	All interconnecting cables protected against overcurrent and short circuit.		N/A
3.2	Wiring methods permit connection of equipment to primary power supply in accordance with the NEC and CEC, Part 1.	Building-in equipment, shall be evaluated in the final system assembly.	N/A
3.2.1	Permitted use for flexible cords and plugs.		N/A
3.2.1	Flexible cords provided with attachment plug rated 125% of equipment current rating.		N/A
3.2.1	Any Class II equipment provided with 15 or 20 A standard supply outlets, Edison-base lampholders or single pole disconnect device provided with a polarized type attachment plug.		N/A
3.2.1.2	Equipment intended for connection to DC mains supply power systems complies with special wiring requirements (e.g., no permanent connection to supply by flexible cord).		N/A
3.2.1.2	Equipment with one pole of the DC mains supply connected to both the equipment mains input terminal and the main protective earthing terminal provided with special instructions and construction provisions for earthing.		N/A
3.2.1.2	Equipment with means for connecting supply to earthing electrode conductor has no switches or protective devices between supply		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	connection and earthing electrode connection.		
3.2.1.2	Special markings and instructions for equipment with provisions to connect earthed conductor of a DC supply circuit to earthing conductor at the equipment.		N/A
3.2.1.2	Special markings and instructions for equipment with earthed conductor of a DC supply circuit connected to the earthing conductor at the equipment.		N/A
3.2.1.2	Terminals and leads provided for permanent connection of DC powered equipment to supply marked to indicate polarity if reverse polarity may result in a hazard.		N/A
3.2.3	Permanently connected equipment has provision for connecting and securing a field wiring system (i.e. conduit, or leads etc.) per the NEC and CEC, Part 1.		N/A
3.2.3	Permanently connected equipment may have terminals or leads not smaller than No. 18 AWG (0.82 mm²) and not less than 150 mm in length for connection of field installed wiring.		N/A
3.2.3	If supply wires exceed 60 °C, marking indicates use of 75 °C or 90 °C wiring for supply connection as appropriate.		N/A
3.2.3	Equipment compatible with suitable trade sizes of conduits and cables.		N/A
3.2.5	Power supply cords are required to be no longer than 4.5 m in length.	Building-in equipment, shall be evaluated in the final	N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	Minimum cord length is required to be 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement. Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.	system assembly.	
3.2.5	Conductors in power supply cords sized according to NEC and CEC, Part I.		N/A
3.2.5	Power supply cords and cord sets incorporate flexible cords suitable for the particular application.		N/A
3.2.6	Strain relief provided for non-detachable interconnecting cables not supplied by a limited power source.		N/A
3.2.9	Adequate wire bending space and volume of field wiring compartment required to properly make the field connections.		N/A
3.2.9	Equipment intended solely for installation in Restricted Access Locations using low voltage d.c. systems may not need provision for connecting and securing a field wiring system. A method of securing wiring or instructions provided to ensure the wiring is protected from abuse.		N/A
3.3	Field wiring terminals provided for interconnection of units for other than LPS or Class 2 circuits also comply with 3.3.		N/A
3.3	Interconnection of units by LPS or Class 2 conductors may have field wiring connectors other		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	than those specified in 3.3 if wiring is reliably separated.		
3.3.1	Terminals for the connection of neutral conductor identified by a distinctive white marking or other equally effective means.		N/A
3.3.3	Wire binding screw terminal permitted for connection of No. 10 AWG (5.3 mm²) or smaller conductor if provided with upturned lugs, cupped washer or equivalent retention.		N/A
3.3.4	Terminals accept wire sizes (gauge) used in the U.S. and Canada.		N/A
3.3.4	Terminals accept current-carrying conductors rated 125% of the equipment current rating.		N/A
3.3.5	First column of Table 3E requirement: “Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration.”		N/A
3.3.6	Field wiring terminals marked to indicate the material(s) of the conductor appropriate for the terminals used.		N/A
3.3.6	Connection of an aluminum conductor not permitted to terminal for equipment earthing conductor.		N/A
3.3.6	Field wiring connections made through the use of suitable pressure connectors (including set screw type), solder lugs or splices to flexible leads.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
3.4.2	Separate motor control device(s) required for cord-connected equipment rated more than 12 A, or with motor rated more than 1/3 hp or more than 120 V.		N/A
3.4.8	Vertically mounted disconnect devices oriented so up position of handle is "on".		N/A
3.4.11	For computer-room applications, equipment with battery systems capable of supplying 750 VA for 5 min require battery disconnect means.		N/A
4.2.8.1	Special opening restrictions for enclosures around CRTs with face dimension of 160 mm or more.		N/A
4.2.9	Compartment housing high-pressure lamp marked to indicate risk of explosion.		N/A
4.2.11	For equipment intended for mounting on racks and provided with slide/rails allowing the equipment to slide away from the rack for installation, service and maintenance, additional construction, performance and marking requirements are applicable to determine the adequacy of the slide/rails.		N/A
4.3.2	Loading test for equipment with handle(s) used to support more than 9 kg tested at four times the weight of the unit.		N/A
4.3.6	In addition to the IEC requirements, Direct Plug-in Equipment complies with UL 1310 or CSA 223 mechanical assembly requirements.		N/A
4.3.12			N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	The maximum quantity of flammable liquid stored in equipment complies with ANSI/NFPA 30(Table NAE.6).		
4.3.12	Equipment using replenishable liquids marked to indicate type of liquid to be used.		N/A
4.3.13.2	Equipment that produces x-radiation and does not comply with 4.3.12 under all conditions of servicing marked to indicate the presence of radiation where readily visible.		N/A
4.3.13.5	Requirements contained in the applicable national codes and regulations apply to lasers (21 CFR 1040 and REDR C1370).		N/A
4.7	Automated information storage equipment intended to contain more than 0.76 m^3 of combustible media requires provision for automatic sprinklers or a gaseous agent extinguishing system.		N/A
4.7.3.1	Equipment for use in environmental air space other than ducts or plenums provided with metal enclosure or with non-metallic enclosure having adequate fire-resistance and low smoke producing characteristics. Low smoke-producing characteristics evaluated according to UL 2043. Equipment for installation in space used for environmental air as described in Sec. 300-22(c) of the NEC provided with instructions indicating suitability for installation in such locations.		N/A
4.7.3.1	Flame spread rating for external surface of combustible material with exposed area greater than 0.93 m^2 or a single dimension greater than 1.8 m; 50 or less for computer room applications or 200 or less for other applications.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
4.7.3.4	Wire marked "VW-1" or "FT-1" considered equivalent.		N/A
5.1.8.2	Special earthing provisions and instructions for equipment with high touch current due to telecommunication network connections.		N/A
5.1.8.3	Touch current due to ringing voltage for equipment containing telecommunication network leads.		N/A
5.3.7	Overloading of SELV connectors and printed wiring board receptacles accessible to the operator.		N/A
5.3.7	Tests interrupted by opening of a component repeated two additional times.		N/A
5.3.9.1	Test interrupted by opening of wire or trace subject to certain conditions.		N/A
6	Specialized instructions provided for telephones that may be connected to a telecommunications network.		N/A
6	Marking identifying function of telecommunication type connectors not used for connection to a telecommunication network.		N/A
6.3	Equipment remotely powered over telecommunication wiring systems provided with specialized markings adjacent to the connection.		N/A
6.3	Overcurrent protection incorporated into		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	equipment to provide power over telecommunication wiring system not interchangeable with devices of higher ratings if operator replaceable.		
6.4	Additional requirements for equipment intended for connection to a telecommunication network using cable subject to overvoltage from power line failures (Fig. 6C).		N/A
6.4	Where 26 AWG line cord required by Fig. 6C, either the cord is provided with the equipment or described in the safety instructions.		N/A
7	Equipment associated with the cable distribution system may need to be subjected to applicable parts of Chapter 8 of the NEC.		N/A
H	Ionizing radiation measurements made under single fault conditions in accordance with the requirements of the Code of Federal Regulations 21 CFR 1020 and the Canadian Radiation Emitting Devices Act, REDR C1370.		N/A
M.2	Continuous ringing signals evaluated to Method A subjected to special accessibility considerations.		N/A
M.4	Special requirements for message waiting and similar telecommunications signals.		N/A
NAC	Equipment intended for use with a generic secondary protector marked with suitable instructions.		N/A
NAC	Equipment intended for use with a specific		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	primary or secondary protector marked with suitable instructions.		
NAD	Acoustic pressure from an ear piece less than 140 dBA for short duration disturbances, and less than 125 dBA for handsets, 118 dBA for headsets and insert earphones, for long duration disturbances.		N/A
NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.		N/A
EE.5	UL articulated accessibility probe (Fig. EE.3) required for assessing accessibility to document/media shredders, instead of Figure 2A test finger.		N/A

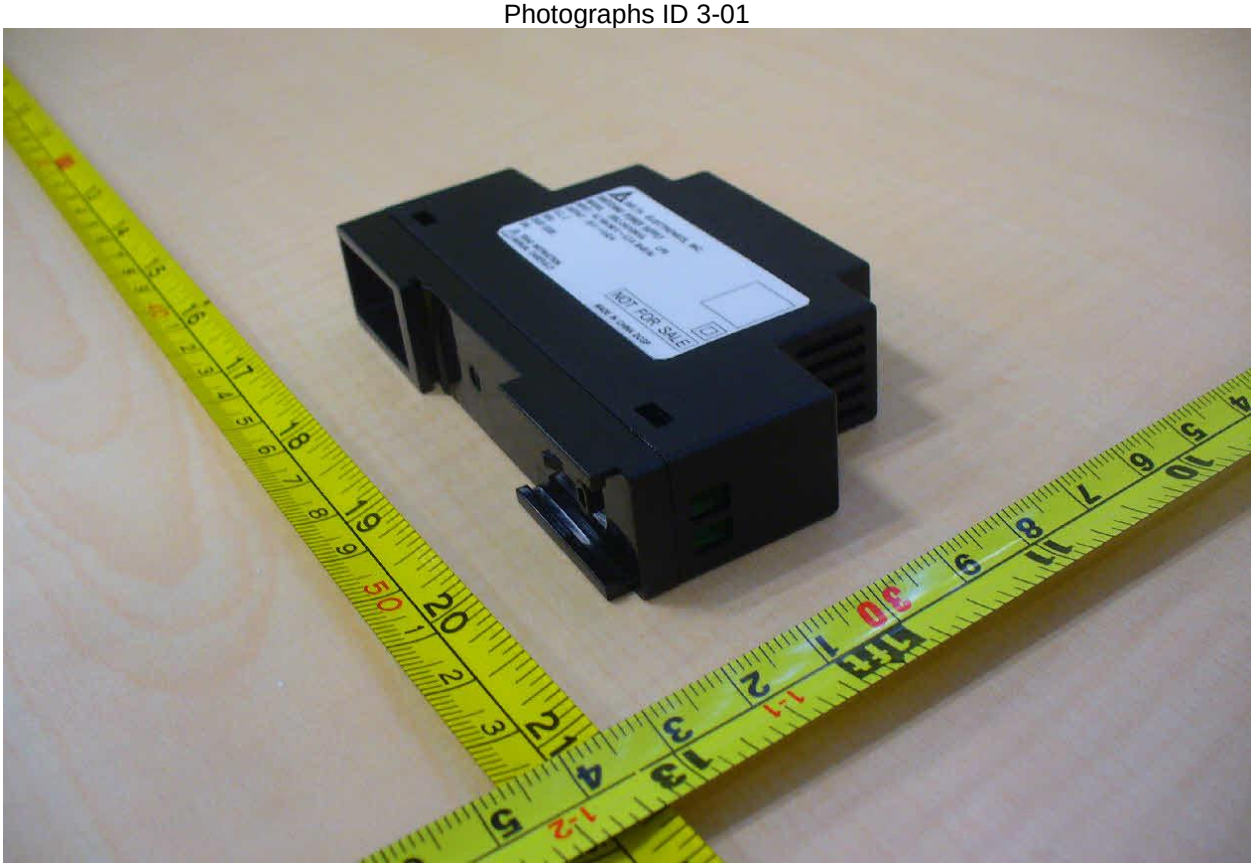
IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
United Kingdom - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
2.6.3.3	The current rating of the circuit shall be taken as 13 A, not 16 A.		N/A
2.7.1	To protect against excessive currents and short-circuits in the PRIMARY 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.		N/A
3.2.1.1	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 1786: 1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE: "Standard plug" is defined in SI 1786: 1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.	Building-in equipment, shall be evaluated in the final system assembly.	N/A
3.2.5.1	A power supply cord with conductor of 1.25 mm² is allowed for equipment with a rated current over 10A and up to and including 13A.		N/A
3.3.4	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 mm² to 1.5 mm² nominal cross-sectional area.		N/A
4.3.6	The torque test is performed using a socket		N/A

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

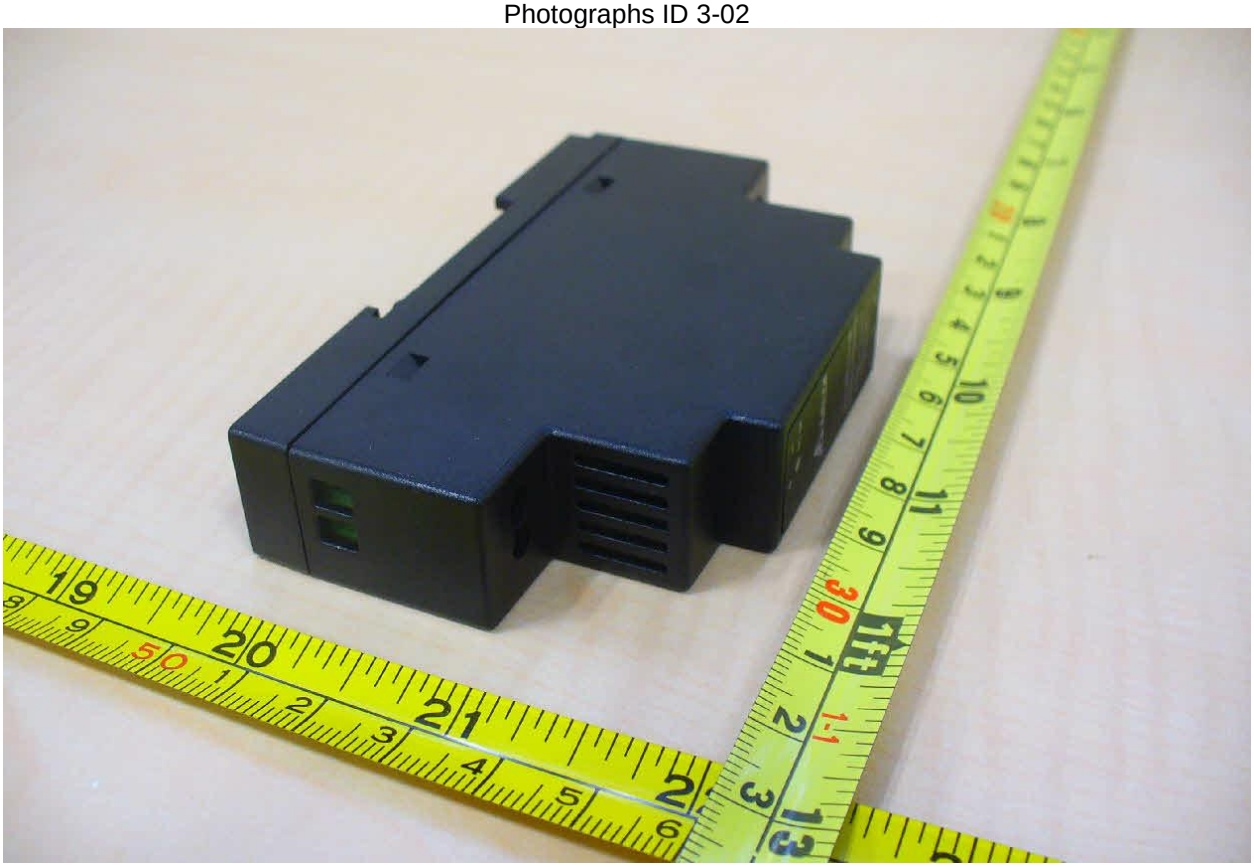
Enclosures

Type	Supplement Id	Description
Photographs	3-01	External View - Input Side
Photographs	3-02	External View - Output Side
Photographs	3-03	External View - Top Side
Photographs	3-04	Open Chassis
Photographs	3-05	Open Cover
Photographs	3-06	PWB Component Side
Photographs	3-07	PWB Trace Side
Diagrams	4-01	Overall Dimension
Diagrams	4-02	Cover
Diagrams	4-03	Chassis
Diagrams	4-04	HS1
Diagrams	4-05	FL1 Spec.
Diagrams	4-06	T1 Spec.
Diagrams	4-07	Glue Location
Schematics + PWB	5-01	PWB Layout (P/N DRC-24V10W1AZ)
Schematics + PWB	5-02	PWB Layout (P/N TDC-178)
Manuals		
Miscellaneous	7-01	Declaration letter of multiple factories
Licenses		
Marking Plate		

Photographs ID 3-01

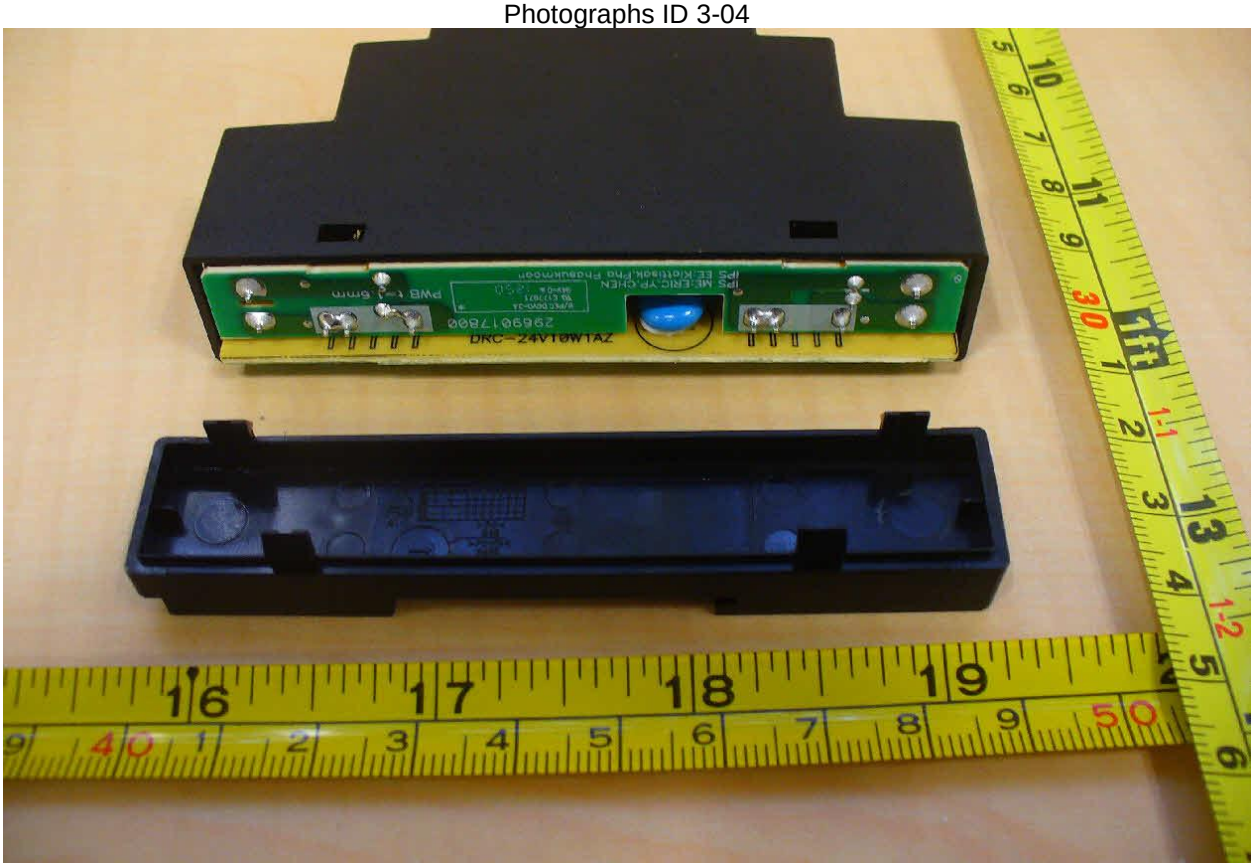


Photographs ID 3-02

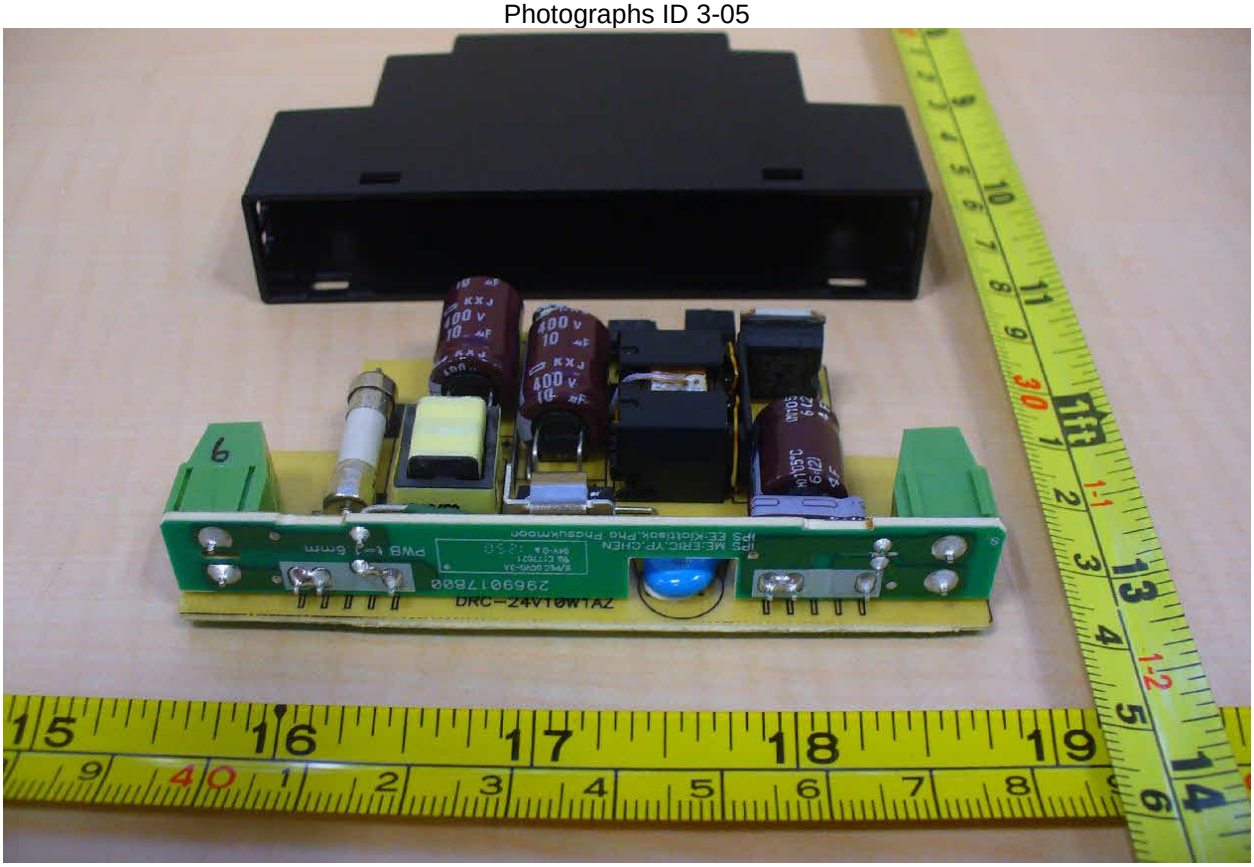


Photographs ID 3-03

Photographs ID 3-04



Photographs ID 3-05



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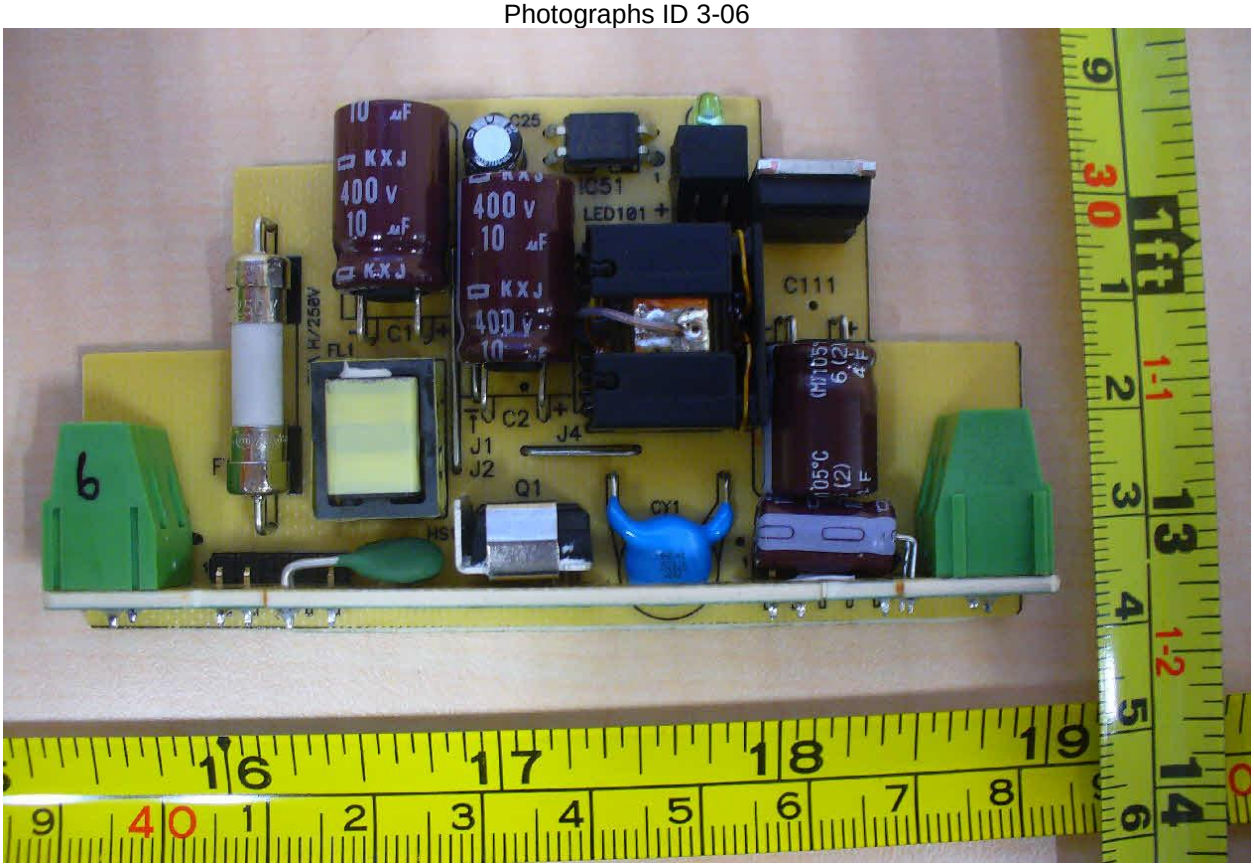
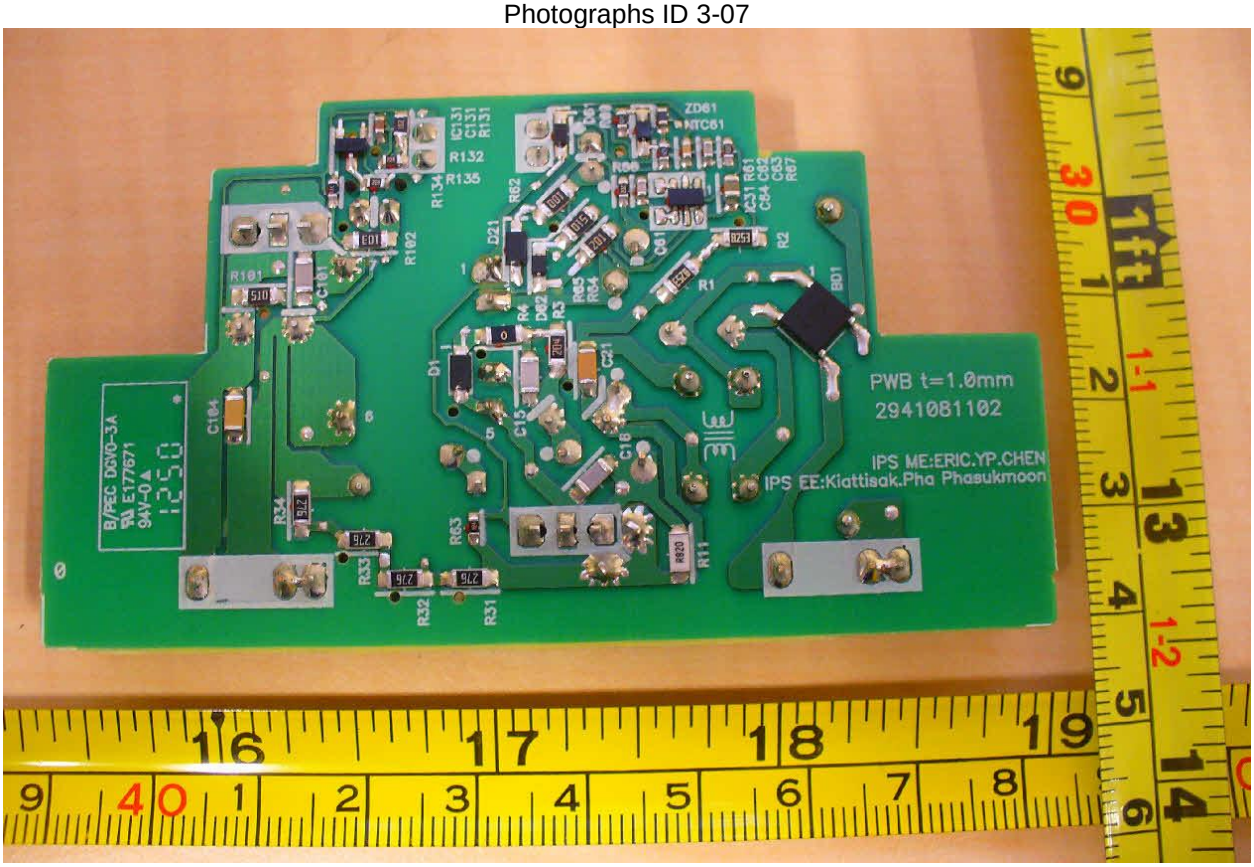
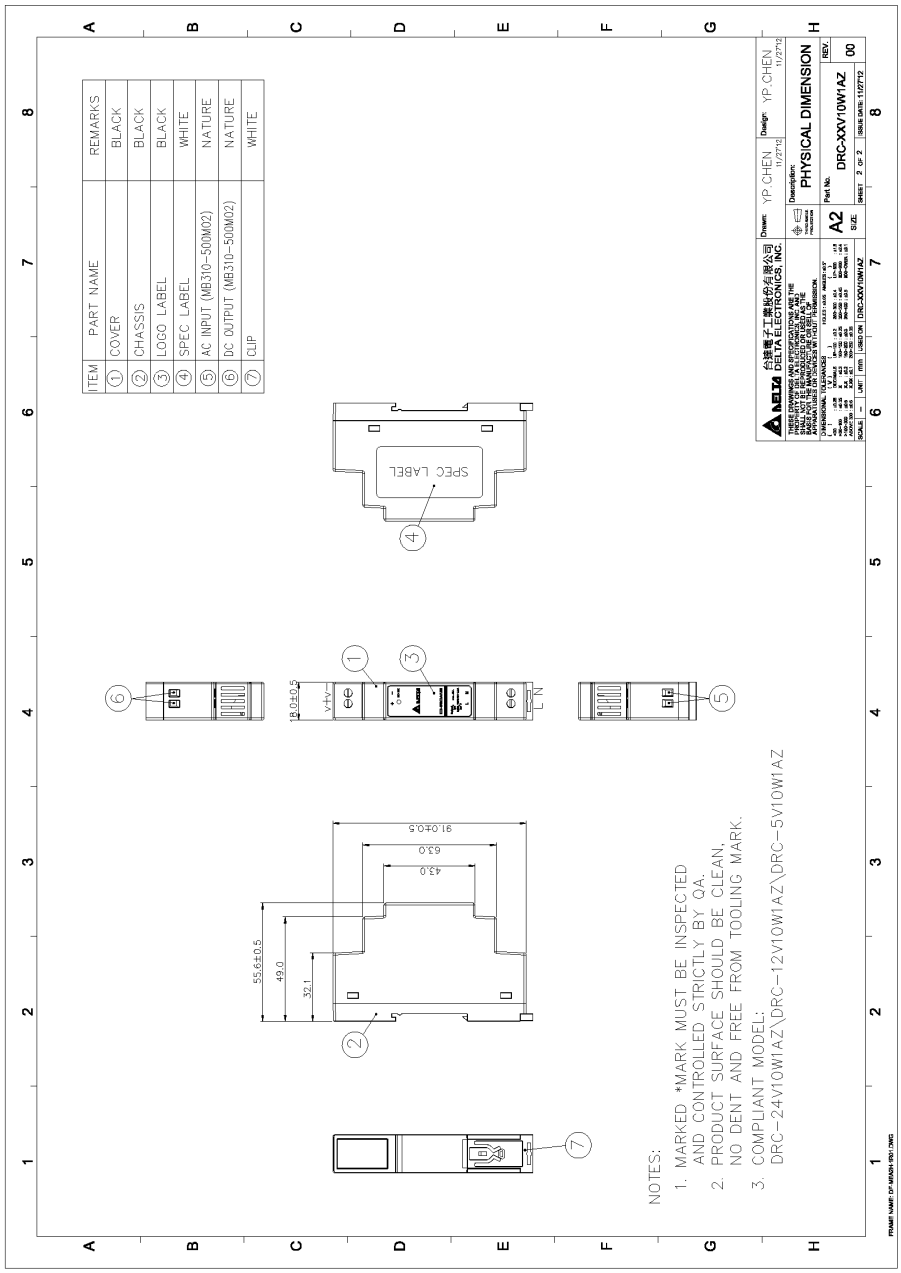


Photographs ID 3-07



Enclosures

Diagrams ID 4-01



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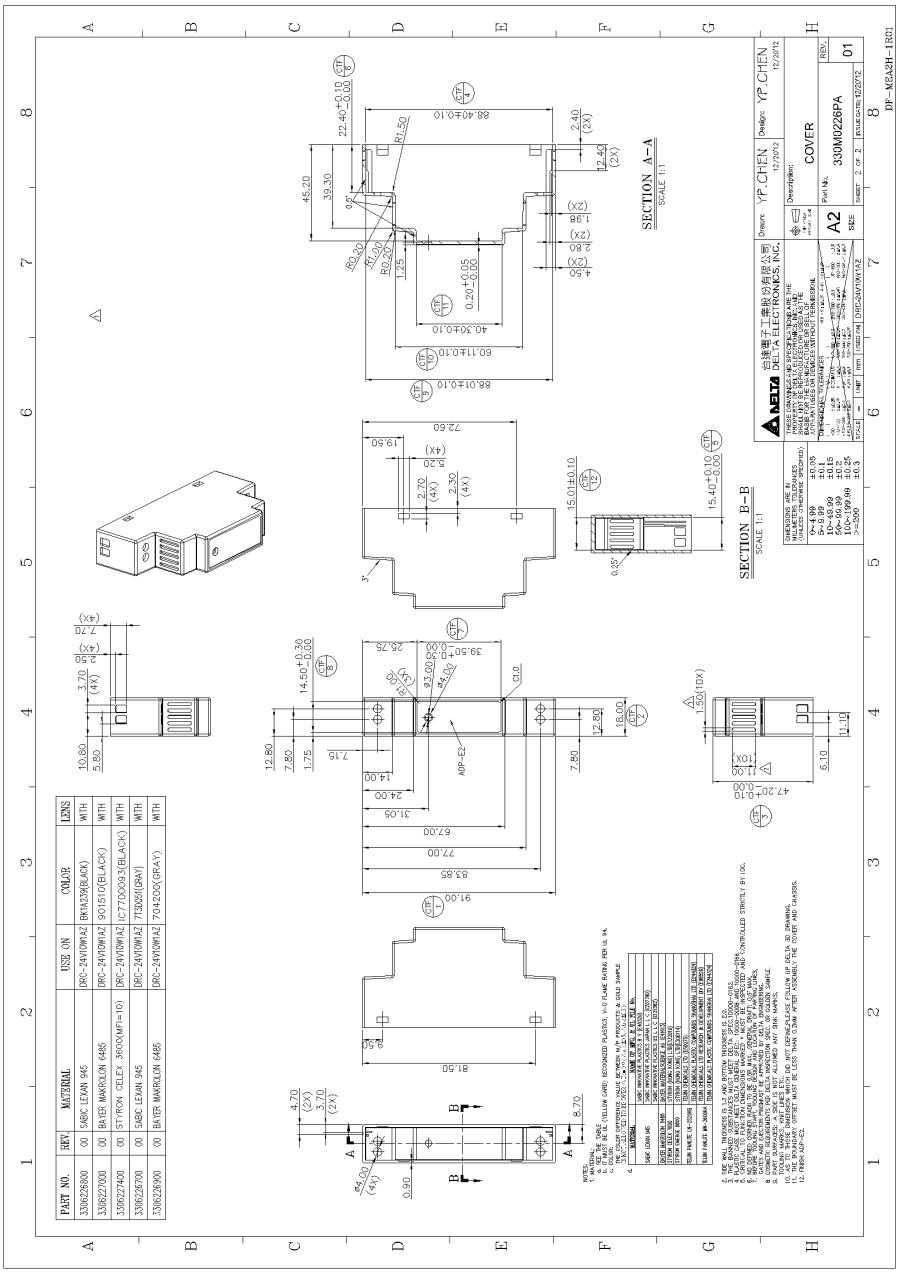

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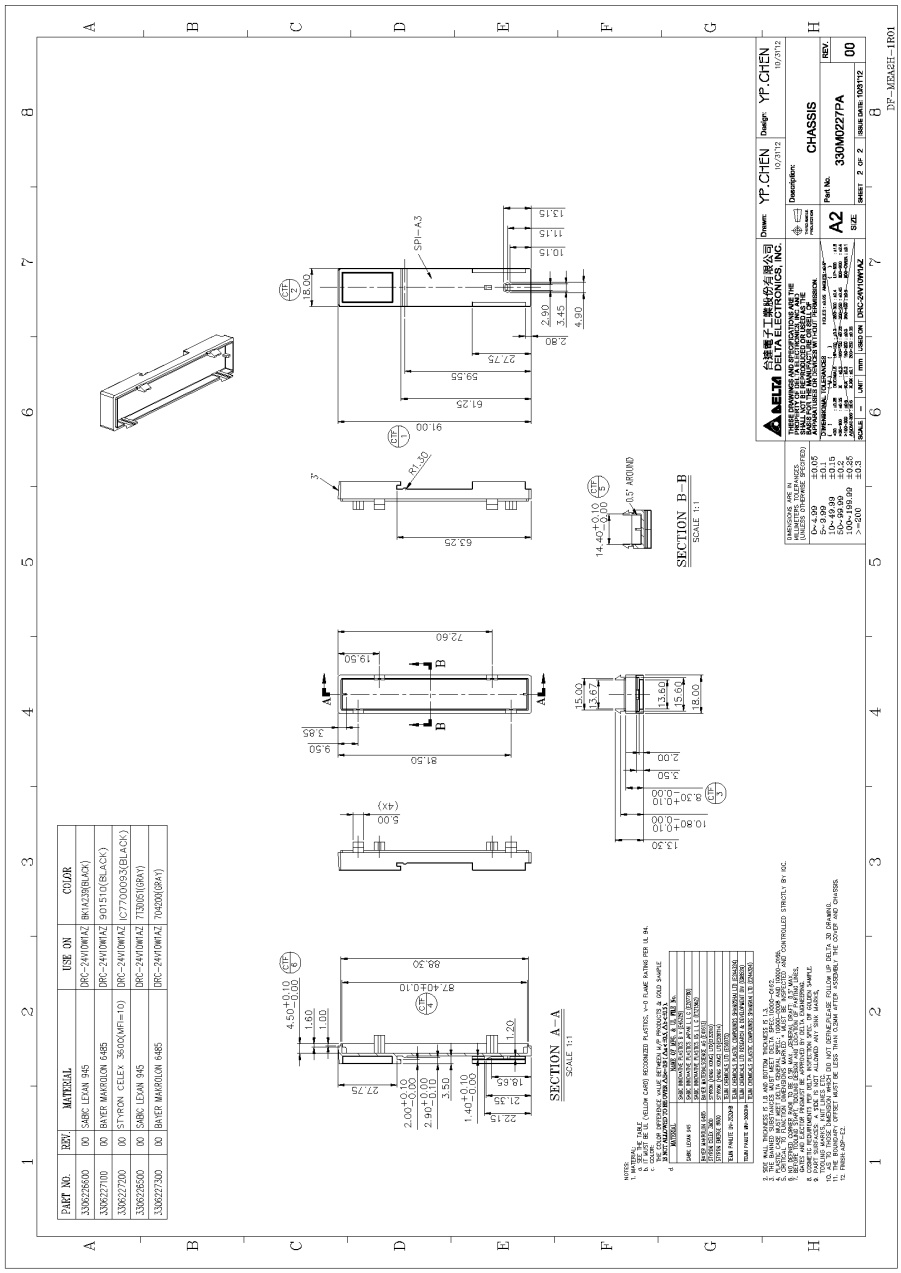
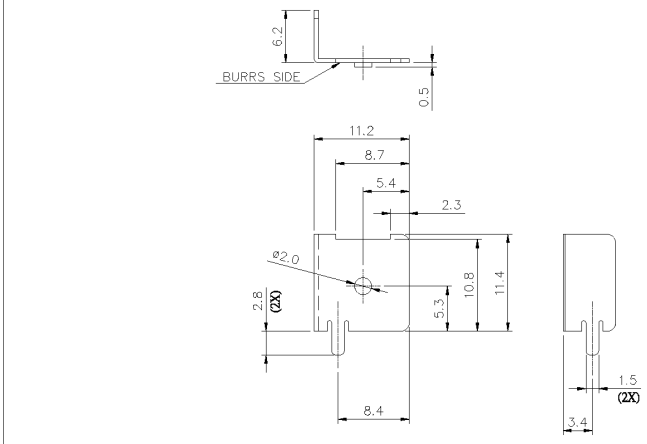


Enclosures

Diagrams ID 4-04



NOTES:

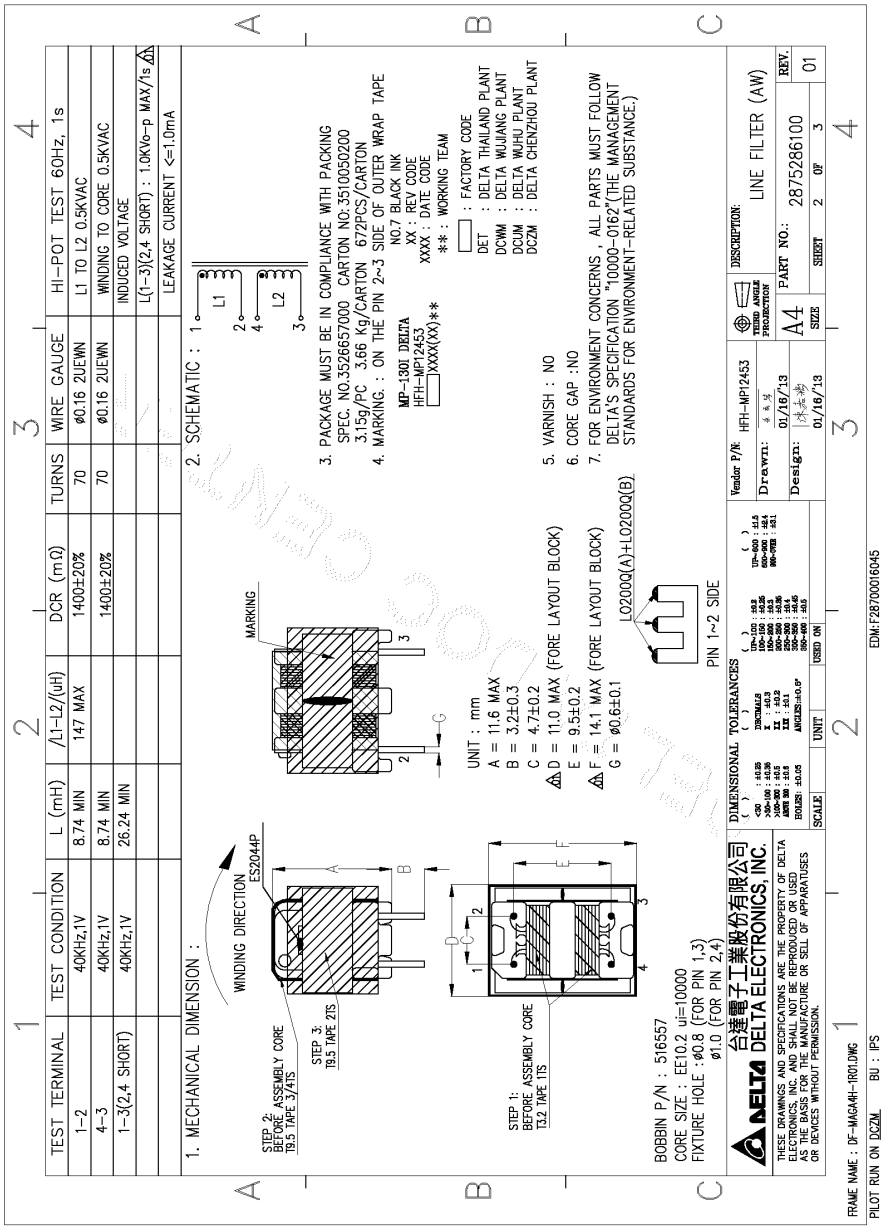
1. MATERIAL: ☑ SPCC T=0.5mm±0.05t FINISH: TIN PLATED 3uM MIN.
   ☐ COPPER (C1100) T=1.0mm±0.05t FINISH: PICKLING (COLOR: NATURE).
   ☐ ALUMINUM (A1100F) T=1.0mm±0.05t FINISH: PICKLING (COLOR: NATURE).
2. PART B & C MATERIAL: SPCC t=0.6mm. COPPER PLATED 3uM MIN. & TIN PLATED 3uM MIN.
3. TIN PLATED PARTS SHOULD MEET DELTA SOLDER ABILITY TEST SPECIFICATION 10000-0038.
4. HEAT SINK MUST MEET DELTA GENERAL SPEC: 10000-0002 AND 10000-0006 AND 10000-0162.
5. UNDEFINED RADII IS 1.0R UNLESS OTHERWISE SPECIFIED.
6. SAMPLE TO BE SUBMITTED FOR DELTA ENGINEERING APPROVAL PRODUCTION TO BE IN ACCORDANCE WITH APPROVAL SAMPLE.
7. PART MUST CLEAN & FREE OF CHIP SHARP EDGES & TOOL MARK.
8. BURRS CAN'T EXCEED 0.05T OF MATERIAL.
9. DIMENSIONS WITH * MARK MUST BE INSPECTED AND CONTROLLED STRICTLY BY IQC.
10. FLATNESS SHOULD BE 0.05mm max. ON ⁘ AREA.

DELTA 台達電子工業股份有限公司 DELTA ELECTRONICS, INC.	Drawn: YP.CHEN 10/30'12	Design: YP.CHEN 10/30'12	
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF DELTA ELECTRONICS, INC. AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SELL OF APPARATUSES OR DEVICES WITHOUT PERMISSION.	THIRD ANGLE PROJECTION	Description: HEAT SINK 1	
DIMENSIONAL TOLERANCES ( ) (V) ( ) HOLES : ±0.05 ANGLES : ±0.5° ( ) <30 :±0.25 >30~100 :±0.35 >100~300 :±0.5 ABOVE 300:±0.8 DECIMALS X :±0.3 X.X :±0.2 X.XX:±0.1 UP~100 :±0.2 100~150 :±0.25 150~200 :±0.3 200~250:±0.35 250~300 :±0.4 300~350 :±0.45 350~400 :±0.5 UP~600 :±1.5 600~900 :±2.4 900~OVER :±3.1	A4 SIZE	Part No. 3347087600	REV. 00
SCALE -- UNIT mm USED ON DRC-24V10W1AZ		SHEET 2 OF 2	ISSUE DATE: 10/30'12

DF-MEA4V-1B00

Enclosures

Diagrams ID 4-05



Enclosures

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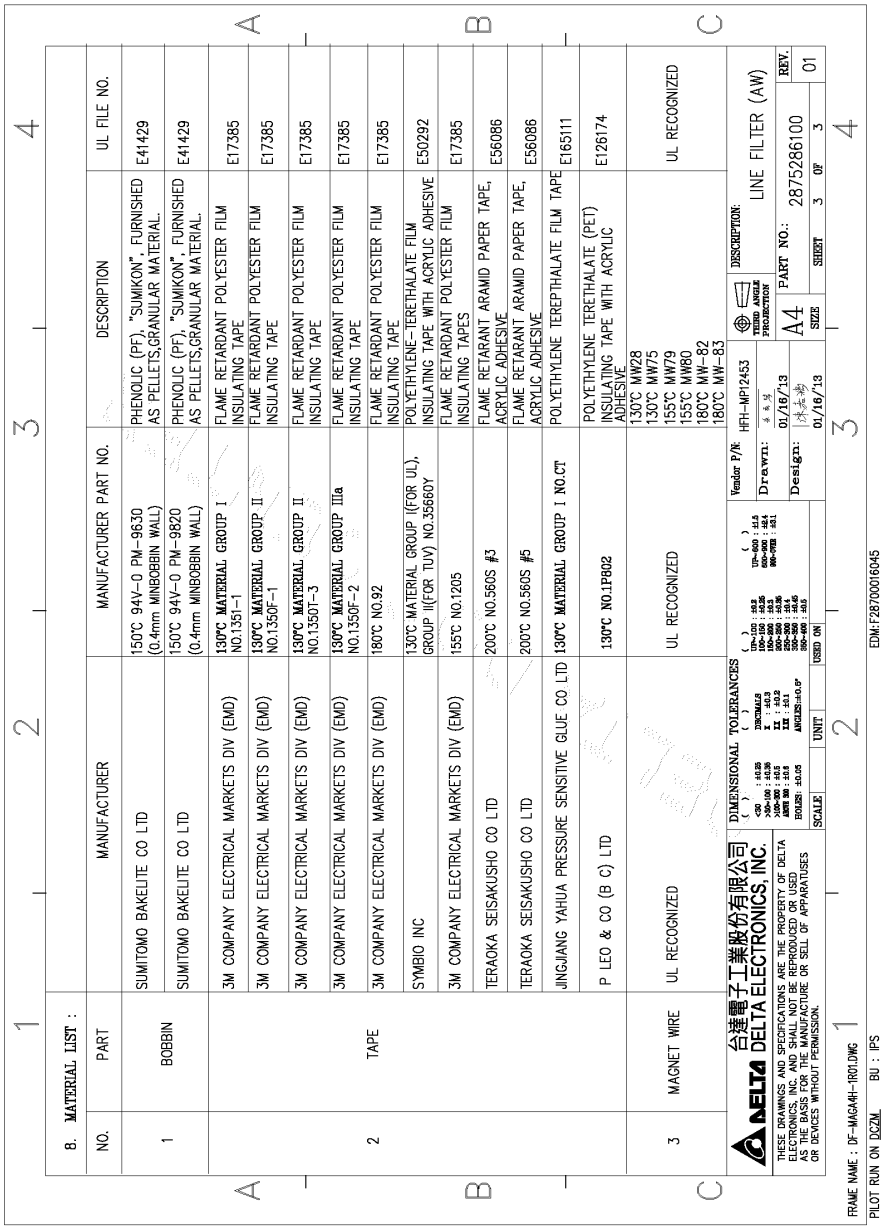

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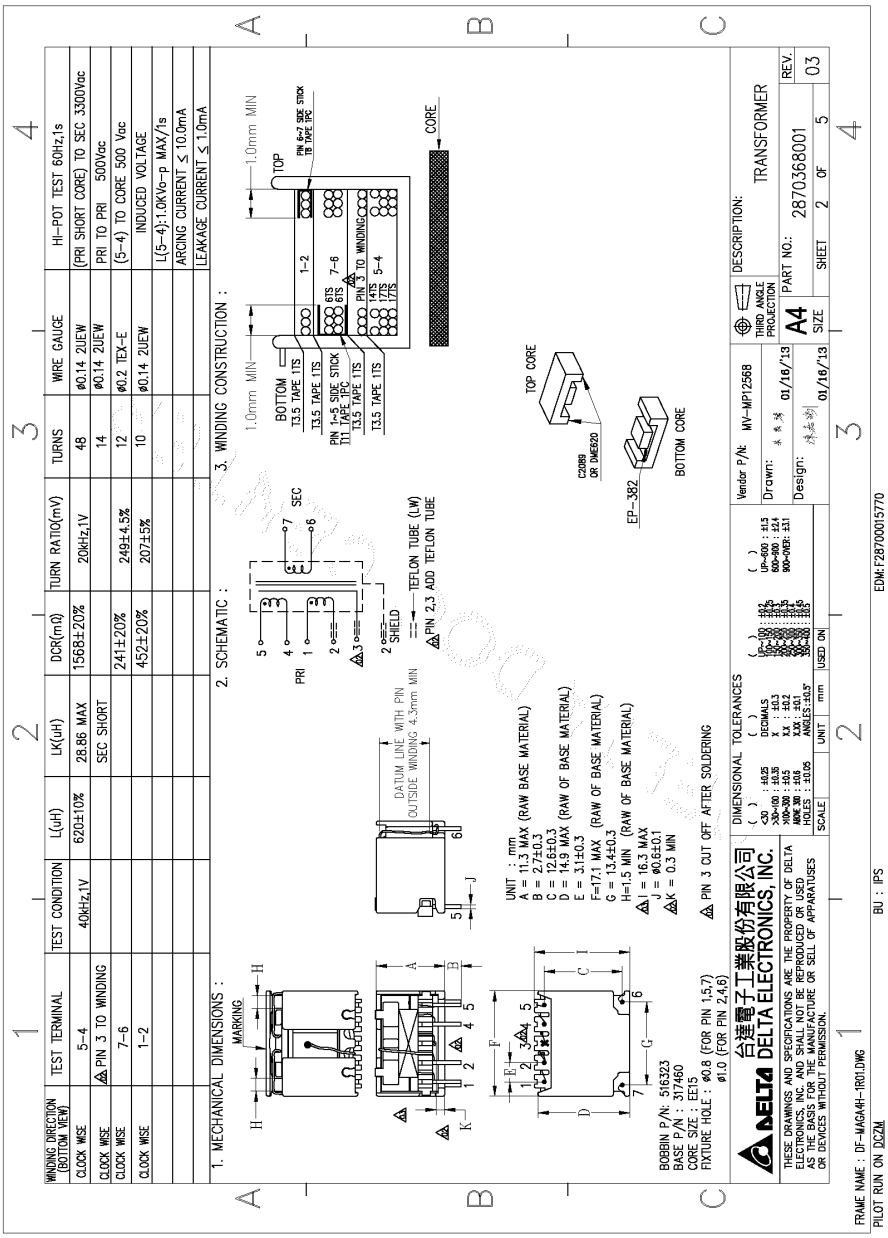

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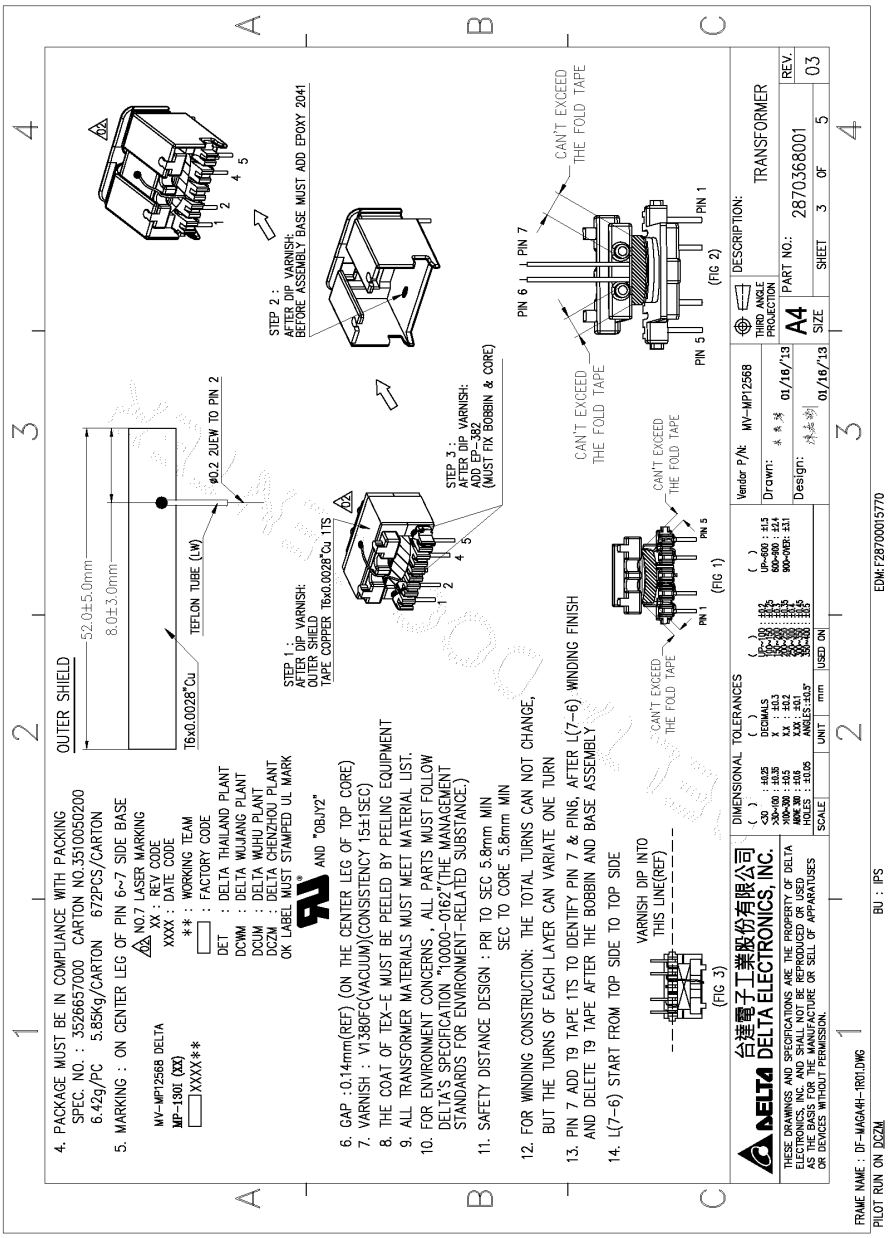

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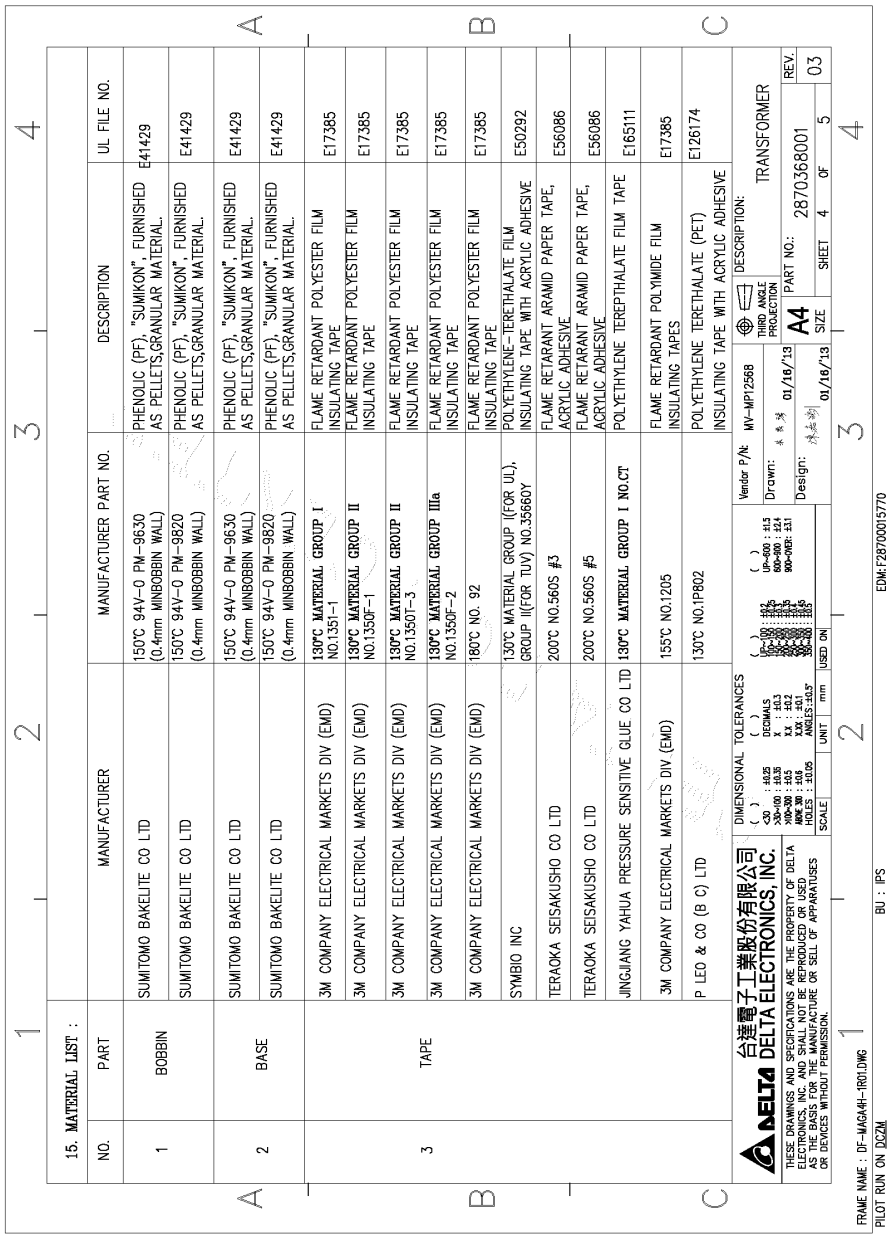

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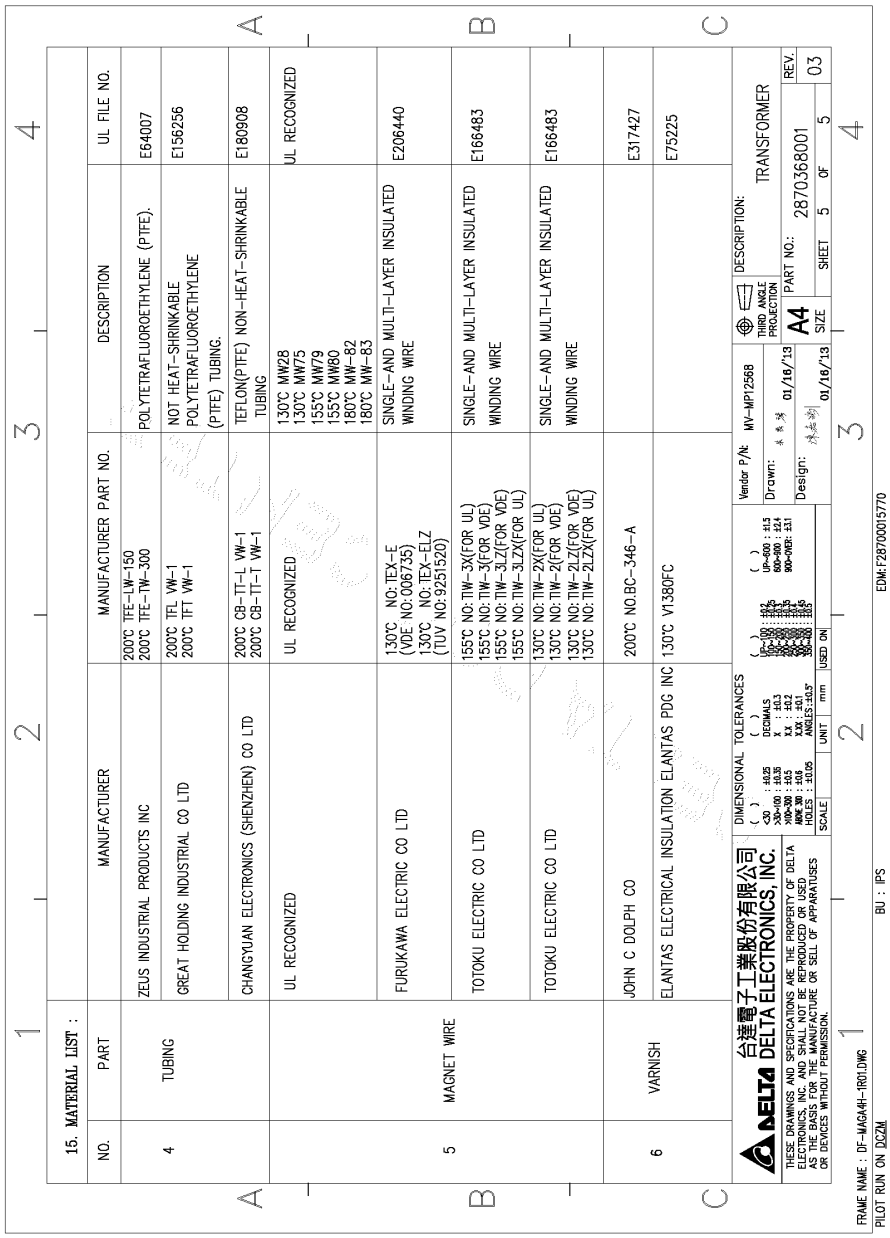
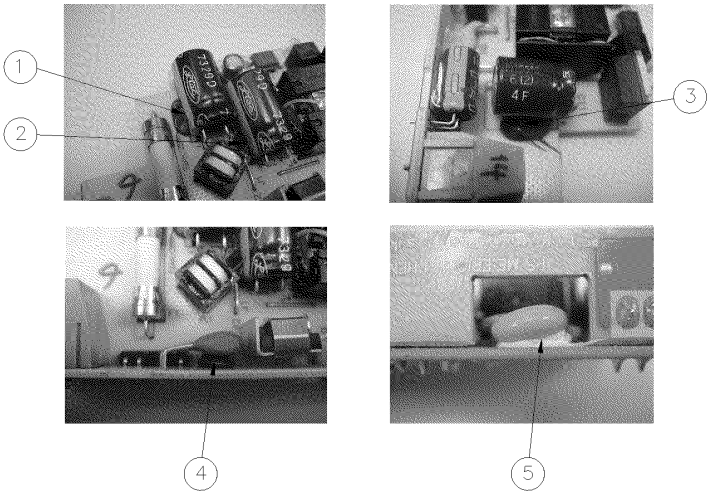


Enclosures

Diagrams ID 4-07

GLUE POSITION



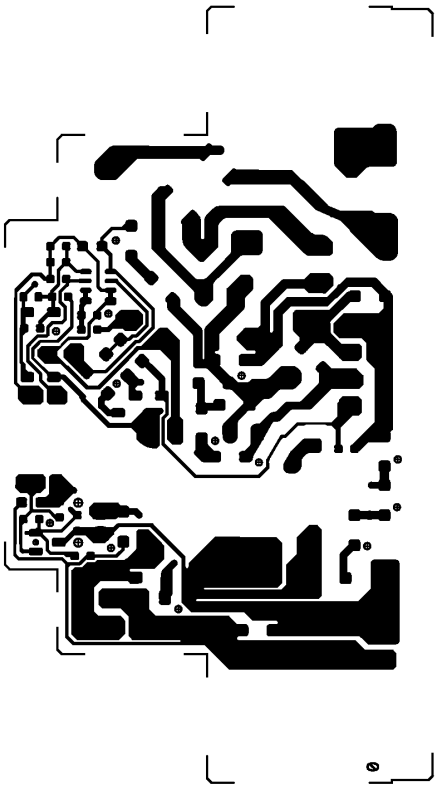
ITEM	POSITION	Value(g)	Function	Notes	REMARK
1	C1側邊 & PWB	0.2	FIX	VIBRATION REQUIREMENT	
2	C2側邊 & PWB	0.2	FIX	VIBRATION REQUIREMENT	
3	C111側邊 & PWB	0.2	FIX	VIBRATION REQUIREMENT	
4	NTC1 底部 & PWB	0.2	FIX	VIBRATION REQUIREMENT	
5	CY1 底部 & PWB	0.2	FIX	VIBRATION REQUIREMENT	

NOTES:1~5 ADD FIX GLUE 4024000400 OR EQUIVALENT

TITLE	REV.	USED ON:	DATE	
Production Notes	00	DRC-24V10W1AZ	11/14'12	(FIG.1)

Enclosures

Schematics ID 5-01



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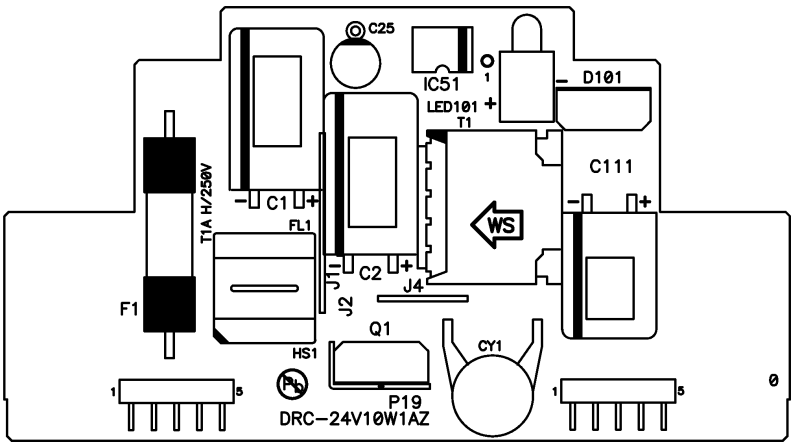
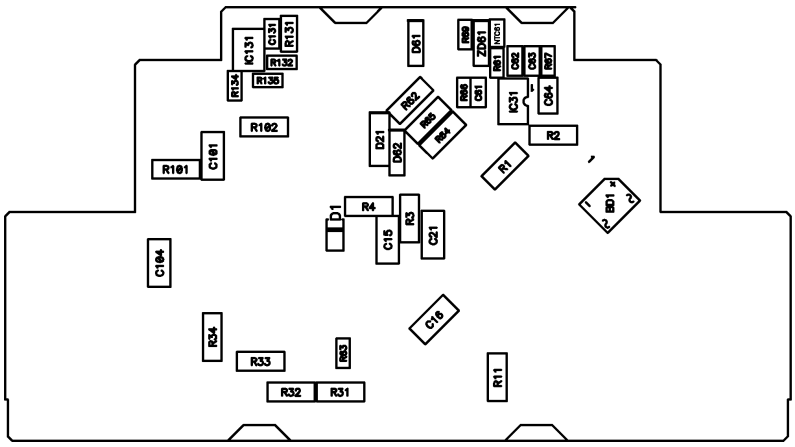
DRAWING NO: P T : DRC-24V10W1AZ REV: 2
USED ON: DRC-24V10W1AZ CODE: 0
MADE BY: KITTY DATE: 12/07/'12
P/N: 2941081102
SOLDER SIDE SIZE:1=1

Schematics ID 5-01



Enclosures

Schematics ID 5-01



Enclosures

Schematics ID 5-02

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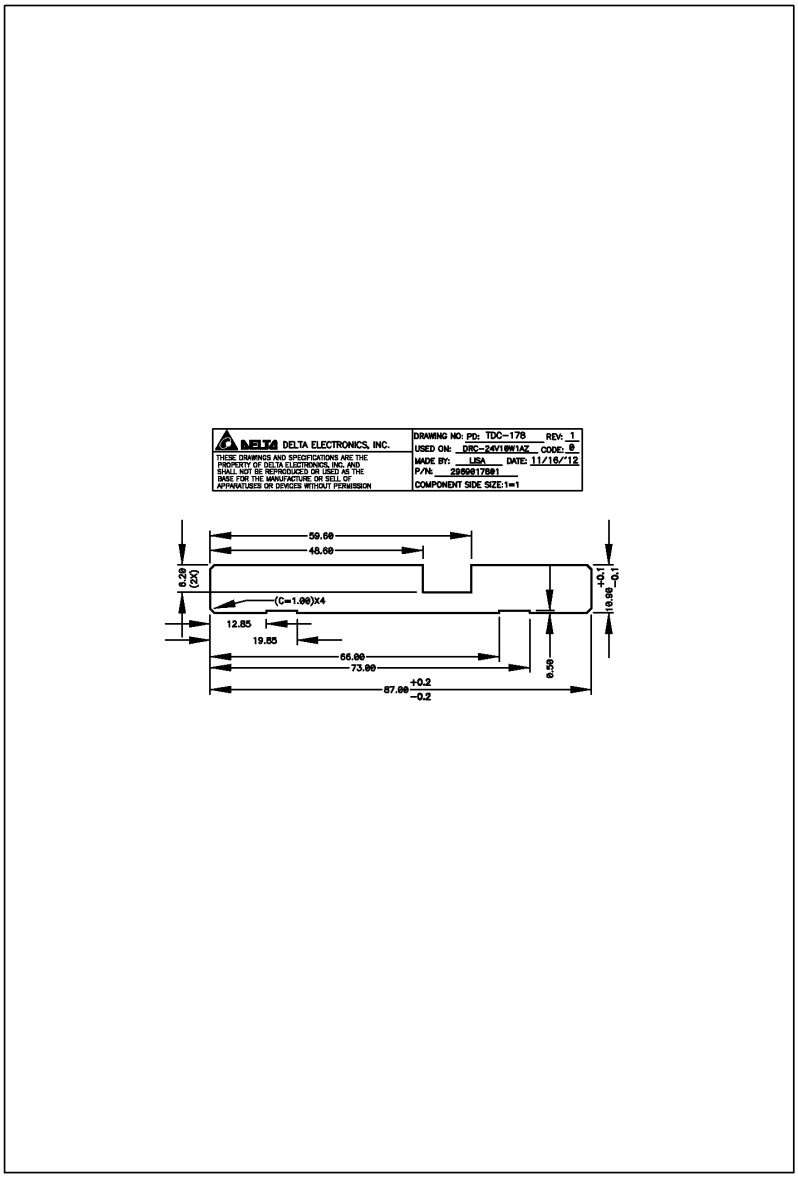

Enclosures

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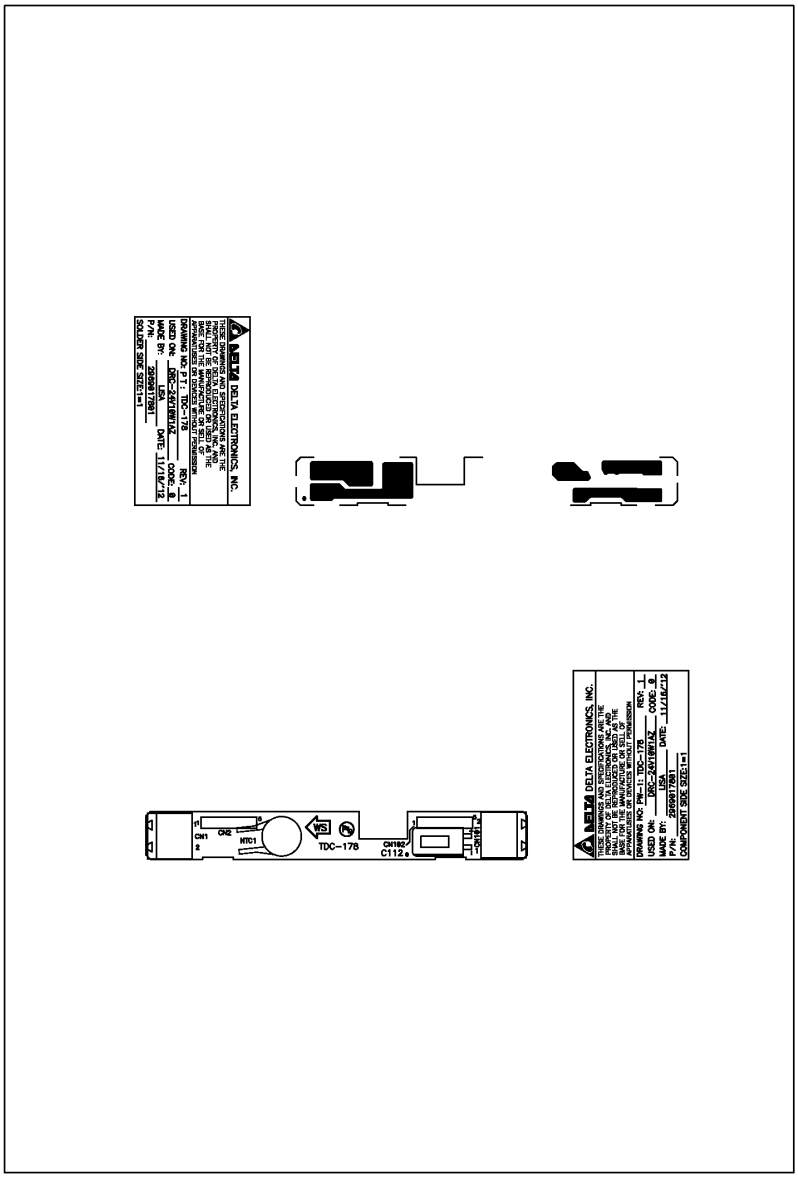

Enclosures

Schematics ID 5-02

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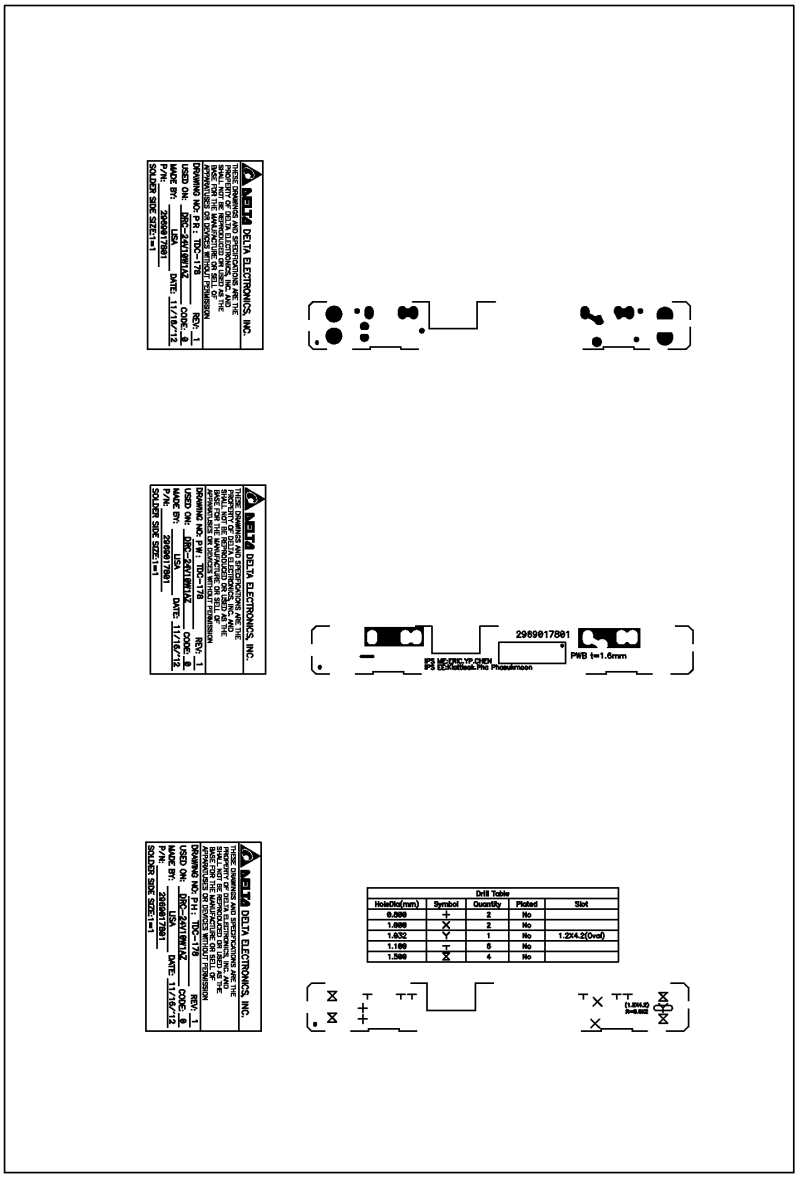
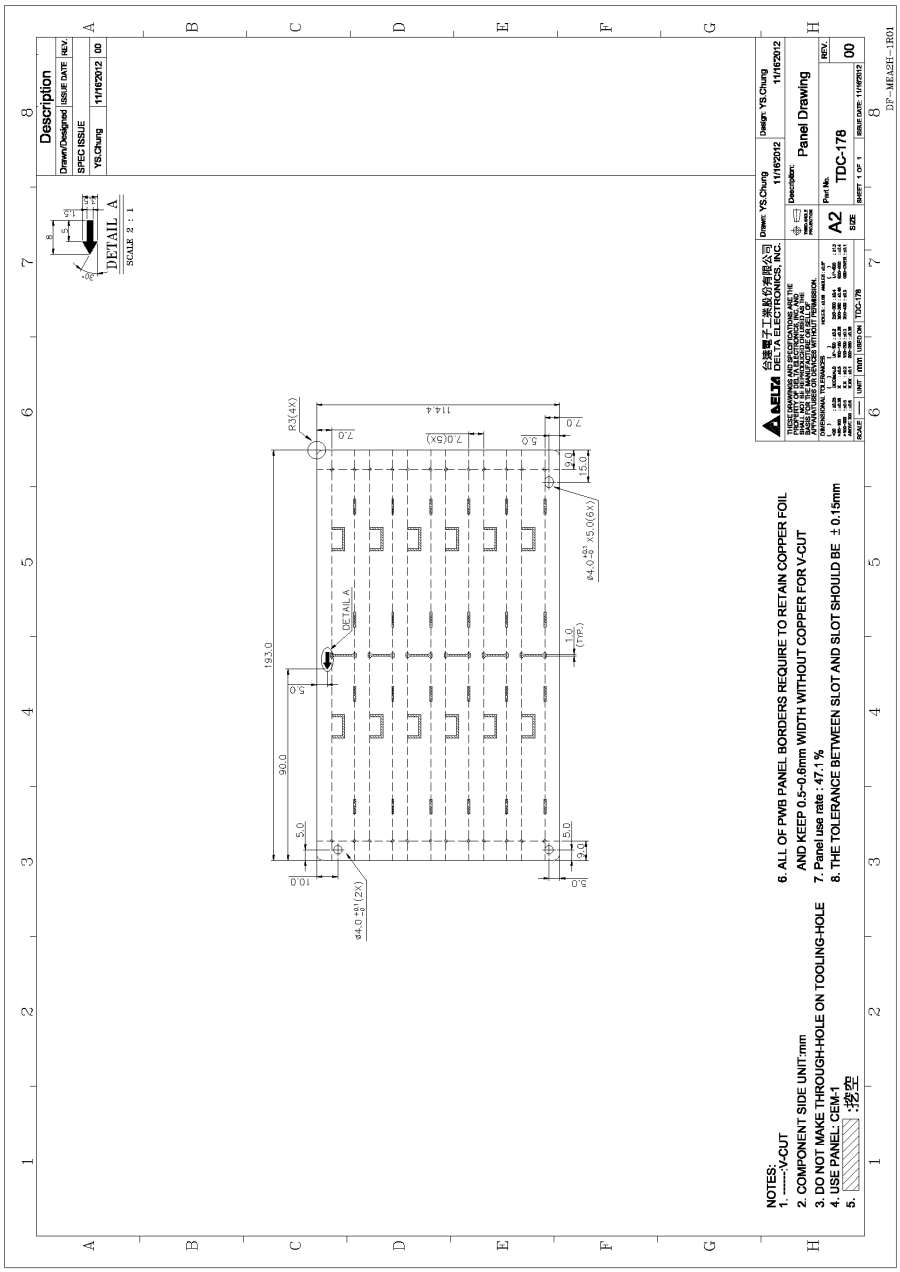


Enclosures

Schematics ID 5-02



Enclosures

Misc ID 7-01

DRAFT CB TEST CERTIFICATE INFORMATION

Generated by ULtraLink on: 2013/01/09

Product	SWITCHING POWER SUPPLY
Name and address of the Applicant	DELTA ELECTRONICS INC 3 TUNGYUAN RD CHUNGLI INDUSTRIAL ZONE TAOYUAN COUNTY 32063 TAIWAN
Name and address of the Manufacturer	DELTA ELECTRONICS INC 3 TUNGYUAN RD CHUNGLI INDUSTRIAL ZONE TAOYUAN COUNTY 32063 TAIWAN
Name and address of the Factory(ies)	DELTA ELECTRONICS (THAILAND) PUBLIC CO., LTD. 909 SOI 9 MOO 4, BANGPOO INDUSTRIAL ESTATE (E.P.Z.), PATTANA 1 RD., TAMBOL PHRAKSA, AMPHUR MUANG, SAMUTPRAKARN 10280, THAILAND. DELTA ELECTRONICS POWER (DONGGUAN) CO., LTD. DELTA INDUSTRIAL ESTATE, SHIJIE TOWN, DONGGUAN CITY, GUANGDONG PROVINCE 523308 CHINA DELTA ELECTRONICS (JIANGSU) LTD. NO. 1688, JIANGXING EAST ROAD, WUJIANG ECONOMIC DEVELOPMENT ZONE, WUJIANG CITY, JIANGSU PROVINCE, 215200 CHINA
Rating and principal characteristics	Input: 100-240V~, 0.3A, 50-60Hz Output: 24Vdc, 0.42A
Trademarks (if any)	DELTA ELECTRONICS, INC.
Model / Type ref.	DRC-24V10W1A
Additional information (if necessary)	
A sample of the product was tested and found to be in conformity with	inclusive of CENELEC Common Modifications. See Test Report for National Differences.
As shown in the Test Report Ref. No. which forms part of this Certificate	E131881-A1594

Client Representative	Tom Chen

Enclosures

Misc ID 7-01

Client email (or fax)	tom.jw.chen@delta.com.tw

This form is to acknowledge that the above information has been reviewed and the material has been found to be accurate as stated. This is also to record client's confirmation that above factories manufacture product(s) that are equal to those submitted for testing and certification. (Refer to IECEE 02, Sub-clause 6.2.5: "When the application covers more than one factory, the address of each factory shall be stated in the CB Test Certificate and the NCB shall take steps to ensure that the products from all the factories are equal. That shall be confirmed in the Test Report.")

Signed: Tom Chen **Dated:** 2013/01/13

***Definitions** per IECEE 02 (http://www.iecee.com/cbscheme/pdf/IECEE02.pdf):
Applicant: A firm or a person who applies to an NCB for obtaining a CB Test Certificate.
Manufacturer: An organization, situated at a stated location or locations, that carries out or controls such stages in the manufacture, assessment, handling and storage of a product that enables it to accept responsibility for continued compliance of the product with the relevant requirements and undertakes all obligations in that connection.
Factory: The location(s) at which the product is produced or assembled and follow-up service is established by the NCB.