IEC IECEE CB SCHEME	Ref. Certif. No.
	JPTUV-101169

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

CB TEST CERTIFICATE

Product	POWER SUPPLY
Name and address of the applicant	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
Name and address of the manufacturer	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
Name and address of the factory	See additional page(s)
Ratings and principal characteristics	Input: AC 100 - 240V, 50-60Hz / DC 125-250V, 1) 1.3A Max., 2) 1.65A Max. Output: 1) DC 12V / 4.17A, 50W Max. (Adjustable between DC 11 to 14V) 2) DC 12V / 5.0A, 60W Max., LPS (Adjustable between DC 12 to 14V)
Trademark (if any)	DELTA ELECTRONICS, INC.
Customer's Testing Facility (CTF) Stage used	CTF Stage 1
Model / Type Ref.	1) PMC-12V050W1XX 2) PMC-12V060W1NX (X = 0-9, A-Z or blank)
Additional information (if necessary may also be reported on page 2)	For model differences, refer to the test report.
A sample of the product was tested and found to be in conformity with	IEC 62368-1:2014 See Test Report for National Differences
As shown in the Test Report Ref. No. which forms part of this Certificate	50301091 001

This CB Test Certificate is issued by the National Certification Body

TÜVRheinland®

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Global Technology Assessment Center
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Web: www.tuv.com

Date: 11.10.2019

Signature: Somrit Junsawat

1. 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

2. Delta Electronics (Jiang Su), LTD.
   No.1688, Jiangxing East Road
   Wujiang Economic Development Zone,
   Wujiang, Jiang Su 215200
   P. R. China

3. Delta Electronics India Private Limited
   Unit-II, Sy. No: 1007, Hosur-Krishnagiri
   Highway, Opp.Akash Bajaj Showroom,
   Chennathur Village, Hosur-635109, Krishnagiri District,
   Tamilnadu State, India

4. Delta Electronics India Private Limited-
   SEZ Unit
   Delta SEZ Notified At Sy. No: 16/1B2B
   (Part)& 16/1B2A(Part), Plot No. 1,
   Industrial Park, Kurubarapalli Village, Krishnagiri - 635115, Tamilnadu State, India

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

Report Ref. No.: 50301091 001

Date: 11.10.2019

Signature: Somrit Junsawat

Test Report issued under the responsibility of:

TÜVRheinland®

TEST REPORT
IEC 62368-1
Audio/video, information and communication technology equipment
Part 1: Safety requirements

Report Number .....:	50301091 001
Date of issue .....:	10.10.2019
Total number of pages .....:	123
Applicant's name .....:	Delta Electronics (Thailand) Public Co., Ltd.
Address .....:	909 Soi 9, Moo 4, Bangpoo Industrial Estate (E.P.Z.), Pattana 1 Rd., Tambol Phraksa, Amphur Muang, Samutprakarn 10280, Thailand
Test specification:	
Standard .....:	IEC 62368-1:2014 (Second Edition)
Test procedure .....:	CB Scheme
Non-standard test method .....:	N/A
Test Report Form No. .....:	IEC62368_1B
Test Report Form(s) Originator .....:	UL(US)
Master TRF .....:	2014-03

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.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test Item description ..... :	POWER SUPPLY
Trade Mark ..... :	DELTA ELECTRONICS, INC.
Manufacturer..... :	Same as applicant.
Model/Type reference ..... :	1) PMC-12V050W1XX 2) PMC-12V060W1NX (X = 0-9, A-Z or blank)
Ratings ..... :	I/P: AC 100 - 240V, 50-60Hz / DC 125-250V, 1) 1.3A Max. 2) 1.65A Max. O/P: 1) DC 12V / 4.17A, 50W Max. (Adjustable between DC 11 to 14V) 2) DC 12V / 5.0A, 60W Max., LPS (Adjustable between DC 12 to 14V)

Testing procedure and testing location:			
☒	CB Testing Laboratory:	TÜV Rheinland Thailand Ltd.	
Testing location/ address ..... :		CTF Stage 1 procedure used. For address of testing location see "Testing Procedure: TMP/CTF Stage 1" below.	
☐	Associated CB Testing Laboratory:		
Testing location/ address ..... :			
Tested by (name + signature) .....:			
Approved by (name + signature).....:			
☒	Testing procedure: TMP/CTF Stage 1	Delta Electronics (Thailand) Public Co., Ltd.	
Testing location/ address ..... :		909 Soi 9, Moo 4, Bangpoo Industrial Estate (E.P.Z.), Pattana 1 Rd., Tambol Phraksa, Amphur Muang, Samutprakarn 10280, Thailand	
Tested by (name + signature) .....:		Somporn Chaiyasing /Project Handler	Somporn
Approved by (name + signature).....:		Pasiwat Phonsawang /Technical Certifier	
☐	Testing procedure: WMT/CTF Stage 2		
Testing location/ address ..... :			
Tested by (name + signature) .....:			
Witnessed by (name + signature) .....:			
Approved by (name + signature).....:			

☐	Testing procedure: SMT/CTF Stage 3 or 4		
Testing location/ address ..... :			
Tested by (name + signature) .....:			
Approved by (name + signature).....:			
Supervised by (name + signature) .....:			

List of Attachments (including a total number of pages in each attachment):

- Photo Documentation (6 pages)
- National Differences (18 pages)
- ATTACHMENT, included working voltage measurement, transformer specifications and schematic circuit (15 pages)

Summary of testing:

Tests performed (name of test and test clause):

All applicable tests as described in Test Case and Measurement Sections were performed.

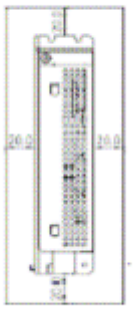
- The equipment has been evaluated for maximum operation temperature of +50°C.
- Maximum operating altitude operated up to 3000m above sea level as declared by manufacturer. Clearances have been evaluated according to IEC 60664-1:1992 table A.2 with a multiplication factor of 1.14 throughout this report.
- Abnormal operation tests have been performed with an external standard breaker trip, rated 16A.
- Testing performed on samples, Serial number:

  Model: PMC-12V050W1XX
  P112050AAL19142001, …002, …006, …007 and P112050AAL19142009.

  Model: PMC-12V060W1NX
  P112060NAL19140211, …212, …213, …214 and P112060NAL19140216.

- The following mounting positions were used during testing:

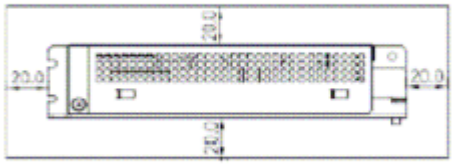
Mounting direction:



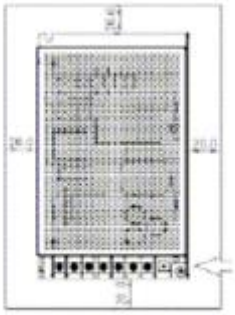
Mounting location 1

Testing location:

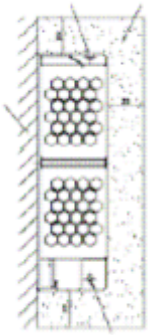
All tests as described in Test Case and Measurement Sections were performed at the laboratory described on page 2.



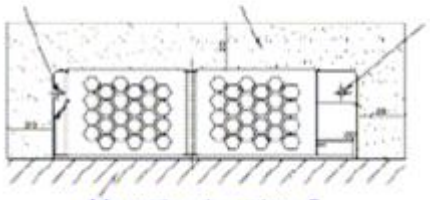
Mounting location 2



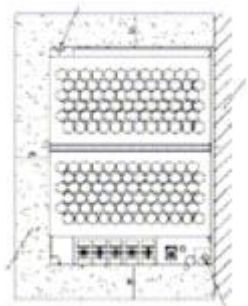
Mounting location 3



Mounting location 4



Mounting location 5



Mounting location 6

- The following load conditions were used during testing:

- Load condition A: 12V/4.17A for model PMC-12V050W1XX
- Load condition A: 12V/5A for model PMC-12V060W1NX

Summary of compliance with National Differences:

List of countries addressed:

Summary of compliance with National Differences to IEC 62368-1:2014 (Second Edition) and EN 62368-1:2014+A11:2017 (for explanation of codes see below):

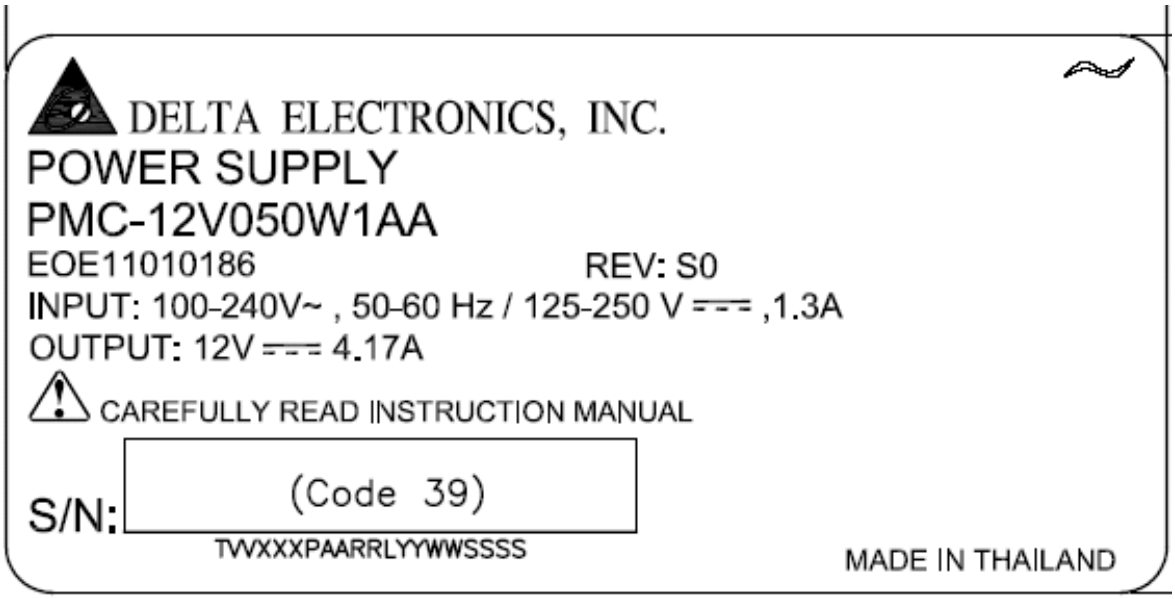
EU Group Differences, EU Special National Conditions, CA, DK, US
Explanation of used codes: CA=Canada, DK=Demark, US=United States of America

☒ **The product fulfils the requirements of EN 62368-1:2014+A11:2017.**

For National Differences see corresponding Attachment.

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:	
Classification of use by..... :	☐ Ordinary person ☐ Instructed person ☒ Skilled person ☐ Children likely to be present
Supply Connection ..... :	☒ AC Mains ☒ DC Mains ☐ External Circuit - not Mains connected - ☐ ES1 ☐ ES2 ☐ ES3
Supply % Tolerance ..... :	☒ +10%/-10% for AC ☐ +20%/-15% ☒ +50%/-20% for DC ☐ None
Supply Connection – Type ..... :	☐ pluggable equipment type A - ☐ non-detachable supply cord ☐ appliance coupler ☐ direct plug-in ☐ mating connector ☐ pluggable equipment type B - ☐ non-detachable supply cord ☐ appliance coupler ☒ permanent connection ☐ mating connector ☐ other:_____
Considered current rating of protective device as part of building or equipment installation..... :	16 (13 for UK, 20 North America) Installation location: ☒ building; ☐ equipment
Equipment mobility..... :	☐ movable ☐ hand-held ☐ transportable ☐ stationary ☒ for building-in ☐ direct plug-in ☐ rack-mounting ☐ wall-mounted
Over voltage category (OVC) ..... :	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other: _____
Class of equipment ..... :	☒ Class I ☐ Class II ☐ Class III
Access location ..... :	☐ restricted access location ☒ N/A
Pollution degree (PD) ..... :	☐ PD 1 ☒ PD 2 ☐ PD 3
Manufacturer's specified maxium operating ambient:	50 °C (De-rating output power if over +50°C)
IP protection class ..... :	☒ IPX0 ☒ IP20 (for input terminal block type C44M)
Power Systems ..... :	☒ TN ☒ TT ☒ IT - 230 V $_{L-L}$ and V $_{L-N}$
Altitude during operation (m) ..... :	☐ 2000 m or less ☒ **3000** m
Altitude of test laboratory (m) ..... :	☒ 2000 m or less ☐ _____ m
Mass of equipment (kg) ..... :	☒ Approx. 0.3 kg
POSSIBLE TEST CASE VERDICTS:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement.....:	P (Pass)

- test object does not meet the requirement..... :	F (Fail)
TESTING:	
Date of receipt of test item ..... :	N/A (CTF Stage 1)
Date (s) of performance of tests..... :	September, 2019 to October, 2019

GENERAL REMARKS:

"(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 ☐ comma / ☒ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... :	☒ **Yes** ☐ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies)..... :	1. Delta Electronics (Thailand) Public Co., Ltd. 909 Soi 9, Moo 4, Bangpoo Ind. Estate (E.P.Z.), Pattana 1 Road Tambol Phraksa, Amphur Muang, Samutprakarn 10280, Thailand 2. Delta Electronics (Jiangsu) Ltd. No. 1688 Jiangxing East Road, Wujiang Economics Development Zone, Song Ling Town, Wujiang City, Jiangsu Province, 215200, P.R China 3. Delta Electronics India Private Limited. Unit-II, Sy. No: 1007, Hosur-Krishnagiri Highway, Opp.Akash Bajaj Showroom, Chennathur Village, Hosur-635109, Krishnagiri District, Tamilnadu State, India 4. Delta Electronics India Private Limited-SEZ Unit Delta SEZ Notified At Sy. No: 16/1B2B(Part) & 16/1B2A(Part), Plot No. 1, Industrial Park, Kurubarapalli Village, Krishnagiri - 635115, Tamilnadu State, India

GENERAL PRODUCT INFORMATION:

Product Description –

The product is a sub-assembly intended for incorporation in information technology equipment, the overall compliance should be investigated in the complete information technology equipment.

Model Differences –

Model PMC-12V060W1NX is identical to model PMC-12V050W1XX, except the information and component as shown in the table as below;

Model/Item	PMC-12V050W1XX	PMC-12V060W1NX
Rating	I/P: AC 100 - 240V, 50-60Hz / DC 125-250V, 1.3A Max. O/P: DC 12V / 4.17A, 50W Max. (Adjustable between DC 11 to 14V)	I/P: AC 100 - 240V, 50-60Hz / DC 125- 250V, 1.65A Max. O/P: DC 12V / 5.0A, 60W Max., LPS (Adjustable between DC 12 to 14V)
Transformer (T1)	MV-TPT9032	MV-MPT12087
Line filter (FL1)	HFH-TPT9006	LFH-TPT7038
Transistor (Q1)	Min. 800V / 6.2A	Min. 700V / 11A
Inrush limiter (NTC1)	Min. 5ohm / 3A	Min. 3ohm / 5A
Electrolytic capacitor (C1)	120uF, 400V, 105°C min.	150uF, 400V, 105°C min.
PCB name	EOE11010186	PMC-12V060W1NA

Definition of variable(s):

Variable:	Range of variable:	Content:
X	0-9, A-Z or blank	For marketing purpose only.

Additional application considerations – (Considerations used to test a component or sub-assembly) –

Engineering Considerations

- The product was submitted and tested for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 50°C.
- The means of connection to the mains supply is permanent connection.
- De-rating output power:
  100% at 50°C, 75% at 60°C, 50% at 70°C.
  Output: +12V/4.17A (Adjustable between 11 to 14Vdc but 50W Max.).
- The equipment disconnect device is considered to be: Shall be evaluate in the final system.
- The following transformers are provided :
  - Double/Reinforced insulation: T1.
- The following capacitors bridging insulation :
  - Double/Reinforced insulation: CY3.
  - Basic insulation: CY1, CY2, CY4.
  - Supplementary insulation: None.
  - Across mains conductors: CX1.
- Functional insulation: other than above mentioned.
  The following resistors bridging insulation :
  - Double/Reinforced insulation: None.
  - Basic insulation: None.
  - Supplementary insulation: None.
  - Across mains conductors: R1A, R1B, R1C, R1D and R1E.
  - Functional insulation: other than above mentioned.
- The following VDRs are bridging insulation :
  - Basic insulation: None.
  - Functional insulation: Z1.
- The following solid insulation are provided :
  - Reinforced insulation: min. 2 layers of insulation tape provided in T1.

- Reinforced insulation: Photo coupler (IC2, IC3).
- Basic insulation: insulated tubing for Q1.
- Supplementary insulation: None.
- Functional insulation: other than above mentioned.

- The following parts consist of the protective earthing :
  - Protective earthing conductor: Input terminal.
  - Protective bonding conductor: Connections between chassis, and protective earthing terminal.
- The following parts are protective earthing terminals : the earthing terminal in the input terminal.

Additional Information

- The Label in Copy of marking plate is a draft of an artwork pending approval by National Certification Bodies and it shall not be affixed to products prior to such an approval.

MARKINGS AND INSTRUCTIONS:

- Fuse Identification marking on PCB near fuse: F1 T3.15AH 250V.

The product also marked with:

- ⏚ (IEC 60417-5019) for the wiring terminal of protective eathing conductor.

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:	
(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.) (Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared Class 3 as a worse case classification e.g. PS3, ES3.	
Electrically-caused injury (Clause 5): (Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification) Example: +5 V dc input ES1	
Source of electrical energy	**Corresponding classification (ES)**
PMC-12V050W1XX, PMC-12V060W1NX	
All circuits except for output circuits	ES3
Output circuits (connector)	ES1
X capacitor connected between L and N	ES3
Electrically-caused fire (Clause 6): (Note: List sub-assembly or circuit designation and corresponding energy source classification) Example: Battery pack (maximum 85 watts): PS2	
Source of power or PIS	**Corresponding classification (PS)**
PMC-12V050W1XX	
All circuits except for output circuits	PS1, Arcing PIS, Resistive PIS
Output connector for 12Vdc	PS1
PMC-12V060W1NX	
All circuits except for output circuits	PS2, Arcing PIS, Resistive PIS
Output connector for 12Vdc	PS2
Injury caused by hazardous substances (Clause 7) (Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.) Example: Liquid in filled component Glycol	
Source of hazardous substances	**Corresponding chemical**
N/A	N/A
Mechanically-caused injury (Clause 8) (Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.) Example: Wall mount unit MS2	
Source of kinetic/mechanical energy	**Corresponding classification (MS)**
PMC-12V050W1XX, PMC-12V060W1NX	
Sharp edges and corners	MS1
Equipment mass (≤ 7kg)	MS1
Wall mount (<1kg, ≤ 2m)	MS1
Thermal burn injury (Clause 9) (Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.) Example: Hand-held scanner – thermoplastic enclosure TS1	
Source of thermal energy	**Corresponding classification (TS)**

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:	
PMC-12V050W1XX, PMC-12V060W1NX	
Accessible surfaces	TS1
Radiation (Clause 10) (Note: List the types of radiation present in the product and the corresponding energy source classification.) Example: DVD – Class 1 Laser Product RS1	
Type of radiation	**Corresponding classification (RS)**
PMC-12V050W1XX, PMC-12V060W1NX	
LED indicator	RS1

ENERGY SOURCE DIAGRAM
Indicate which energy sources are included in the energy source diagram. Insert diagram below
☐ **ES** ☐ **PS** ☐ **MS** ☐ **TS** ☐ **RS**

OVERVIEW OF EMPLOYED SAFEGUARDS				
Clause	**Possible Hazard**			
5.1	Electrically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (ES3: Primary Filter circuit)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
PMC-12V050W1XX, PMC-12V060W1NX				
Assumed to be accessible by ordinary person in end product	ES3: All primary circuits	N/A	N/A	See 5.4.2, 5.4.3, 5.5.2, 5.5.3 and 5.5.4
Assumed to be accessible by ordinary person in end product	ES3: Primary filter circuit (X-cap)	N/A	N/A	See 5.5.2.2
Ordinary	ES1: output of the unit	N/A	N/A	N/A
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
PMC-12V050W1XX				
PCB	PS3 circuits	See 6.3	V-1 or better	N/A
Plastic materials not part of PS3 circuits	PS3 circuits	See 6.3	V-2 or better	N/A
All combustible materials within equipment and other components/materials	PS3 circuits	See 6.3	See 6.4.5, 6.4.6	N/A
Output connector for 12Vdc	PS1 circuits	Equipmentsafeguard (e.g., no ignition occurs)	Selection of materials + Fire enclosure in the final unit	N/A

PMC-12V060W1NX				
PCB	PS2 circuits	See 6.3	V-1 or better	N/A
Plastic materials not part of PS3 circuits	PS2 circuits	See 6.3	V-2 or better	N/A
All combustible materials within equipment and other components/materials	PS2 circuits	See 6.3	See 6.4.5, 6.4.6	N/A
Output connector for 12Vdc	PS2 circuits	Equipmentsafeguard (e.g., no ignition occurs)	Selection of materials + Fire enclosure in the final unit	N/A
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3: High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
N/A	N/A	N/A	N/A	N/A
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary, Instructed, Skilled	TS1: External enclosure	N/A	N/A	N/A
10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
N/A	N/A	N/A	N/A	N/A
Supplementary information: (1) See attached energy source diagram for additional details. (2) “N” – Normal Condition; “A” – Abnormal Condition; “S” – Single Fault.				

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4	**GENERAL REQUIREMENTS**		P
4.1.1	Acceptance of materials, components and subassemblies	See appended table 4.1.2.	P
4.1.2	Use of components	Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	P
4.1.3	Equipment design and construction	The equipment is a building-in type and evaluation is also to be made during the final system approval.	P
4.1.15	Markings and instructions.....:	(See Annex F)	P
4.4.4	Safeguard robustness	Enclosure of the unit considered as internal enclosure in the final unit. No safeguard directly accessible to ordinary or instructed person.	P
4.4.4.2	Steady force tests .....:	(See Annex T.3)	P
4.4.4.3	Drop tests .....:		N/A
4.4.4.4	Impact tests.....:		N/A
4.4.4.5	Internal accessible safeguard enclosure and barrier tests.....:	Enclosure of the unit considered as internal enclosure in the final unit.	P
4.4.4.6	Glass Impact tests.....:		N/A
4.4.4.7	Thermoplastic material tests .....:	Metal enclosure	N/A
4.4.4.8	Air comprising a safeguard .....:	(See Annex T)	P
4.4.4.9	Accessibility and safeguard effectiveness		N/A
4.5	Explosion		N/A
4.6	Fixing of conductors	See below.	P
4.6.1	Fix conductors not to defeat a safeguard	Compliance checked.	P
4.6.2	10 N force test applied to .....:	10 N applied to all internal components.	P
4.7	Equipment for direct insertion into mains socket - outlets	The equipment is not for direct insertion into mains socket-outlets.	N/A
4.7.2	Mains plug part complies with the relevant standard.....:		N/A
4.7.3	Torque (Nm) .....:		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.8	Products containing coin/button cell batteries	No lithium coin/button batteries are used.	N/A
4.8.2	Instructional safeguard		N/A
4.8.3	Battery Compartment Construction		N/A
	Means to reduce the possibility of children removing the battery .....:		—
4.8.4	Battery Compartment Mechanical Tests .....:		N/A
4.8.5	Battery Accessibility		N/A
4.9	Likelihood of fire or shock due to entry of conductive object .....:		N/A
5	**ELECTRICALLY-CAUSED INJURY**		P
5.2.1	Electrical energy source classifications .....:	(See appended table 5.2)	P
5.2.2	ES1, ES2 and ES3 limits	See below.	P
5.2.2.2	Steady-state voltage and current .....:	(See appended table 5.2)	P
5.2.2.3	Capacitance limits.....:	(See appended table 5.2)	P
5.2.2.4	Single pulse limits.....:	(See appended table 5.2)	N/A
5.2.2.5	Limits for repetitive pulses .....:	(See appended table 5.2)	P
5.2.2.6	Ringing signals .....:	No such ringing signals with the equipment. (See Annex H)	N/A
5.2.2.7	Audio signals .....:	No such audio signals with the equipment. (See Clause E.1)	N/A
5.3	Protection against electrical energy sources	(See appended table “OVERVIEW OF EMPLOYED SAFEGUARDS”)	P
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons	See above.	P
5.3.2.1	Accessibility to electrical energy sources and safeguards		P
5.3.2.2	Contact requirements	See below.	P
	a) Test with test probe from Annex V.....:	The test probe cannot access the hazardous live parts (See Annex V).	P
	b) Electric strength test potential (V).....:		N/A
	c) Air gap (mm) .....:	More than 0.2 mm.	P
5.3.2.4	Terminals for connecting stripped wire		N/A
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material		P
5.4.1.3	Humidity conditioning.....:	(See subclause 5.4.8)	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.1.4	Maximum operating temperature for insulating materials .....:	(See appended table 5.4.1.4, 6.3.2, 9.0, B.2.6)	P
5.4.1.5	Pollution degree .....:	2	—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound	Pollution degree 2 is applied.	N/A
5.4.1.5.3	Thermal cycling		N/A
5.4.1.6	Insulation in transformers with varying dimensions		N/A
5.4.1.7	Insulation in circuits generating starting pulses		N/A
5.4.1.8	Determination of working voltage	See appended table 5.4.1.8 in "**ATTACHMENT**" for working voltage measurement.	P
5.4.1.9	Insulating surfaces		N/A
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted	See below.	P
5.4.1.10.2	Vicat softening temperature.....:		N/A
5.4.1.10.3	Ball pressure .....:	(See appended table 5.4.1.10.3)	P
5.4.2	Clearances		P
5.4.2.2	Determining clearance using peak working voltage	(See appended table 5.4.2.2, 5.4.2.4 and 5.4.3)	P
5.4.2.3	Determining clearance using required withstand voltage .....:		P
	a) a.c. mains transient voltage .....:	2500V	—
	b) d.c. mains transient voltage .....:		—
	c) external circuit transient voltage .....:		—
	d) transient voltage determined by measurement :		—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test	(See appended table 5.4.2.4)	N/A
5.4.2.5	Multiplication factors for clearances and test voltages .....:	Specified the equipment to be operated up to 3000 m above sea level, the required clearance is multiplied by the altitude correction factor 1.14 (See appended table 5.4.2.2, 5.4.2.4 and 5.4.3).	P
5.4.3	Creepage distances.....:	(See appended table 5.4.2.2, 5.4.2.4 and 5.4.3)	P
5.4.3.1	General	See below.	P
5.4.3.3	Material Group .....:	Material group IIIb is assumed.	—
5.4.4	Solid insulation	See below.	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.4.2	Minimum distance through insulation .....:	(See appended table 5.4.4.2, 5.4.4.5 c) 5.4.4.9)	P
5.4.4.3	Insulation compound forming solid insulation	Certified sources of optocoupler are used.	P
5.4.4.4	Solid insulation in semiconductor devices		P
5.4.4.5	Cemented joints		P
5.4.4.6	Thin sheet material		P
5.4.4.6.1	General requirements		P
5.4.4.6.2	Separable thin sheet material		P
	Number of layers (pcs) .....:	Minimum 2	P
5.4.4.6.3	Non-separable thin sheet material		P
5.4.4.6.4	Standard test procedure for non-separable thin sheet material.....:		P
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components		P
5.4.4.9	Solid insulation at frequencies >30 kHz .....:	(See appended Table 5.4.4.9)	P
5.4.5	Antenna terminal insulation	No antenna is used.	N/A
5.4.5.1	General	See above.	N/A
5.4.5.2	Voltage surge test	See above.	N/A
	Insulation resistance (MΩ).....:	See above.	—
5.4.6	Insulation of internal wire as part of supplementary safeguard .....:		N/A
5.4.7	Tests for semiconductor components and for cemented joints	(See appended table 4.1.2)	P
5.4.8	Humidity conditioning		P
	Relative humidity (%).....:	95 %	—
	Temperature (°C) .....:	40 °C	—
	Duration (h) .....:	120 h	—
5.4.9	Electric strength test.....:	(See appended table 5.4.9)	P
5.4.9.1	Test procedure for a solid insulation type test		P
5.4.9.2	Test procedure for routine tests		N/A
5.4.10	Protection against transient voltages between external circuit		N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.10.2.2	Impulse test.....:		N/A
5.4.10.2.3	Steady-state test.....:		N/A
5.4.11	Insulation between external circuits and earthed circuitry.....:		N/A
5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements		N/A
	Rated operating voltage U_{op} (V).....:		—
	Nominal voltage U_{peak} (V) .....:		—
	Max increase due to variation U_{sp} .....:		—
	Max increase due to ageing ΔU_{sa}.....:		—
	$U_{op} = U_{peak} + \Delta U_{sp} + \Delta U_{sa}$.....:		—
5.5	Components as safeguards		
5.5.1	General		P
5.5.2	Capacitors and RC units		P
5.5.2.1	General requirement		P
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector.....:	(See appended table 5.5.2.2)	P
5.5.3	Transformers	(See Annex G.5.3)	P
5.5.4	Optocouplers	(See subclause 5.4 or Annex G.12)	P
5.5.5	Relays		N/A
5.5.6	Resistors		P
5.5.7	SPD's	(See Annex G.8) Surge suppressor (varistor) Z1 connected between L and N after the fuse complies with Annex Q of IEC 60950-1 and IEC 61050-2 + A1.	P
5.5.7.1	Use of an SPD connected to reliable earthing		N/A
5.5.7.2	Use of an SPD between mains and protective earth		N/A
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable ..... :		N/A
5.6	Protective conductor		P
5.6.2	Requirement for protective conductors		P
5.6.2.1	General requirements	Consider in final system.	N/A
5.6.2.2	Colour of insulation		N/A
5.6.3	Requirement for protective earthing conductors		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Protective earthing conductor size (mm^2) .....:		—
5.6.4	Requirement for protective bonding conductors	Unit provides main protective earthing/bonding terminal in supply terminal. Bonding is transmitted through PCB trace to enclosure.	P
5.6.4.1	Protective bonding conductors	Protective current rating <25A. Protective bonding conductor (PCB traces) comply with requirements specified in table 31. Required 0.3 mm^2 Measured 0.49 mm^2 (for PMC-12V050W1XX) Measured 0.51 mm^2 (for PMC-12V060W1NX)	P
	Protective bonding conductor size (mm^2). .....:	0.49 mm^2 (for PMC-12V050W1XX) 0.51 mm^2 (for PMC-12V060W1NX)	—
	Protective current rating (A) ..... :	16 (13 for UK, 20 North America)	—
5.6.4.3	Current limiting and overcurrent protective devices		N/A
5.6.5	Terminals for protective conductors		P
5.6.5.1	Requirement	Terminal for connection of protective earthing/ bonding conductor complied with table 32.	P
	Conductor size (mm^2), nominal thread diameter (mm).....:	Bonding terminal size (screw thread) table 32, 3.0 mm	P
5.6.5.2	Corrosion		N/A
5.6.6	Resistance of the protective system	See below.	P
5.6.6.1	Requirements	Compliance checked.	P
5.6.6.2	Test Method Resistance (Ω).....:	(See appended table 5.6.6.2)	P
5.6.7	Reliable earthing		N/A
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks		P
5.7.2.1	Measurement of touch current .....:	(See appended table 5.7.4)	P
5.7.2.2	Measurement of prospective touch voltage		P
5.7.3	Equipment set-up, supply connections and earth connections		P
	System of interconnected equipment (separate connections/single connection) .....:	Single equipment.	—
	Multiple connections to mains (one connection at a time/simultaneous connections).....:	Single connection.	—

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Clause	Requirement + Test	Result - Remark	Verdict
5.7.4	Earthed conductive accessible parts .....:	(See appended Table 5.7.4)	P
5.7.5	Protective conductor current		N/A
	Supply Voltage (V).....:		—
	Measured current (mA).....:		—
	Instructional Safeguard.....:		N/A
5.7.6	Prospective touch voltage and touch current due to external circuits		N/A
5.7.6.1	Touch current from coaxial cables		N/A
5.7.6.2	Prospective touch voltage and touch current from external circuits		N/A
5.7.7	Summation of touch currents from external circuits		N/A
	a) Equipment with earthed external circuits Measured current (mA).....:		N/A
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA).....:		N/A

6	**ELECTRICALLY- CAUSED FIRE**		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications		P
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault....:	(See appended table 6.2.2)	P
6.2.2.3	Power measurement for worst-case power source fault .....:	(See appended table 6.2.2)	P
6.2.2.4	PS1 .....:	(See appended table 6.2.2)	N/A
6.2.2.5	PS2 .....:	(See appended table 6.2.2)	P
6.2.2.6	PS3 .....:	(See appended table 6.2.2)	N/A
6.2.3	Classification of potential ignition sources		P
6.2.3.1	Arcing PIS .....:	All internal circuits are declared as arcing PIS	P
6.2.3.2	Resistive PIS .....:	All internal circuits are declared as resistive PIS.	P
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1 (a)	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials.....:	No ignition and such temperature attained within the plastic fire enclosure (See appended table 5.4.1.4, 6.3.2, 9.0, B.2.6).	P

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Clause	Requirement + Test	Result - Remark	Verdict
6.3.1 (b)	Combustible materials outside fire enclosure	The equipment is a building-in type and evaluation is to be made during the final system approval.	N/A
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method		P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits		N/A
6.4.3.1	General		N/A
6.4.3.2	Supplementary Safeguards		N/A
	Special conditions if conductors on printed boards are opened or peeled		N/A
6.4.3.3	Single Fault Conditions.....:		N/A
	Special conditions for temperature limited by fuse		N/A
6.4.4	Control of fire spread in PS1 circuits		P
6.4.5	Control of fire spread in PS2 circuits		P
6.4.5.2	Supplementary safeguards .....:	(See appended tables 4.1.2 and Annex G)	P
6.4.6	Control of fire spread in PS3 circuit	The equipment is a building-in type and evaluation is to be made during the final system approval.	P
6.4.7	Separation of combustible materials from a PIS		N/A
6.4.7.1	General.....:		N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers		P
6.4.8.1	Fire enclosure and fire barrier material properties	Metal enclosure.	P
6.4.8.2.1	Requirements for a fire barrier		N/A
6.4.8.2.2	Requirements for a fire enclosure	The equipment is a building-in type and evaluation is to be made during the final system approval.	P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		P
6.4.8.3.1	Fire enclosure and fire barrier openings	The equipment is a building-in type and evaluation is to be made during the final system approval.	P
6.4.8.3.2	Fire barrier dimensions		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm) .....:		N/A
	Needle Flame test		N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm) .....:		N/A
	Flammability tests for the bottom of a fire enclosure .....:		N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c) .....:		N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating.....:		N/A
6.5	Internal and external wiring		P
6.5.1	Requirements		P
6.5.2	Cross-sectional area (mm^2) .....:		—
6.5.3	Requirements for interconnection to building wiring.....:	(See Annex Q.)	N/A
6.6	Safeguards against fire due to connection to additional equipment	No such connection to additional equipment. The equipment is a building-in type and evaluation is also to be made during the final system approval.	N/A
	External port limited to PS2 or complies with Clause Q.1	See above.	N/A
7	**INJURY CAUSED BY HAZARDOUS SUBSTANCES**		N/A
7.2	Reduction of exposure to hazardous substances	No hazardous chemicals within the equipment. The equipment is a building-in type and evaluation is also to be made during the final system approval.	N/A
7.3	Ozone exposure	No ozone production within the equipment. The equipment is a building-in type and evaluation is also to be made during the final system approval.	N/A
7.4	Use of personal safeguards (PPE)	The equipment is a building-in type and evaluation is to be made during the final system approval.	N/A
	Personal safeguards and instructions..... :	See above.	—
7.5	Use of instructional safeguards and instructions	The equipment is a building-in type and evaluation is to be made during the final system	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
		approval.instruction safeguard was not required.	
	Instructional safeguard (ISO 7010).....:	(See Annex F)	—
7.6	Batteries ..... :	No batteries are used.	N/A
8	**MECHANICALLY-CAUSED INJURY**		P
8.1	General	See the following details.	P
8.2	Mechanical energy source classifications	Sharp edges and corners, classified as MS1. Equipment mass 0.3 kg < 7 kg, classified as MS1.	P
8.3	Safeguards against mechanical energy sources	See above.	N/A
8.4	Safeguards against parts with sharp edges and corners	Accessible edges and corners of the equipment are rounded and are classified as MS1.	P
8.4.1	Safeguards	See above.	N/A
8.5	Safeguards against moving parts		N/A
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard..... :		—
8.5.4	Special categories of equipment comprising moving parts		N/A
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Safeguards and Safety Interlocks ..... :	(See Annex F.4 and Annex K)	N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard..... :		—
8.5.4.2.3	Disconnection from the supply		N/A
8.5.4.2.4	Probe type and force (N)..... :		N/A
8.5.5	High Pressure Lamps		N/A
8.5.5.1	Energy Source Classification		N/A
8.5.5.2	High Pressure Lamp Explosion Test..... :		N/A
8.6	Stability	The equipment is a building-in type and evaluation is to be made during the final system approval.	N/A
8.6.1	Product classification		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Instructional Safeguard..... :		—
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A
	Applied Force.....:		—
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10° tilt.....:		—
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force).....:		N/A
	Position of feet or movable parts.....:		—
8.7	Equipment mounted to wall or ceiling		N/A
8.7.1	Mounting Means (Length of screws (mm) and mounting surface) .....:		N/A
8.7.2	Direction and applied force .....:		N/A
8.8	Handles strength		N/A
8.8.1	Classification	MS1	P
8.8.2	Applied Force .....:		N/A
8.9	Wheels or casters attachment requirements	The equipment is for building-in type and no such wheels or casters within the equipment.	N/A
8.9.1	Classification		N/A
8.9.2	Applied force.....:		—
8.10	Carts, stands and similar carriers		N/A
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard.....:		—
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force.....:		—
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N) .....:		—
8.10.6	Thermoplastic temperature stability (°C).....:		N/A
8.11	Mounting means for rack mounted equipment	The equipment is a building-in type and evaluation is to be made during the final system approval.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.11.1	General		N/A
8.11.2	Product Classification		N/A
8.11.3	Mechanical strength test, variable *N* ..... :		N/A
8.11.4	Mechanical strength test 250N, including end stops		N/A
8.12	Telescoping or rod antennas..... :	No such devices are provided within the equipment. (See Annex T)	N/A
	Button/Ball diameter (mm)..... :		—
9	**THERMAL BURN INJURY**		P
9.2	Thermal energy source classifications	All accessible surfaces are classified as TS1 (See appended table 5.4.1.4, 6.3.2, 9.0, B.2.6).	P
9.3	Safeguard against thermal energy sources		P
9.4	Requirements for safeguards		N/A
9.4.1	Equipment safeguard	Building-in equipment, shall be evaluated in the final system assembly.	N/A
9.4.2	Instructional safeguard .....:		N/A
10	**RADIATION**		P
10.2	Radiation energy source classification	No hazardous radiation energy sources as specified in this standard are present. LED indicating light is considered low power application LED and specified as RS1.	P
10.2.1	General classification	See above.	P
10.3	Protection against laser radiation		N/A
	Laser radiation that exists equipment:		—
	Normal, abnormal, single-fault ..... :		N/A
	Instructional safeguard..... :		—
	Tool ..... :		—
10.4	Protection against visible, infrared, and UV radiation	No such radiation generated from the equipment.	N/A
10.4.1	General		N/A
10.4.1.a)	RS3 for Ordinary and instructed persons .....:		N/A
10.4.1.b)	RS3 accessible to a skilled person..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Personal safeguard (PPE) instructional safeguard ..... :		—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1.:		N/A
10.4.1.d)	Normal, abnormal, single-fault conditions ..... :		N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque..... :		N/A
10.4.1.f)	UV attenuation..... :		N/A
10.4.1.g)	Materials resistant to degradation UV..... :		N/A
10.4.1.h)	Enclosure containment of optical radiation ..... :		N/A
10.4.1.i)	Exempt Group under normal operating conditions ..... :		N/A
10.4.2	Instructional safeguard..... :		N/A
10.5	Protection against x-radiation		N/A
10.5.1	X- radiation energy source that exists equipment :		N/A
	Normal, abnormal, single fault conditions		N/A
	Equipment safeguards ..... :		N/A
	Instructional safeguard for skilled person ..... :		N/A
10.5.3	Most unfavourable supply voltage to give maximum radiation..... :		—
	Abnormal and single-fault condition..... :	(See appended table B.3 & B.4)	N/A
	Maximum radiation (pA/kg) ..... :		N/A
10.6	Protection against acoustic energy sources	No such consideration for the purpose of personal music players.	N/A
10.6.1	General		N/A
10.6.2	Classification		N/A
	Acoustic output, dB(A) ..... :		N/A
	Output voltage, unweighted r.m.s..... :		N/A
10.6.4	Protection of persons		N/A
	Instructional safeguards ..... :		N/A
	Equipment safeguard prevent ordinary person to RS2..... :		—
	Means to actively inform user of increase sound pressure..... :		—
	Equipment safeguard prevent ordinary person to RS2..... :		—
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
10.6.5.1	Corded passive listening devices with analog input		N/A
	Input voltage with 94 dB(A) L_{Aeq} acoustic pressure output..... :		—
10.6.5.2	Corded listening devices with digital input		N/A
	Maximum dB(A)..... :		—
10.6.5.3	Cordless listening device		N/A
	Maximum dB(A)..... :		—
B	**NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS**		P
B.2	Normal Operating Conditions	See the following details.	P
B.2.1	General requirements .....:	(See Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers .....:	Not such equipment. (See Annex E)	N/A
B.2.3	Supply voltage and tolerances	+10%/-10% for AC +50%/-20% for DC	P
B.2.5	Input test.....:	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		P
B.3.1	General requirements .....:	(See appended table B.3)	P
B.3.2	Covering of ventilation openings	(See appended table B.3)	P
B.3.3	D.C. mains polarity test		N/A
B.3.4	Setting of voltage selector .....:		N/A
B.3.5	Maximum load at output terminals .....:	(See appended table B.3)	P
B.3.6	Reverse battery polarity	No battery within the equipment.	N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.	Not such equipment.	N/A
B.3.8	Safeguards functional during and after abnormal operating conditions		P
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited.....:		N/A
B.4.3	Motor tests		N/A
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature .....:		N/A
B.4.4	Short circuit of functional insulation		P
B.4.4.1	Short circuit of clearances for functional insulation		P

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Clause	Requirement + Test	Result - Remark	Verdict
B.4.4.2	Short circuit of creepage distances for functional insulation		P
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors		P
B.4.6	Short circuit or disconnect of passive components		P
B.4.7	Continuous operation of components		N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions		P
B.4.9	Battery charging under single fault conditions…:		N/A
C	**UV RADIATION**		N/A
C.1	Protection of materials in equipment from UV radiation		N/A
C.1.2	Requirements		N/A
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure apparatus		N/A
C.2.4	Xenon-arc light exposure apparatus		N/A
D	**TEST GENERATORS**		N/A
D.1	Impulse test generators	No such consideration.	N/A
D.2	Antenna interface test generator	See above.	N/A
D.3	Electronic pulse generator	See above.	N/A
E	**TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS**		N/A
E.1	Audio amplifier normal operating conditions		N/A
	Audio signal voltage (V)..... :		—
	Rated load impedance (Ω) ..... :		—
E.2	Audio amplifier abnormal operating conditions		N/A
F	**EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS**		P
F.1	General requirements	See the following details.	P
	Instructions – Language ..... :	English. The other languages will be provided during the national approval.	—
F.2	Letter symbols and graphical symbols	See the following details.	P

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Clause	Requirement + Test	Result - Remark	Verdict
F.2.1	Letter symbols according to IEC 60027-1	Letter symbols for quantities and units are complied with IEC 60027-1.	P
F.2.2	Graphic symbols IEC, ISO or manufacturer specific	Graphical symbols are complied with IEC 60417, ISO 3864-2, ISO 7000 or ISO 7010.	P
F.3	Equipment markings		P
F.3.1	Equipment marking locations		P
F.3.2	Equipment identification markings	See copy of marking plate.	P
F.3.2.1	Manufacturer identification ..... :	See copy of marking plate.	—
F.3.2.2	Model identification ..... :	See copy of marking plate.	—
F.3.3	Equipment rating markings	See the following details.	P
F.3.3.1	Equipment with direct connection to mains		P
F.3.3.2	Equipment without direct connection to mains	See above.	N/A
F.3.3.3	Nature of supply voltage ..... :	See copy of marking plate.	—
F.3.3.4	Rated voltage..... :	See copy of marking plate.	—
F.3.3.4	Rated frequency..... :	See copy of marking plate	—
F.3.3.6	Rated current or rated power..... :	See copy of marking plate.	—
F.3.3.7	Equipment with multiple supply connections	Only one supply connection.	N/A
F.3.4	Voltage setting device		N/A
F.3.5	Terminals and operating devices		P
F.3.5.1	Mains appliance outlet and socket-outlet markings..... :		N/A
F.3.5.2	Switch position identification marking ..... :		N/A
F.3.5.3	Replacement fuse identification and rating markings..... :	Fuse Identification marking on PCB near fuse: F1 T3.15AH 250V	P
F.3.5.4	Replacement battery identification marking ..... :	No such battery within the equipment.	N/A
F.3.5.5	Terminal marking location	.	P
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I Equipment		P
F.3.6.1.1	Protective earthing conductor terminal		P
F.3.6.1.2	Neutral conductor terminal		P
F.3.6.1.3	Protective bonding conductor terminals		P
F.3.6.2	Class II equipment (IEC 60417-5172)	The equipment is a Class I equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.6.2.1	Class II equipment with or without functional earth		N/A
F.3.6.2.2	Class II equipment with functional earth terminal marking		N/A
F.3.7	Equipment IP rating marking ..... :	- IPX0 - IP20 (for input terminal block type C44M)	—
F.3.8	External power supply output marking		N/A
F.3.9	Durability, legibility and permanence of marking	See the following details.	P
F.3.10	Test for permanence of markings	The marking plate was subjected to the permanence of marking test. The marking plate was rubbed with cloth soaked with water for 15 s and then again for 15 s with the cloth soaked with petroleum spirit. After each test, there was no damage to the marking plate. The marking on the label did not fade. There was no curling of the marking plate and removed by hand.	P
F.4	Instructions		P
	a) Equipment for use in locations where children not likely to be present - marking	The equipment is building-in type and evaluation is to be made during the final system approval.	N/A
	b) Instructions given for installation or initial use		P
	c) Equipment intended to be fastened in place		N/A
	d) Equipment intended for use only in restricted access area		N/A
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N/A
	f) Protective earthing employed as safeguard		P
	g) Protective earthing conductor current exceeding ES2 limits		N/A
	h) Symbols used on equipment		N/A
	i) Permanently connected equipment not provided with all-pole mains switch		N/A
	j) Replaceable components or modules providing safeguard function		N/A
F.5	Instructional safeguards		P
	Where “instructional safeguard” is referenced in the test report it specifies the required elements, location of marking and/or instruction	To be considered in final system.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

G	**COMPONENTS**		P
G.1	**Switches**		N/A
G.1.1	General requirements		N/A
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.2	**Relays**		N/A
G.2.1	General requirements		N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supply power		N/A
G.2.4	Mains relay, modified as stated in G.2		N/A
G.3	**Protection Devices**		P
G.3.1	Thermal cut-offs		N/A
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Thermal cut-off connections maintained and secure		N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691		N/A
G.3.2.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H)…….:		—
	Single Fault Condition……:		—
	Test Voltage (V) and Insulation Resistance (Ω).:		—
G.3.3	PTC Thermistors		N/A
G.3.4	Overcurrent protection devices		P
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions……:		N/A
G.4	**Connectors**		N/A
G.4.1	Spacings		N/A
G.4.2	Mains connector configuration …… :		N/A
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		N/A
G.5	**Wound Components**		P
G.5.1	Wire insulation in wound components ……:	(See Annex J)	P

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°		P
G.5.1.2 b)	Construction subject to routine testing		N/A
G.5.2	Endurance test on wound components		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Time (s) ..... :		—
	Temperature (°C)..... :		—
G.5.2.3	Wound Components supplied by mains		N/A
G.5.3	**Transformers**		P
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1) ..... :	The transformer meets the requirements given in subcaluses G.5.3.2 and G.5.3.3.	P
	Position ..... :	(See appended table 4.1.2)	—
	Method of protection ..... :	See above and appended table B.3 & B.4.	—
G.5.3.2	Insulation		P
	Protection from displacement of windings..... :		—
G.5.3.3	Overload test.....:	(See appended table B.3 & B.4)	P
G.5.3.3.1	Test conditions		P
G.5.3.3.2	Winding Temperatures testing in the unit		P
G.5.3.3.3	Winding Temperatures - Alternative test method		N/A
G.5.4	**Motors**		N/A
G.5.4.1	General requirements		N/A
	Position ..... :		—
G.5.4.2	Test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4	Locked-rotor overload test		N/A
	Test duration (days) ..... :		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V)..... :		—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h) ..... :		N/A
	Electric strength test (V)..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
G.5.4.6.2	Tested in the unit		N/A
	Maximum Temperature ..... :		N/A
	Electric strength test (V) ..... :		N/A
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h)..... :		N/A
	Electric strength test (V)..... :		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage ..... :		—
G.6	**Wire Insulation**		P
G.6.1	General		P
G.6.2	Solvent-based enamel wiring insulation		N/A
G.7	**Mains supply cords**		N/A
G.7.1	General requirements		N/A
	Type.....:		—
	Rated current (A).....:		—
	Cross-sectional area (mm^2), (AWG).....:		—
G.7.2	Compliance and test method		N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N)..... :		—
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm) .. :		—
G.7.3.2.4	Strain relief comprised of polymeric material		N/A
G.7.4	Cord Entry .....:		N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Mass (g) .....:		—
	Diameter (m) ..... :		—
	Temperature (°C)..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
G.7.6	Supply wiring space		N/A
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Test with 8 mm strand		N/A
G.8	**Varistors**		P
G.8.1	General requirements		P
G.8.2	Safeguard against shock		P
G.8.3	Safeguard against fire		N/A
G.8.3.2	Varistor overload test .....:		N/A
G.8.3.3	Temporary overvoltage.....:		N/A
G.9	**Integrated Circuit (IC) Current Limiters**		N/A
G.9.1 a)	Manufacturer defines limit at max. 5A.	No IC current limiters are provided within the equipment.	N/A
G.9.1 b)	Limiters do not have manual operator or reset		N/A
G.9.1 c)	Supply source does not exceed 250 VA .....:		—
G.9.1 d)	IC limiter output current (max. 5A) .....:		—
G.9.1 e)	Manufacturers' defined drift .....:		—
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
G.10	**Resistors**		N/A
G.10.1	General requirements		N/A
G.10.2	Resistor test		N/A
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N/A
G.10.3.1	General requirements		N/A
G.10.3.2	Voltage surge test		N/A
G.10.3.3	Impulse test		N/A
G.11	**Capacitor and RC units**		P
G.11.1	General requirements		P
G.11.2	Conditioning of capacitors and RC units		P
G.11.3	Rules for selecting capacitors		P
G.12	**Optocouplers**		P
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results).....:	Approved sources of opto-couplers used. (see appended table 4.1.2).	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Type test voltage Vini ..... :		—
	Routine test voltage, Vini,b ..... :		—
G.13	**Printed boards**		P
G.13.1	General requirements		P
G.13.2	Uncoated printed boards		P
G.13.3	Coated printed boards		N/A
G.13.4	Insulation between conductors on the same inner surface		N/A
	Compliance with cemented joint requirements (Specify construction) ..... :		—
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation ..... :		N/A
	Number of insulation layers (pcs) ..... :		—
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2a)	Thermal conditioning		N/A
G.13.6.2b)	Electric strength test		N/A
G.13.6.2c)	Abrasion resistance test		N/A
G.14	**Coating on components terminals**		N/A
G.14.1	Requirements ..... :		N/A
G.15	**Liquid filled components**		N/A
G.15.1	General requirements		N/A
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
G.16	**IC including capacitor discharge function (ICX)**		N/A
a)	Humidity treatment in accordance with sc5.4.8 – 120 hours		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
b)	Impulse test using circuit 2 with Uc = to transient voltage ..... :		N/A
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N/A
C2)	Test voltage ..... :		—
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N/A
D2)	Capacitance ..... :		—
D3)	Resistance ..... :		—
H	**CRITERIA FOR TELEPHONE RINGING SIGNALS**		N/A
H.1	General		N/A
H.2	Method A		N/A
H.3	Method B		N/A
H.3.1	Ringing signal		N/A
H.3.1.1	Frequency (Hz) ..... :		—
H.3.1.2	Voltage (V) ..... :		—
H.3.1.3	Cadence; time (s) and voltage (V) ..... :		—
H.3.1.4	Single fault current (mA): ..... :		—
H.3.2	Tripping device and monitoring voltage ..... :		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V) ..... :		—
J	**INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION**		P
	General requirements		P
K	**SAFETY INTERLOCKS**		N/A
K.1	General requirements		N/A
K.2	Components of safety interlock safeguard mechanism ..... :		N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance ..... :		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
K.6.2	Compliance and Test method .....:		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location) .....:		N/A
K.7.2	Overload test, Current (A).....:		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test .....:		N/A
L	**DISCONNECT DEVICES**		N/A
L.1	General requirements	EUT for building-in, shall be evaluated in the final system.	N/A
L.2	Permanently connected equipment		N/A
L.3	Parts that remain energized		N/A
L.4	Single phase equipment		N/A
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices		N/A
L.8	Multiple power sources		N/A
M	**EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS**		N/A
M.1	General requirements		N/A
M.2	Safety of batteries and their cells		N/A
M.2.1	Requirements		N/A
M.2.2	Compliance and test method (identify method) . :		N/A
M.3	Protection circuits		N/A
M.3.1	Requirements		N/A
M.3.2	Tests		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
M.3.3	Compliance .....:		N/A
M.4	Additional safeguards for equipment containing secondary lithium battery		N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
M.4.2.1	Charging operating limits		N/A
M.4.2.2a)	Charging voltage, current and temperature.....:		—
M.4.2.2 b)	Single faults in charging circuitry .....:		—
M.4.3	Fire Enclosure		N/A
M.4.4	Endurance of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation		N/A
M.4.4.3	Drop and charge/discharge function tests		N/A
	Drop		N/A
	Charge		N/A
	Discharge		N/A
M.4.4.4	Charge-discharge cycle test		N/A
M.4.4.5	Result of charge-discharge cycle test		N/A
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A
M.6	Prevention of short circuits and protection from other effects of electric current		N/A
M.6.1	Short circuits		N/A
M.6.1.1	General requirements		N/A
M.6.1.2	Test method to simulate an internal fault		N/A
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method) ..... :		N/A
M.6.2	Leakage current (mA) ..... :		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
M.7.2	Compliance and test method		N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A
M.8.1	General requirements		N/A
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume Vz (m^3/s)..... :		—
M.8.2.3	Correction factors..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
M.8.2.4	Calculation of distance *d* (mm) ..... :		—
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) ..... :		N/A
N	**ELECTROCHEMICAL POTENTIALS**		P
	Metal(s) used ..... :		—
O	**MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES**		P
	Figures O.1 to O.20 of this Annex applied..... :	Considered.	—
P	**SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS**		N/A
P.1	General requirements	The equipment is building-in type and evaluation is also to be made during the final system approval.	N/A
P.2.2	Safeguards against entry of foreign object		N/A
	Location and Dimensions (mm) ..... :		—
P.2.3	Safeguard against the consequences of entry of foreign object		N/A
P.2.3.1	Safeguards against the entry of a foreign object		N/A
	Openings in transportable equipment		N/A
	Transportable equipment with metalized plastic parts..... :		N/A
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard) ..... :		N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts		N/A
P.4.2 a)	Conditioning testing		N/A
	Tc (°C) ..... :		—
	Tr (°C)..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Ta (°C)..... :		—
P.4.2 b)	Abrasion testing ..... :		N/A
P.4.2 c)	Mechanical strength testing ..... :		N/A
Q	**CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING**		P
Q.1	Limited power sources		P
Q.1.1 a)	Inherently limited output		N/A
Q.1.1 b)	Impedance limited output		N/A
	- Regulating network limited output under normal operating and simulated single fault condition	See appended table Annex Q.1 for details.	P
Q.1.1 c)	Overcurrent protective device limited output		N/A
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method		N/A
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A) ..... :		—
	Current limiting method..... :		—
R	**LIMITED SHORT CIRCUIT TEST**		N/A
R.1	General requirements	Enclosure is bonded to PE through PCB traces. Rating of external protection does not exceed 25A. Cross section of PCB traces comply with table 31.	N/A
R.2	Determination of the overcurrent protective device and circuit		N/A
R.3	Test method Supply voltage (V) and short-circuit current (A)). ..... :		N/A
S	**TESTS FOR RESISTANCE TO HEAT AND FIRE**		N/A
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W	The equipment is building-in type and evaluation is also to be made during the final system approval.	N/A
	Samples, material..... :		—
	Wall thickness (mm)..... :		—
	Conditioning (°C)..... :		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material.....:		—
	Wall thickness (mm).....:		—
	Conditioning (°C).....:		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material.....:		—
	Wall thickness (mm).....:		—
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material.....:		—
	Wall thickness (mm).....:		—
	Conditioning (test condition), (°C).....:		—
	Test flame according to IEC 60695-11-20 with conditions as set out		N/A
	After every test specimen was not consumed completely		N/A
	After fifth flame application, flame extinguished within 1 min		N/A
T	**MECHANICAL STRENGTH TESTS**		P
T.1	General requirements		P
T.2	Steady force test, 10 N .....:		P
T.3	Steady force test, 30 N .....:	Enclosure tested as internal enclosure	P
T.4	Steady force test, 100 N .....:		N/A
T.5	Steady force test, 250 N .....:		N/A
T.6	Enclosure impact test		N/A
	Fall test		N/A
	Swing test		N/A

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict
T.7	Drop test .....:		N/A
T.8	Stress relief test.....:		N/A
T.9	Impact Test (glass)		N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		N/A
	Impact energy (J) .....:		—
	Height (m) .....:		—
T.10	Glass fragmentation test.....:	(See subclause 4.4.4.9)	N/A
T.11	Test for telescoping or rod antennas	.	N/A
	Torque value (Nm) .....:		—
U	**MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFECTS OF IMPLOSION**		N/A
U.1	General requirements		N/A
U.2	Compliance and test method for non-intrinsically protected CRTs		N/A
U.3	Protective Screen.....:		N/A
V	**DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)**		P
V.1	Accessible parts of equipment		P
V.2	Accessible part criterion		P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

4.1.2	TABLE: List of critical components				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity[1]
Input terminal block (CN1)	Dinkle	DT-49 series	Min. 10A, 300V	UL1015	UL
Alternate - Input terminal block (CN1)	Switchlab	T24 / T44 / C44M	Min. 10A, 300V	UL1015	UL
Input connector (CN1)	JST	VH series	Min. 10A, 250V	UL1015	UL
Alternate - Input connector (CN1)	JWT	A3963 series	Min. 10A, 250V	UL1015	UL
Fuse (F1)	Littelfuse.	215 series	T3.15AH, AC250V	VDE0820 / IEC/EN60127-2	VDE
	Bel Fuse Ltd.	5HT / 5HTP series	T3.15AH, AC250V	VDE0820 / IEC/EN60127-2	VDE
	Schurter.	SPT series	T3.15AH, AC250V	VDE0820 / IEC/EN60127-2	VDE
Varistor (Z1)	Thinking	TVR14471K	AC 300V Min	IEC 61051-1 IEC/EN 60950-1 Annex Q	UL, VDE
	Epcos	S14K300E2K1	AC 300V Min	IEC 61051-1 IEC/EN 60950-1 Annex Q	UL, VDE
Bleeder resistor (R1A, R1B, R1C)	Interchangeable	Interchangeable	Max. 680KΩ, Min. 1/4W	---	---
Bleeder resistor (R1D, R1E)	Interchangeable	Interchangeable	Max. 1MΩ, Min. 1/4W	---	---
X-Capacitors (CX1)	Hua Jung	MKP	Max. 0.22uF, AC 275V, T100°C min, Subclass X1 or X2	VDE0565 / IEC/EN60384-14: 2013, A1:2016	VDE
	Interchangeable	Interchangeable	Max. 0.22uF, AC 275V, T100°C min, Subclass X1 or X2	VDE0565 / IEC/EN60384-14: 2013, A1:2016	VDE
Line Filter (FL1) (For PMC-12V050W1XX)	Delta Electronics Inc.	HFH-TPT9006	130°C	---	Tested in the unit.
Line Filter (FL1) - Base	Chang Chun Plastic	T375J	Phenolic, V-0, 150°C	---	UL

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

Line Filter (FL1) - Bobbin	Nan Ya Plastics	1403G6	PBT, V-0, 130°C	---	UL
Line Filter (FL1) (For PMC-12V060W1NX)	Delta Electronics Inc.	LFH-TPT7038	130°C	---	Tested in the unit.
Line Filter (FL1) - Base	Chang Chun Plastic	T375J	Phenolic, V-0, 150°C	---	UL
Line Filter (FL1) - Bobbin	Nan Ya Plastics	1403G6	PBT, V-0, 130°C	---	UL
Insulator tape (FL1)	3M	1350F-1	130°C	UL 94	UL
	Symbio Inc	35660Y	130°C	UL 94	UL
	Jingjing Yahua Pressure	CT	130°C	UL 94	UL
Y-Capacitors (CY1, CY2)	Murata	KX / KH	Max. 100pF, AC250V, T125°C, Subclass Y2 Min.	VDE0565 / IEC/EN60384-14: 2005	VDE, FI
	TDK	CD / CS	Max. 100pF, AC250V, T125°C, Subclass Y2 Min.	VDE0565 / IEC/EN60384-14: 2005	VDE, FI
Inrush limiter (NTC1) (For PMC-12V050W1XX)	Interchangeable	Interchangeable	Min 5Ohm.	UL1434	UL
Inrush limiter (NTC1) (For PMC-12V060W1NX)	Interchangeable	Interchangeable	Min 3Ohm.	UL1434	UL
Bridge Diode (BD1)	Interchangeable	Interchangeable	Min 600V, 4A	---	---
Y-Capacitors (CY4)	Murata	KX / KH	Max. 4700pF, AC250V, T125°C, Subclass Y2 Min.	VDE0565 / IEC/EN60384-14: 2005	VDE, FI
	TDK	CD / CS	Max. 4700pF, AC250V, T125°C, Subclass Y2 Min.	VDE0565 / IEC/EN60384-14: 2005	VDE, FI

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

Electrolytic Capacitor (C1) (For PMC-12V050W1XX)	Interchangeable	Interchangeable	120uF, 400V, 105°C min.	---	---
Electrolytic Capacitor (C1) (For PMC-12V060W1NX)	Interchangeable	Interchangeable	150uF, 400V, 105°C min.	---	---
Transformer (T1) (For PMC-12V050W1XX)	Delta Electronics, Inc.	MV-TPT9032	Class B	---	Tested in the unit.
Bobbin (T1)	Sumitomo Bakelite	PM-9820 / PM-9630	Phenolic, V-0, 150°C	UL94	UL
Triple insulated wire (T1)	Furukawa	TEX-E	130°C	---	TUV, VDE
	Totoku	TIW-2 / TIW-3	130°C	---	TUV, VDE
Transformer (T1) (For PMC-12V060W1NX)	Delta Electronics, Inc.	MV-MPT12087	Class B	---	Tested in the unit.
Bobbin (T1)	Sumitomo Bakelite	PM-9820 / PM-9630	Phenolic, V-0, 150°C	UL94	UL
Insulator tape (T1)	3M	1350F-1 / 1350F-2 / 1350T-3 / 92	130°C min.	UL 94	UL
	Symbio Inc	35660Y	130°C	UL 94	UL
	Jingjing Yahua Pressure	CT	130°C	UL 94	UL
	P Leo & Co (B C) Ltd	1K7170	220°C	UL 94	UL
	Teraoka Seisakusho Co., Ltd	560S #3 / 560S #5	200°C	UL 94	UL
Triple insulated wire (T1)	Furukawa Electric Co Ltd	TEX-E / TEX-ELZ / TEX-ECEW3	130°C	UL 746A, UL2353	UL

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

	Totoku Electric Co., Ltd	TIW-2 / TIW-2X / TIW-2LZ / TIW-2LZX / TIW-2SX / TIW-2S / TIW-3 / TIW-3X / TIW-3LZ / TIW-3LZX	130°C min.	UL 746A, UL2353	UL
Transistor (Q1) (For PMC-12V050W1XX)	Interchangeable	Interchangeable	Min 800V, 6.2A	---	Tested in the unit.
Transistor (Q1) (For PMC-12V060W1NX)	Interchangeable	Interchangeable	Min 700V, 11A	---	Tested in the unit.
Y-Capacitors (CY3)	Murata	KX	Max. 2200pF, AC 250V, T125°C, Subclass Y1.	VDE0565 / IEC/EN60384-14: 2005	VDE, FI
	Walsin	AH	Max. 2200pF, AC 250V, T125°C, Subclass Y1.	VDE0565 / IEC/EN60384-14: 2005	VDE, FI
	TDK	CD	Max. 2200pF, AC 250V, T125°C, Subclass Y1.	VDE0565 / IEC/EN60384-14: 2005	VDE, FI
Optocoupler (IC2, IC3) (For PMC-12V050W1XX)	NEC Corp	PS2561BL1-1	Dti. > 0.4mm, Ext.cr. >7mm, Int.cr.> 4mm, Isolation 3000Vac min, 110°C min.	IEC/EN60950-1	VDE, FI
	Toshiba Corp	TLP781F	Dti. ≥ 0.4mm, Ext.cr. ≥ 8mm, Int.cr. ≥ 8mm, Isolation 3000Vac min, 100°C min. T115°C.	IEC60950-1	VDE, FI

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

	Vishay Semiconductor GMBH	TCET1113G	Dti.= 0.7mm, Ext.cr.=8.1mm, Int.cr.= 4.3mm. Isolation 3000Vac min, 100°C min.	IEC60950-1	VDE, FI
	Vishay Semiconductor GMBH	SFH617A (System H or J)	Dti.= 0.5mm, Ext.cr.=8.2mm, Int.cr.= 4.9mm. Isolation 3000Vac min, 100°C min.	IEC60950-1	VDE, FI
	Sharp Corp Electronic Component Group	PC123Y Series	Dti. > 0.4mm, Ext.cr. > 8mm, Int.cr.> 4mm, 110 °C.	IEC60950-1	VDE, FI
	Vishay Semiconductor GMBH	TCET1103(G)D	Dti.= 0.7mm, Ext.cr.= 8.1mm, Int.cr.= 4.3mm. Isolation 3000Vac min, 100°C min.	IEC60950-1	VDE, FI
	Everlight Electronics Co Ltd	EL816 series	Dti=>0.4mm, ext. cr. => 8.0mm, Isolation 3000Vac Min., 100°C min., Thermal cycling test	IEC/EN 60590-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Everlight Electronics Co., Ltd	EL101 series	Dti => 0.4mm, ext.cr. => 7.6mm, Isolation 3000Vac min., 100°C min, Thermal cycling test	EN 60950-1, EN60335-1, EN 60065, DIN EN 60747-5-2, UL 1577	VDE, FI, UL, CQC
	Everlight Electronics Co., Ltd	EL357N series	Dti.≥0.4mm, Ext.cr. ≥5mm, Thermal cycling test, Isolation 3000Vac min, 100°C min.	IEC/EN 60950-1, UL1577, EN 60747-5-2	N, D, VDE, UL

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

	Renesas Electronics Corporation	PS2381-1	Dti = 0.54mm, ext.cr. > 7.87mm, Thermal cycling tested, Isolation 3000Vac min, 100°C min.	EN 60950-1, EN 60065, DIN EN 60747-5-2, UL 1577	VDE, FI, UL, CQC
	Cosmo Electronics Corp	KPC357NT series	Dti => 0.4mm, Ext. cr > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Everlight Electronics Co Ltd	EL817 series	Dti=>0.4mm, ext. cr => 8.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics	PS2561BL1-1 / PS2561DL1-1	Dti > 0.4mm, Ext cr>7.0mm, Isolation 3000Vac min. 100°C min., Thermal cyclin test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics Corporation	PS2561L-1 series	Dti > 0.4mm, Ext cr > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics Corporation	PS2561L2-1 series	Dti > 0.4mm, Ext cr > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

	Renesas Electronics Corporation	PS2561AL2-1 series	Dti > 0.4mm, Ext cr > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics Corporation	PS2561AL-1 series	Dti > 0.4mm, Ext cr > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60590-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics Corporation	PS2761B-1 series	Dti > 0.4mm, Ext cr > 5.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, BSI, CQC
	Renesas Electronics Corporation	PS2861B-1 series	Dti > 0.4mm, Ext cr > 5.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	SEMKO, VDE, CQC
	Sharp Corp Electronic Components And Devices Group	PC123 series	Dti = 0.9mm, Ext cr = 8.3mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	SEMKO, VDE, CQC
	Cosmo Electronics Corp	K1010 series	Dti => 0.4mm, Ext cr > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC

IEC 62368-1					
Clause	Requirement + Test		Result - Remark		Verdict
Optocoupler (IC2, IC3) (For PMC-12V060W1NX)	Everlight Electronics Co Ltd	EL816 series	Dti => 0.4mm, ext. cr. => 8.0mm, Isolation 3000Vac, Min., 100°C min., Thermal cycling test	IEC/EN 60590-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Everlight Electronics Co Ltd	EL101 series	Dti => 0.4mm, ext.cr. => 7.6mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	EN 60950-1, EN60335-1, EN 60065, DIN EN 60747-5-2, UL 1577	VDE, FI, UL, CQC
	Everlight Electronics Co Ltd	EL357N series	Dti.≥0.4mm, Ext.cr. ≥5mm, Thermal cycling test, Isolation 3000Vac min., 100°C min.	IEC/EN 60950-1, UL1577, EN 60747-5-2	N, D, VDE, UL
	Renesas Electronics Corporation	PS2381-1	Dti = 0.54mm, ext.cr. > 7.87mm, Thermal cycling tested, Isolation 3000Vac min., 100°C min.	EN 60950-1, EN 60065, DIN EN 60747-5-2, UL 1577	VDE, FI, UL, CQC
	Cosmo Electronics Corp	KPC357NT series	Dti => 0.4mm, Ext. cr > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Everlight Electronics Co Ltd	EL817 series	Dti => 0.4mm, ext. cr => 8.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

	Renesas Electronics	PS2561BL1-1 / PS2561DL1-1	Dti > 0.4mm, Ext cr >7.0mm, Isolation 3000Vac min. 100°C min., Thermal cyclin test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics Corporation	PS2561L-1 series	Dti > 0.4mm, Ext cr > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics Corporation	PS2561L2-1 series	Dti > 0.4mm, Ext cr > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics Corporation	PS2561AL2-1 series	Dti > 0.4mm, Ext cr > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics Corporation	PS2561AL-1 series	Dti > 0.4mm, Ext cr >7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics Corporation	PS2761B-1 series	Dti > 0.4mm, Ext cr > 5.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, BSI, CQC

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

	Renesas Electronics Corporation	PS2861B-1 series	Dti > 0.4mm, Ext cr > 5.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	SEMKO, VDE, CQC
	Cosmo Electronics Corp	K1010 series	Dti > 0.4mm, Ext cr > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Sharp Corp Electronic Components And Devices Group	PC123 series	Dti = 0.9mm, Ext cr = 8.3mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	SEMKO, VDE, CQC
Thermistor (NTC601)	Uppermost	TDC05D410	100KΩ	---	UL
	Thinking	TTC-104	100KΩ	---	UL
Insulator sheet between Q1 and chassis.	Bergquist	SIL- PAD K-4	VTM-0, 130°C Min.	UL94	UL
Tube for basic insulation	Interchangeable	Interchangeable	VW-1, T105□C min.	UL94	UL
PCB	Interchangeable	Interchangeable	Min. flammability 94V-0, 130°C	UL94, UL796	UL
Supplementary information: [1)] Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

4.8.4, 4.8.5	**TABLE: Lithium coin/button cell batteries mechanical tests**	N/A

(The following mechanical tests are conducted in the sequence noted.)

4.8.4.2	**TABLE: Stress Relief test**	—

Part	Material	Oven Temperature (°C)	Comments

4.8.4.3	**TABLE: Battery replacement test**	—

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

4.8.4, 4.8.5	TABLE: Lithium coin/button cell batteries mechanical tests		N/A
(The following mechanical tests are conducted in the sequence noted.)			
Battery part no.....:			—
Battery Installation/withdrawal		Battery Installation/Removal Cycle	Comments
		1	
		2	
		3	
		4	
		5	
		6	
		8	
		9	
		10	

4.8.4.4	TABLE: Drop test			—
Impact Area		Drop Distance	Drop No.	Observations
			1	
			2	
			3	

4.8.4.5	TABLE: Impact			—
Impacts per surface		**Surface tested**	**Impact energy (Nm)**	**Comments**

4.8.4.6	TABLE: Crush test			—
Test position		**Surface tested**	**Crushing Force (N)**	**Duration force applied (s)**

Supplementary information:

4.8.5	TABLE: Lithium coin/button cell batteries mechanical test result			N/A
Test position		**Surface tested**	**Force (N)**	**Duration force applied (s)**

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:			

5.2	TABLE: Classification of electrical energy sources						P
5.2.2.2 – Steady State Voltage and Current conditions							
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				U (Vrms or Vpk)	I (Apk or Arms)	Hz	
Model: PMC-12V050W1XX							
1	264Vac/ 60Hz	+14V (+ to -)	Normal	14.14V dc	-	DC	ES1
			Abnormal - Covering of ventilation openings (all surface)	14.14V dc	-	DC	
			Single fault - IC3(1–2) SC	14.14V dc	-	DC	
2	264Vac/ 60Hz	+14V (+ to PE)	Normal	-	0.362mApk	-	ES1
			Abnormal - Covering of ventilation openings (all surface)	-	0.362mApk	-	
			Single fault - IC3(1–2) SC	-	0.490mApk	-	
3	264Vac/ 60Hz	+14V (- to PE)	Normal	-	0.36mApk	-	ES1
			Abnormal - Covering of ventilation openings (all surface)	-	0.36mApk	-	
			Single fault - IC3(1–2) SC	-	0.489mApk	-	

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

4	375Vdc	+14V (+ to -)	Normal	14.14V dc	-	DC	ES1
			Abnormal - Covering of ventilation openings (all surface)	14.14V dc	-	DC	
			Single fault - IC3(1–2) SC	14.14V dc	-	DC	
5	264Vac/ 60Hz	+14V (+ to PE)	Normal	-	-	-	ES1
			Abnormal	-	-	-	
			Single fault Basic safeguard – PE interrupt	-	0.7mApk	-	
6	264Vac/ 60Hz	+14V (- to PE)	Normal	-	-	-	ES1
			Abnormal	-	-	-	
			Single fault Basic safeguard – PE interrupt	-	0.694mApk	-	
Model: PMC-12V060W1NX							
1	264Vac/ 60Hz	+14V (+ to -)	Normal	14.20V dc	-	DC	ES1
			Abnormal - Covering of ventilation openings (all surface)	14.20V dc	-	DC	
			Single fault - IC3(1–2) SC/OC	14.20V dc	-	DC	
2	375Vdc	+14V (+ to -)	Normal	14.19V dc	-	DC	ES1
			Abnormal - Covering of ventilation openings (all surface)	14.19V dc	-	DC	
			Single fault - IC3(1–2) SC	14.19V dc		-	

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

3	264Vac/ 60Hz	+14V (+ to PE)	Normal	-	0.388mApk	-	ES1
			Abnormal - Covering of ventilation openings (all surface)	-	0.388mApk	-	
			Single fault - IC3(1–2) SC	-	0.498mApk	-	
4	264Vac/ 60Hz	+14V (- to PE)	Normal	-	0.386mApk	-	ES1
			Abnormal - Covering of ventilation openings (all surface)	-	0.386mApk	-	
			Single fault - IC3(1–2) SC~~/OC~~	-	0.496mApk	-	
5	264Vac/ 60Hz	+14V (+ to PE)	Normal	-	-	-	ES1
			Abnormal	-	-	-	
			Single fault - Basic safeguard – PE interrupt	-	0.586mApk	-	
6	264Vac/ 60Hz	+14V (- to PE)	Normal	-	-	-	ES1
			Abnormal	-	-	-	
			Single fault - Basic safeguard – PE interrupt	-	0.552mApk	-	

5.2.2.3 - Capacitance Limits

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters		ES Class
				Capacitance, nF	Upk (V)	
Model: PMC-12V050W1XX						
1	264Vac/ 60Hz	L to N CX1 = 0.22µF	Normal	0.264 µF	373.35	ES3
			Abnormal	-	-	
			Single fault – R1D OC	0.264 µF	373.35	

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

2	264Vac/ 60Hz	L to PE CY1 = 100pF	Normal	120pF	373.35	ES1
			Abnormal	-	-	
			Single fault – SC/OC	-	-	
3	264Vac/ 60Hz	N to PE CY2 = 100pF	Normal	120 pF	0	ES1
			Abnormal	-	-	
			Single fault – SC/OC	-	-	
4	375Vdc	+ to - CX1 = 0.22µF	Normal	0.264 µF	375	ES3
			Abnormal	-	-	
			Single fault – SC/OC	-	-	

5.2.2.4 - Single Pulses

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Duration (ms)	Upk (V)	Ipk (mA)	
-	-	-	Normal	-	-	-	-
			Abnormal	-	-	-	
			Single fault – SC/OC	-	-	-	

5.2.2.5 - Repetitive Pulses

No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class
				Off time (ms)	Upk (V)	Ipk (mA)	
Model: PMC-12V050W1XX							
1	264Vac/ 60Hz	+14V (+ to -)	Normal	-	-	-	ES1
			Abnormal – Output +14V Overload	1.503784	14.36Vpk	-	
			Single fault – IC2 (1-2) SC	1.139744	16.11Vpk	-	
2	264Vac/ 60Hz	+14V (+ to -)	Normal	-	-	-	ES1
			Abnormal - Output +14V SC	1.50806	3.523Vpk	-	
			Single fault – SC/OC	-	-	-	

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Clause	Requirement + Test	Result - Remark	Verdict

Model: PMC-12V060W1NX							
1	264Vac/ 60Hz	Output +14V to GND	Normal	-	-	-	ES1
			Abnormal Output 14V overload test	1.74988s	14.20	-	
			Single fault – T1 (X1-X2) SC	1.62492s	5.15	-	
Test Conditions: Normal – Abnormal – Supplementary information: SC = Short-circuited, OC = Open-circuited							

5.4.1.4, 6.3.2, 9.0, B.2.6	**TABLE: Temperature measurements**					P
	Supply voltage (V) .....:	see below	see below	see below	see below	—
	Ambient T_{min} (°C) .....:	see below	see below	see below	see below	—
	Ambient T_{max} (°C) .....:	see below	see below	see below	see below	—
	Tma (°C) .....:	see below	see below	see below	see below	—
Maximum measured temperature T of part/at:		T (°C)	T (°C)	T (°C)	T (°C)	Allowed T_{max} (°C)
Model: PMC-12V050W1XX						
Test condition, Mounting location 1 **1) Supply voltage 264Vac/ 60Hz, Loading A.** **2) Supply voltage 90Vac/ 60Hz, Loading A.** **3) Supply voltage 375Vdc, Loading A.** **4) Supply voltage 120Vdc, Loading A.**		**1)**	**2)**	**3)**	**4)**	--
Ambient		51.0	50.9	51.2	51.2	-
T1 primary winding		90.5	87.1	89.7	85.5	110
T1 secondary winding		89.3	86.1	88.3	84.3	110
T1 core		86.2	83.3	85.8	81.9	110
FL1		68.0	85.5	63.0	69.4	120
L350		70.2	70.7	69.7	69.9	120
IC2		72.7	73.8	71.5	71.3	100
IC3		76.0	75.9	74.7	73.6	100
CX1 and FL1		61.8	66.5	60.1	61.2	100

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Clause	Requirement + Test	Result - Remark			Verdict
CY1		71.1	81.5	67.1	75.0	125
CY2		71.6	81.6	67.8	75.3	125
CY3		67.7	69.7	65.7	66.5	125
CY4		71.5	74.2	69.0	71.2	125
CY350		65.8	66.7	64.9	65.2	125
CY351		65.7	66.9	64.4	64.8	125
C1		73.3	75.9	70.5	69.9	105
C12 near T1		77.1	76.6	75.4	73.9	105
C350		67.8	68.0	67.6	67.6	105
C351		71.3	71.4	70.7	70.5	105
F1 body		60.4	64.8	58.8	60.2	-
NTC1 near PWB		80.6	92.6	72.6	80.9	130 for PWB
BD1		78.1	94.1	71.6	85.1	130 for PWB
Q1 near PWB		73.4	75.7	72.3	75.1	130 for PWB
D350		72.1	72.7	71.3	71.7	130 for PWB
ZD3		86.0	87.3	84.5	85.2	130 for PWB
CN1 at L terminal		56.9	58.6	56.5	57.0	90
CN1 at +V terminal		64.9	65.4	64.6	64.8	90
External enclosure near Q1		65.0	66.2	63.7	64.7	-
External enclosure near D350		63.8	64.7	63.8	64.6	-
Test condition, Mounting location 2 **5) Supply voltage 264Vac/ 60Hz, Loading A.** **6) Supply voltage 90Vac/ 60Hz, Loading A.** **7) Supply voltage 375Vdc, Loading A.** **8) Supply voltage 120Vdc, Loading A.**		**5)**	**6)**	**7)**	**8)**	--
Ambient		51.2	50.9	51.4	51.1	-
T1 primary winding		94.0	91.9	93.4	90.2	110
T1 secondary winding		94.4	91.6	94.0	90.2	110
T1 core		91.8	88.7	91.1	87.8	110
FL1		71.3	90.0	66.5	73.8	120

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Clause	Requirement + Test	Result - Remark			Verdict
L350		74.8	75.9	74.5	74.6	120
IC2		76.9	79.1	75.7	76.3	100
IC3		81.3	81.7	80.3	79.4	100
CX1 and FL1		65.1	70.5	64.0	65.5	100
CY1		73.3	84.7	68.7	78.9	125
CY2		74.5	86.2	70.9	80.1	125
CY3		72.4	75.7	71.3	72.4	125
CY4		69.4	72.8	68.9	72.2	125
CY350		70.2	71.6	69.7	70.2	125
CY351		70.4	72.2	69.7	70.4	125
C1		76.2	77.3	71.1	71.9	105
C12 near T1		83.0	83.1	82.0	80.6	105
C350		72.3	72.9	72.0	72.1	105
C351		76.2	76.8	75.8	75.9	105
F1 body		63.7	68.6	62.6	64.2	-
NTC1 near PWB		78.3	88.6	72.4	80.9	130 for PWB
BD1		77.2	91.5	72.5	85.9	130 for PWB
Q1 near PWB		75.2	77.9	74.9	78.4	130 for PWB
D350		75.1	75.8	74.8	75.4	130 for PWB
ZD3		84.7	87.9	83.9	86.7	130 for PWB
CN1 at L terminal		60.8	62.6	60.4	61.1	90
CN1 at +V terminal		68.8	69.7	68.4	68.8	90
External enclosure near Q1		66.9	68.3	66.5	67.8	-
External enclosure near D350		67.0	68.1	66.7	67.6	-
Test condition, Mounting location 3 **9) Supply voltage 264Vac/ 60Hz, Loading A.** **10) Supply voltage 90Vac/ 60Hz, Loading A.** **11) Supply voltage 375Vdc, Loading A.** **12) Supply voltage 120Vdc, Loading A.**		**9)**	**10)**	**11)**	**12)**	--
Ambient		50.8	51.0	50.9	51.1	-

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Clause	Requirement + Test	Result - Remark			Verdict

T1 primary winding	87.8	84.1	87.6	83.5	110
T1 secondary winding	86.2	82.8	86.1	82.2	110
T1 core	83.8	80.5	83.6	79.9	110
FL1	64.5	82.0	60.3	66.5	120
L350	67.8	68.1	67.6	67.6	120
IC2	69.3	70.2	68.7	68.6	100
IC3	72.9	72.6	72.5	71.3	100
CX1 and FL1	58.8	63.4	58.0	58.9	100
CY1	67.9	78.9	64.9	73.0	125
CY2	68.2	78.5	65.6	73.2	125
CY3	64.5	66.4	63.8	64.5	125
CY4	67.9	70.4	67.6	70.0	125
CY350	62.5	63.3	62.4	62.6	125
CY351	62.2	63.3	62.0	62.3	125
C1	69.2	71.7	68.0	67.2	105
C12 near T1	73.8	73.2	73.4	71.9	105
C350	66.2	66.2	66.1	66.1	105
C351	68.9	68.9	68.8	68.6	105
F1 body	57.6	61.7	56.7	57.9	-
NTC1 near PWB	76.9	89.2	70.1	79.6	130 for PWB
BD1	74.5	90.8	69.2	84.0	130 for PWB
Q1 near PWB	70.4	72.4	70.3	73.1	130 for PWB
D350	69.1	69.5	69.0	69.4	130 for PWB
ZD3	82.4	83.4	82.0	82.8	130 for PWB
CN1 at L terminal	74.5	90.8	69.2	84.0	90
CN1 at +V terminal	70.4	72.4	70.3	73.1	90
External enclosure near Q1	69.1	69.5	69.0	69.4	-
External enclosure near D350	82.4	83.4	82.0	82.8	-

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Clause	Requirement + Test	Result - Remark	Verdict

Test condition, Mounting location 4 **13) Supply voltage 264Vac/ 60Hz, Loading A.** **14) Supply voltage 90Vac/ 60Hz, Loading A.** **15) Supply voltage 375Vdc, Loading A.** **16) Supply voltage 120Vdc, Loading A.**	**13)**	**14)**	**15)**	**16)**	--
Ambient	50.9	51.1	51.1	51.1	-
T1 primary winding	90.2	86.8	89.5	85.5	110
T1 secondary winding	89.1	85.8	88.1	84.3	110
T1 core	85.8	82.8	85.6	81.8	110
FL1	67.7	85.1	62.8	69.3	120
L350	70.0	70.6	69.7	69.9	120
IC2	72.4	73.3	71.3	71.1	100
IC3	75.7	75.5	74.5	73.5	100
CX1 and FL1	61.6	66.1	60.0	61.0	100
CY1	70.8	81.1	66.9	75.0	125
CY2	71.2	81.2	67.6	75.2	125
CY3	67.3	69.3	65.6	66.3	125
CY4	70.9	73.6	68.9	71.2	125
CY350	65.6	66.4	64.8	65.2	125
CY351	65.4	66.5	64.2	64.7	125
C1	72.8	75.4	70.3	68.7	105
C12 near T1	76.7	76.2	75.4	73.9	105
C350	67.7	67.8	67.7	67.6	105
C351	71.1	71.1	70.6	70.5	105
F1 body	60.2	64.4	58.8	60.0	-
NTC1 near PWB	80.2	92.1	72.4	80.7	130 for PWB
BD1	77.8	93.8	71.4	85.1	130 for PWB
Q1 near PWB	72.8	75.0	72.1	74.9	130 for PWB
D350	71.7	72.2	71.0	71.5	130 for PWB
ZD3	85.5	86.7	84.3	85.1	130 for PWB

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Clause	Requirement + Test	Result - Remark			Verdict
CN1 at L terminal		57.1	58.4	56.6	57.2	90
CN1 at +V terminal		65.0	65.5	64.6	64.9	90
External enclosure near Q1		64.5	65.6	63.4	64.5	-
External enclosure near D350		63.4	64.3	63.5	64.4	-
Test condition, Mounting location 5 **17) Supply voltage 264Vac/ 60Hz, Loading A.** **18) Supply voltage 90Vac/ 60Hz, Loading A.** **19) Supply voltage 375Vdc, Loading A.** **20) Supply voltage 120Vdc, Loading A.**		**17)**	**18)**	**19)**	**20)**	--
Ambient		51.3	51.3	50.9	51.0	-
T1 primary winding		92.6	90.4	89.3	86.2	110
T1 secondary winding		93.7	90.8	90.2	86.3	110
T1 core		90.3	87.3	88.3	84.4	110
FL1		70.5	89.4	63.0	70.3	120
L350		74.7	75.7	71.7	71.7	120
IC2		76.4	78.4	72.2	72.7	100
IC3		80.6	80.9	76.7	75.7	100
CX1 and FL1		64.4	70.0	60.6	61.9	100
CY1		72.3	84.0	65.3	73.9	125
CY2		73.5	85.4	67.0	75.9	125
CY3		72.1	75.2	67.3	68.6	125
CY4		67.5	70.5	63.4	65.8	125
CY350		69.7	71.0	66.5	66.9	125
CY351		69.6	71.4	66.1	66.7	125
C1		71.9	75.8	66.6	67.2	105
C12 near T1		82.4	82.4	78.3	77.0	105
C350		72.4	72.9	69.3	69.1	105
C351		76.0	76.3	72.8	72.4	105
F1 body		63.1	68.1	59.6	61.2	-
NTC1 near PWB		77.2	87.7	68.1	76.1	130 for PWB
BD1		76.1	90.7	67.9	80.7	130 for PWB

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Clause	Requirement + Test	Result - Remark	Verdict

Q1 near PWB	72.6	74.9	69.6	72.4	130 for PWB
D350	73.9	74.5	71.3	71.5	130 for PWB
ZD3	82.8	85.8	79.1	81.4	130 for PWB
CN1 at L terminal	60.5	62.7	57.9	58.6	90
CN1 at +V terminal	68.6	69.6	66.1	66.4	90
External enclosure near Q1	64.6	65.8	61.9	62.8	-
External enclosure near D350	65.5	66.6	63.0	63.8	-
Test condition, Mounting location 6 **21) Supply voltage 264Vac/ 60Hz, Loading A.** **22) Supply voltage 90Vac/ 60Hz, Loading A.** **23) Supply voltage 375Vdc, Loading A.** **24) Supply voltage 120Vdc, Loading A.**	**21)**	**22)**	**23)**	**24)**	--
Ambient	50.9	51.0	50.7	51.0	-
T1 primary winding	87.8	84.2	87.6	83.5	110
T1 secondary winding	86.3	82.8	86.0	82.2	110
T1 core	83.7	80.5	83.5	79.9	110
FL1	64.6	81.6	60.1	66.4	120
L350	68.0	68.4	67.8	67.9	120
IC2	69.4	70.3	68.6	68.6	100
IC3	73.0	72.7	72.4	71.3	100
CX1 and FL1	58.9	63.4	57.8	58.9	100
CY1	68.0	78.6	64.8	73.0	125
CY2	68.3	78.4	65.5	73.2	125
CY3	64.5	66.4	63.6	64.5	125
CY4	68.0	70.4	67.5	69.9	125
CY350	62.7	63.4	62.3	62.7	125
CY351	62.3	63.3	61.8	62.3	125
C1	69.3	71.7	67.9	67.2	105
C12 near T1	73.9	73.3	73.3	71.9	105
C350	66.3	66.3	66.2	66.3	105
C351	69.0	69.0	68.8	68.7	105

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Clause	Requirement + Test	Result - Remark			Verdict
F1 body		57.9	61.8	56.6	57.9	-
NTC1 near PWB		76.9	89.0	70.0	79.6	130 for PWB
BD1		74.6	90.8	69.2	83.9	130 for PWB
Q1 near PWB		70.4	72.3	70.3	72.9	130 for PWB
D350		69.2	69.5	69.0	69.3	130 for PWB
ZD3		82.5	83.4	82.0	82.7	130 for PWB
CN1 at L terminal		55.3	56.7	55.0	55.4	90
CN1 at +V terminal		62.7	63.2	62.7	62.8	90
External enclosure near Q1		62.5	63.4	62.2	63.1	-
External enclosure near D350		61.6	62.3	61.4	62.1	-
Test condition, Mounting location 2 **25) Supply voltage 240Vac/ 60Hz, Loading A.** **26) Supply voltage 100Vac/ 60Hz, Loading A.** **27) Supply voltage 250Vdc, Loading A.** **28) Supply voltage 125Vdc, Loading A.**		**25)**	**26)**	**27)**	**28)**	--
Ambient		50.9	50.9	50.9	50.7	-
T1 primary winding		89.8	87.6	87.2	87.2	110
T1 secondary winding		90.9	88.3	87.9	87.9	110
T1 core		88.7	86.0	86.0	86.0	110
FL1		69.0	83.3	63.2	63.2	120
L350		72.6	73.2	71.5	71.5	120
IC2		74.0	75.4	71.2	71.2	100
IC3		78.0	78.0	75.3	75.3	100
CX1 and FL1		62.1	66.0	59.9	59.9	100
CY1		70.0	78.1	66.3	66.3	125
CY2		71.5	80.3	67.7	67.7	125
CY3		69.0	71.4	66.5	66.5	125
CY4		64.8	66.8	63.7	63.7	125
CY350		67.5	68.5	66.3	66.3	125
CY351		67.2	68.6	65.8	65.8	125

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Clause	Requirement + Test	Result - Remark			Verdict

C1	69.2	72.2	65.5	65.5	105
C12 near T1	79.8	79.8	76.6	76.6	105
C350	69.9	70.0	68.9	68.9	105
C351	73.7	73.7	72.4	72.4	105
F1 body	61.2	65.1	59.2	59.2	-
NTC1 near PWB	74.6	82.3	67.9	67.9	130 for PWB
BD1	73.4	84.1	69.5	76.9	130 for PWB
Q1 near PWB	70.4	72.2	68.9	71.1	130 for PWB
D350	72.4	72.6	71.2	71.5	130 for PWB
ZD3	80.5	82.5	78.5	80.3	130 for PWB
CN1 at L terminal	58.3	59.6	7.3	57.7	90
CN1 at +V terminal	66.7	67.3	65.8	66.2	90
External enclosure near Q1	62.7	63.9	61.8	62.6	-
External enclosure near D350	64.3	64.9	63.2	63.9	-
Test condition, Mounting location 2 **29) Supply voltage 264Vac/ 60Hz, Loading B.** **30) Supply voltage 90Vac/ 60Hz, Loading B.** **31) Supply voltage 375Vdc, Loading B.** **32) Supply voltage 100Vdc, Loading B.**	**29)**	**30)**	**31)**	**32)**	--
Ambient	50.5	51.0	50.9	50.6	-
T1 primary winding	90.6	88.1	90.5	87.1	110
T1 secondary winding	91.5	88.6	91.3	86.9	110
T1 core	89.4	86.3	89.3	85.2	110
FL1	68.1	86.4	63.6	70.3	120
L350	71.7	72.5	71.6	71.6	120
IC2	74.2	76.2	73.2	73.3	100
IC3	78.3	78.7	77.9	76.3	100
CX1 and FL1	61.7	67.0	61.0	62.0	100
CY1	69.2	79.9	66.2	74.3	125
CY2	70.9	82.3	68.0	76.5	125

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Clause	Requirement + Test	Result - Remark			Verdict
CY3		68.9	72.2	68.0	69.0	125
CY4		64.7	67.3	64.4	66.5	125
CY350		67.3	68.6	67.2	67.3	125
CY351		66.9	68.8	66.7	66.9	125
C1		69.4	73.4	67.7	68.0	105
C12 near T1		80.4	80.7	79.6	77.9	105
C350		89.5	69.7	69.5	69.3	105
C351		73.2	73.4	73.3	72.7	105
F1 body		60.7	66.1	59.9	61.1	-
NTC1 near PWB		74.0	84.1	69.0	76.6	130 for PWB
BD1		72.5	86.4	69.0	81.2	130 for PWB
Q1 near PWB		70.4	72.5	70.5	72.8	130 for PWB
D350		71.4	71.8	71.4	71.2	130 for PWB
ZD3		81.1	83.6	80.6	82.4	130 for PWB
CN1 at L terminal		58.0	60.1	57.9	58.3	90
CN1 at +V terminal		66.9	67.8	66.9	67.0	90
External enclosure near Q1		62.3	63.5	62.4	63.1	-
External enclosure near D350		63.7	64.7	63.7	64.1	-
Test condition, Mounting location 2 **33) Supply voltage 264Vac/ 60Hz, 75% Loading A.** **34) Supply voltage 90Vac/ 60Hz, 75% Loading A.** **35) Supply voltage 375Vdc, 75% Loading A.** **36) Supply voltage 100Vdc, 75% Loading A.**		**33)**	**34)**	**35)**	**36)**	--
Ambient		60.8	61.1	60.4	61.0	-
T1 primary winding		92.6	89.2	92.3	87.8	110
T1 secondary winding		93.4	89.7	93.1	88.2	110
T1 core		91.1	87.4	90.9	86.2	110
FL1		75.0	85.8	71.9	75.4	120

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Clause	Requirement + Test	Result - Remark			Verdict
L350		78.0	77.8	77.8	77.0	120
IC2		80.8	80.6	80.1	78.5	100
IC3		84.1	82.8	83.5	80.9	100
CX1 and FL1		70.6	73.4	70.0	69.8	100
CY1		77.3	85.0	74.8	80.4	125
CY2		78.4	85.8	75.8	81.0	125
CY3		77.6	78.2	76.8	75.9	125
CY4		72.4	73.2	72.1	72.6	125
CY350		74.8	74.7	74.5	73.7	125
CY351		75.5	75.5	75.1	74.2	125
C1		77.3	77.6	76.0	74.0	105
C12 near T1		86.1	84.2	85.5	82.0	105
C350		76.8	76.0	76.6	75.5	105
C351		79.4	78.5	79.3	77.8	105
F1 body		69.5	72.0	68.8	68.9	-
NTC1 near PWB		81.3	87.8	77.1	81.2	130 for PWB
BD1		80.3	89.9	77.0	85.4	130 for PWB
Q1 near PWB		76.4	75.9	76.3	76.1	130 for PWB
D350		76.9	76.3	76.7	75.8	130 for PWB
ZD3		85.2	85.3	84.3	84.3	130 for PWB
CN1 at L terminal		67.3	68.2	67.1	66.9	90
CN1 at +V terminal		74.0	73.8	73.8	73.3	90
External enclosure near Q1		69.3	69.4	69.3	69.0	-
External enclosure near D350		71.3	71.2	71.2	70.7	-

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Clause	Requirement + Test	Result - Remark	Verdict

Test condition, Mounting location 2 **37) Supply voltage 264Vac/ 60Hz, 50% Loading A.** **38) Supply voltage 90Vac/ 60Hz, 50% Loading A.** **39) Supply voltage 375Vdc, 50% Loading A.** **40) Supply voltage 100Vdc, 50% Loading A.**	**37)**	**38)**	**39)**	**40)**	--
Ambient	70.2	70.2	70.3	70.8	-
T1 primary winding	93.1	89.4	92.9	88.5	110
T1 secondary winding	93.9	90.0	93.9	89.0	110
T1 core	91.9	88.1	91.7	87.2	110
FL1	80.0	84.7	78.4	78.8	120
L350	82.5	81.6	82.3	81.0	120
IC2	85.4	83.8	85.0	82.3	100
IC3	87.8	85.4	87.5	84.1	100
CX1 and FL1	77.2	77.8	77.0	75.6	100
CY1	82.1	85.7	80.6	82.5	125
CY2	83.0	86.3	81.5	83.0	125
CY3	78.4	81.8	82.4	80.3	125
CY4	80.4	77.7	78.1	77.1	125
CY350	81.0	79.7	80.2	78.9	125
CY351	82.7	80.1	80.7	79.1	125
C1	89.3	80.6	81.9	78.4	105
C12 near T1	81.9	86.2	89.0	84.9	105
C350	83.7	80.7	81.7	80.2	105
C351	76.3	82.2	83.5	81.5	105
F1 body	85.3	77.0	76.0	75.0	-
NTC1 near PWB	84.3	88.0	82.7	82.9	130 for PWB
BD1	84.3	89.3	82.4	85.9	130 for PWB
Q1 near PWB	81.1	79.2	81.1	79.3	130 for PWB
D350	81.2	80.1	81.1	79.7	130 for PWB

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Clause	Requirement + Test	Result - Remark			Verdict

ZD3	88.0	86.5	87.8	85.8	130 for PWB
CN1 at L terminal	74.8	74.8	74.8	74.1	90
CN1 at +V terminal	80.1	79.6	80.1	79.1	90
External enclosure near Q1	76.0	75.4	76.0	75.1	-
External enclosure near D350	77.4	76.7	77.3	76.3	-
Test condition, Mounting location 2 **41) Supply voltage 264Vac/ 60Hz, Loading A.** **42) Supply voltage 90Vac/ 60Hz, Loading A.**	**41)**	**42)**	--	--	--
Ambient	24.9	24.2	-	-	-
External enclosure Top over T1	43.8	44.5	-	-	70
External enclosure Bottom under T1	41.5	42.5	-	-	70
External enclosure Front near FL1	37.4	38.5	-	-	70
External enclosure Left near C1	39.1	39.8	-	-	70
External enclosure Rigth near C107	40.2	41.8	-	-	70
Test condition, Mounting location 3 **43) Supply voltage 264Vac/ 60Hz, Loading A.** **44) Supply voltage 90Vac/ 60Hz, Loading A.**	**43)**	**44)**	**--**	**--**	**--**
Ambient	24.6	24.6	-	-	-
External enclosure Top over C1	42.6	44.8	-	-	70
External enclosure Bottom under C107	35.9	37.5	-	-	70
External enclosure Front over T1	38.7	40.4	-	-	70
External enclosure Left near FL1	37.9	39.5	-	-	70
External enclosure Rigth near Q1	39.8	37.9	-	-	70
Model: PMC-12V060W1NX					
Test condition **Mounting location 4** **a) Supply voltage 264Vac/ 60Hz, Loading A 100%.** **b) Supply voltage 90Vac/ 60Hz, Loading A 100%.** **Mounting location 5** **c) Supply voltage 264Vac/ 60Hz, Loading A 100%.** **d) Supply voltage 90Vac/ 60Hz, Loading A 100%.**	**a)**	**b)**	**c)**	**d)**	**--**

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Clause	Requirement + Test	Result - Remark			Verdict
Ambient		50.7	51.2	51.0	50.9	-
T1 wire (primary)		84.4	83.3	88.4	87.5	110
T1 wire (secondary)		89.5	87.3	92.6	91.4	110
T1 core		89.6	86.2	95.3	92.0	110
FL1		62.8	76.8	65.4	84.0	120
L350		73.2	74.2	76.5	78.1	120
IC2		71.6	72.7	75.2	77.3	100
IC3		72.2	72.4	76.0	77.0	100
CX1 near F1		60.1	63.6	62.7	68.1	100
CY1		65.9	76.5	66.0	75.6	125
CY2		67.7	77.2	69.8	81.1	125
CY3		65.8	68.1	69.9	74.2	125
CY4		71.6	79.1	68.1	75.3	125
C1		70.0	75.4	69.3	76.2	105
C352		72.1	72.8	75.6	76.9	105
NTC1 near PWB		74.8	93.5	73.7	94.7	130 for PWB
BD1 near PWB		70.3	84.3	70.7	86.3	130 for PWB
Q1 near PWB		81.4	83.9	82.9	85.5	130 for PWB
D350 near PWB		74.1	74.7	76.7	78.0	130 for PWB
CN1 at L terminal		56.0	57.8	58.7	61.7	85
CN1 at +V terminal		65.1	66.1	67.2	68.5	85
External enclosure near Q1		58.0	58.9	60.2	61.8	-

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Clause	Requirement + Test	Result - Remark	Verdict

Test condition **Mounting location 6** **e) Supply voltage 264Vac/ 60Hz, Loading A 100%.** **f) Supply voltage 90Vac/ 60Hz, Loading A 100%.** **Mounting location 5** **g) Supply voltage 240Vac/ 60Hz, Loading A 100%.** **h) Supply voltage 100Vac/ 60Hz, Loading A 100%.**	**e)**	**f)**	**g)**	**h)**	**--**
Ambient	51.0	51.1	50.8	50.8	-
T1 wire (primary)	84.0	82.8	87.6	86.0	110
T1 wire (secondary)	89.0	86.5	91.2	89.4	110
T1 core	89.1	85.6	94.0	90.3	110
FL1	61.4	75.4	65.1	76.8	120
L350	72.3	73.3	76.2	77.0	120
IC2	70.3	71.4	74.5	75.5	100
IC3	71.0	71.2	75.7	75.7	100
CX1 near F1	58.6	62.3	61.6	65.0	100
CY1	64.7	75.0	65.6	72.1	125
CY2	66.7	75.9	69.3	77.2	125
CY3	64.6	66.9	69.3	71.7	125
CY4	71.8	78.2	67.5	72.7	125
C1	69.3	73.9	68.8	73.5	105
C352	72.1	73.0	75.1	75.5	105
NTC1 near PWB	73.2	92.1	73.5	88.2	130 for PWB
BD1 near PWB	69.0	82.9	70.4	81.4	130 for PWB
Q1 near PWB	82.0	84.0	82.1	83.3	130 for PWB
D350 near PWB	74.8	75.8	76.0	76.5	130 for PWB
CN1 at L terminal	54.8	56.9	57.1	58.9	85
CN1 at +V terminal	64.3	65.2	67.0	67.7	85

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Clause	Requirement + Test	Result - Remark	Verdict

External enclosure near Q1	59.2	60.7	60.2	61.1	-
Test condition **Mounting location 5** **i) Supply voltage 264Vac/ 60Hz, Loading A 70%.** **j) Supply voltage 90Vac/ 60Hz, Loading A 70%.** **k) Supply voltage 264Vac/ 60Hz, Loading A 50%.** **l) Supply voltage 90Vac/ 60Hz, Loading A 50%.**	**i)**	**j)**	**k)**	**l)**	**--**
Ambient	60.7	60.2	70.3	70.5	-
T1 wire (primary)	89.0	85.3	91.8	86.9	110
T1 wire (secondary)	92.5	88.2	95.0	89.1	110
T1 core	94.5	88.7	96.2	89.5	110
FL1	70.4	78.8	78.4	82.0	120
L350	78.2	78.0	83.0	81.6	120
IC2	79.1	78.3	85.3	82.6	100
IC3	79.9	78.2	85.8	82.6	100
CX1 near F1	68.3	70.1	76.7	76.6	100
CY1	71.8	76.7	79.8	81.6	125
CY2	74.8	80.1	82.2	83.5	125
CY3	74.8	75.5	81.9	80.5	125
CY4	73.0	75.7	80.1	79.9	125
C1	74.7	76.6	82.0	80.7	105
C352	78.6	77.5	83.8	81.5	105
NTC1 near PWB	77.1	89.0	83.8	89.5	130 for PWB
BD1 near PWB	75.2	83.6	82.2	85.8	130 for PWB
Q1 near PWB	85.0	84.0	89.2	86.0	130 for PWB
D350 near PWB	79.2	78.2	83.8	81.5	130 for PWB
CN1 at L terminal	64.5	65.6	73.0	73.0	85
CN1 at +V terminal	72.3	72.4	79.2	78.6	85
External enclosure near Q1	66.8	67.1	74.9	74.1	-

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Clause	Requirement + Test	Result - Remark	Verdict

Test condition **Mounting location 5** **m) Supply voltage 264Vac/ 60Hz, Loading B 14V/4.29A.** **n) Supply voltage 90Vac/ 60Hz, Loading B 14V/4.29A.** **o) Supply voltage 375Vdc, Loading A 100%.** **p) Supply voltage 106.25Vdc, Loading A 100%.**	**m)**	**n)**	**o)**	**p)**	**--**
Ambient	50.9	51.0	50.7	50.7	-
T1 wire (primary)	89.1	86.6	89.0	87.0	110
T1 wire (secondary)	94.0	91.3	92.7	90.0	110
T1 core	96.8	91.6	95.9	91.1	110
FL1	65.5	80.6	63.0	68.5	120
L350	74.9	75.7	77.1	77.5	120
IC2	76.4	77.5	75.2	75.0	100
IC3	77.2	77.0	76.4	75.4	100
CX1 near F1	62.2	66.4	62.2	63.2	100
CY1	66.5	74.8	64.8	69.9	125
CY2	71.1	81.2	68.4	74.1	125
CY3	70.7	73.9	69.7	70.6	125
CY4	68.4	74.6	67.9	74.0	125
C1	70.3	76.1	68.5	70.4	105
C352	75.3	75.3	76.1	76.7	105
NTC1 near PWB	74.2	92.5	69.3	82.6	130 for PWB
BD1 near PWB	71.6	85.3	68.5	78.6	130 for PWB
Q1 near PWB	84.0	85.2	83.2	85.3	130 for PWB
D350 near PWB	75.8	76.0	77.1	77.8	130 for PWB
CN1 at L terminal	57.4	59.6	57.7	58.6	85
CN1 at +V terminal	67.2	67.9	67.8	68.3	85
External enclosure near Q1	60.3	61.3	60.9	61.9	-

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Clause	Requirement + Test	Result - Remark	Verdict

Test condition **Mounting location 5** **q) Supply voltage 375Vdc, Loading A 70%.** **r) Supply voltage 106.25Vdc, Loading A 70%.** **s) Supply voltage 375Vdc, Loading A 50%.** **t) Supply voltage 106.25Vdc, Loading A 50%.**	**q)**	**r)**	**s)**	**t)**	**--**
Ambient	60.4	60.9	70.8	70.2	-
T1 wire (primary)	89.0	84.4	89.8	84.4	110
T1 wire (secondary)	92.6	86.9	93.0	86.4	110
T1 core	94.7	87.6	94.2	86.8	110
FL1	68.8	71.1	75.1	74.7	120
L350	78.1	77.2	80.8	79.1	120
IC2	78.9	76.6	83.1	79.6	100
IC3	79.8	77.0	83.7	79.8	100
CX1 near F1	68.2	67.6	74.7	72.9	100
CY1	70.6	73.3	76.7	77.0	125
CY2	73.6	76.0	79.2	78.6	125
CY3	74.4	73.3	79.6	77.1	125
CY4	72.6	74.8	78.0	77.4	125
C1	73.8	73.0	79.5	76.6	105
C352	78.6	77.0	81.8	79.1	105
NTC1 near PWB	74.1	81.9	79.5	82.1	130 for PWB
BD1 near PWB	73.5	79.3	78.9	80.7	130 for PWB
Q1 near PWB	84.9	83.3	87.3	83.9	130 for PWB
D350 near PWB	79.1	77.4	81.8	79.3	130 for PWB
CN1 at L terminal	64.1	64.0	71.0	70.3	85
CN1 at +V terminal	72.0	71.6	77.3	76.3	85
External enclosure near Q1	66.7	66.4	72.9	72.0	-

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Clause	Requirement + Test	Result - Remark	Verdict

Test condition **Mounting location 5** **u) Supply voltage 90Vac/60Hz, Loading A.** **v) Supply voltage 106.25Vdc, Loading A.**	**u)**	**v)**	**--**	**--**	**--**
Ambient	24.5	24.9	-	-	-
External enclosure Top T1	40.6	39.3	-	-	70
External enclosure near C1	39.4	37.1	-	-	70
External enclosure near FL1	36.3	34.9	-	-	70
External enclosure under T1	39.6	38.1	-	-	70

Supplementary information:
Note 1: The apparatus was submitted and evaluated for maximum manufacturer's recommended ambient (Tma) of 25 ºC, 50 ºC, 60 ºC and 70.
Note 2: The temperatures were measured under the worse case normal mode defined in table B.2.5.
Note 3: Temperature limits are calculated as follows:
Winding components providing safety isolation:
Class B→ Tmax = 120°C –10°C =110°C

Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)	Insulation class
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Supplementary information:
Note 1: Tma should be considered as directed by appliable requirement.
Note 2: Tma is not included in assessment of Touch Temperatures (Clause 9).

5.4.1.10.2	**TABLE: Vicat softening temperature of thermoplastics**		N/A
Penetration (mm)…….:			—
Object/ Part No./Material	Manufacturer/trademark	T softening (°C)	
Supplementary information:			

5.4.1.10.3	**TABLE: Ball pressure test of thermoplastics**		P
Allowed impression diameter (mm) ……. :	≤ 2 mm		—
Object/Part No./Material	Manufacturer/trademark	Test temperature (°C)	Impression diameter (mm)
FL1 Bobbin, 1403G6 (PBT), E130155	NANYA PLASTICS	125	1.0

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Clause	Requirement + Test	Result - Remark	Verdict

CN1:Input Connector, DT-49-B01W-05 (Polyamide), E102914	DINKLE	125	1.0
CN1:Input Connector, type B3P5-VH,E60389	JST	125	1.0
CN1:Input Connector, type A3963WV2-5P-A,E144544	JWT	125	1.0
Supplementary information: N/A			

5.4.2.2, 5.4.2.4 and 5.4.3	**TABLE: Minimum Clearances/Creepage distance**	P

Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz)[1]	Required cl (mm)	cl (mm)[2]	Required [3]cr (mm)	cr (mm)
Functional / Basic and supplementary insulation:							
Between L and N - (before fuse)	<420	<250	--	1.5	3.6	2.5	3.6
Under fuse	<420	<250	--	1.5	4.0	2.5	4.0
Primary to Primary after fuse	<420	<250	--	Method B.4.4 applied			
C1 to enclosure	<420	<250	--	1.5	4.9	2.5	4.9
LF1 to enclosure	<420	<250	--	1.5	6.8	2.5	6.8
F1 to enclosure	<420	<250	--	1.5	2.9	2.5	2.9
CY4 trace to earth trace	<420	<250	--	1.5	6.0	2.5	6.0
CY350, CY351 trace to earth trace	<420	<250	--	1.5	6.0	2.5	6.0
Neutral trace to earth trace	<420	<250	--	1.5	3.4	2.5	3.4
Reinforced / double insulation:							
Primary C12 to secondary pin of IC2	<420	<250	70.25	3.0	7.5	5.0	7.5
At T1 from primary to secondary near ZD6	590	294	70.25	3.0	8.8	6.0	8.8
T1 primary core secondary D350	590	294	70.25	3.0	8.1	6.0	8.1
T1 from primary to secondary near ZD6	590	294	70.25	3.0	8.1	6.0	8.1
At IC2, IC3	<420	<250	70.25	3.0	7.9	5.0	7.9
At CY3	<420	<250	70.25	3.0	7.7	5.0	7.7

Supplementary information:
Note 1: Only for frequency above 30 kHz

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Clause	Requirement + Test	Result - Remark	Verdict

Note 2: See table 5.4.2.4 if this is based on electric strength test

Note 3: Provide Material Group

Above values for required clearances are only derived from Procedure 1 (5.4.2.2). Values for procedure 2 are stated in table 5.4.2.3.

Required clearances are adopted for altitude of 3000m (correction factor 1.14).

See table 5.4.1.8 - Working voltage measurements in Attachment.

5.4.2.3	**TABLE: Minimum Clearances distances using required withstand voltage**		P
	Overvoltage Category (OV):		II
	Pollution Degree:		2

Clearance distanced between:	Required withstand voltage	Required cl (mm)	Measured cl (mm)
Functional / basic and supplementary insulation:			
Between L and N - (before fuse)	2500	1.7	3.6
Under fuse	2500	1.7	4.0
Primary to Primary after fuse	2500	1.7	Method B.4.4 applied
C1 to enclosure	2500	1.7	4.9
LF1 to enclosure	2500	1.7	6.8
F1 to enclosure	2500	1.7	2.9
CY4 trace to earth trace	2500	1.7	6.0
CY350, CY351 trace to earth trace	2500	1.7	6.0
Neutral trace to earth trace	2500	1.7	3.4
Reinforced / double insulation:			
Primary C12 to secondary pin of IC2	2500	3.4	7.5
At T1 from primary to secondary near ZD6	2500	3.4	8.8
T1 primary core secondary D350	2500	3.4	8.1
T1 from primary to secondary near ZD6	2500	3.4	8.1
At IC2, IC3	2500	3.4	7.9
At CY3	2500	3.4	7.7

Supplementary information: Refer to table 5.4.2.2, 5.4.2.4 and 5.4.3

Above clearances are derived from Procedure 2 (5.4.2.3 – Required withstand voltage).

Required clearances are adopted for altitude of 3000m (correction factor 1.14).

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.2.4	TABLE: Clearances based on electric strength test			N/A
Test voltage applied between:		Required cl (mm)	Test voltage (kV) peak / r.m.s. / d.c.	Breakdown Yes / No
--		--	--	--
Supplementary information:				

5.4.4.2, 5.4.4.5 c) 5.4.4.9	TABLE: Distance through insulation measurements					P
Distance through insulation di at/of:	Peak voltage (V)	Frequency (kHz)	Material	Required DTI (mm)	DTI (mm)	
Optical Isolators	420	>30	See table 4.1.2	0.4	1)	
Heat Shrinkable Tubing	420	>30	See table 4.1.2	0.4	1)	
Supplementary information: 1) For details refer to appended table 4.1.2.						

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
Model: PMC-12V050W1XX				
Functional:				
Between secondary and protective earth*		AC	500	No
Basic/supplementary:				
Between primary and protective earth		DC	2500	No
Between secondary and core of transformer (MV-TPT9032)		DC	2500	No
Y2 Capacitors: Murata Mfg. Co Ltd (E37921) Type KH		DC	2500	No
Y2 Capacitors: TDK Corporation (E37861) Type CS		DC	2500	No
Bergquist type SLI-PAD K-4: insulator for Q1 and D350		DC	2500	No
Reinforced:				

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
Primary to Secondary (PMC-12V050W1XX)		DC	4000	No
Primary to Secondary (MV-TPT9032)		DC	4000	No
Insulator tape 1 layer: 3M type 1350F-1 (E17385).		DC	4000	No
Longwell type LSH-125FR: heat shrinkable tube for C1, CY3 AND CY4.		DC	4000	No
Routine Tests:				
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Model: PMC-12V060W1NX				
Functional:				
Secondary to Protective earth *		AC	500	No
Basic/supplementary:				
Between primary and protective earth		DC	2500	No
Y2 Capacitors: Murata (E37921)Type KX/KH		DC	2500	No
Y2 Capacitors: Panasonic (E62674) Type TS / NS-A		DC	2500	No
Y2 Capacitors: TDK-EPC (E37861) Type CD/CS		DC	2500	No
Reinforced:				
Primary to Secondary (PMC-12V060W1NX)		DC	4000	No
Primary to Secondary of T1		DC	4000	No
Secondary to core of T1		DC	4000	No
3M type 1350F-1 Insulator tape 1 layer		DC	4000	No
3M type 1350F-2 Insulator tape 1 layer		DC	4000	No
SYMBIO TYPE 35660Y:Insulator tape 1 layer		DC	4000	No
Routine Tests:				
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Supplementary information: **(*) For customer requirement.**				

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Clause	Requirement + Test	Result - Remark	Verdict

5.5.2.2	TABLE: Stored discharge on capacitors				P
Supply Voltage (V), Hz	Test Location	Operating Condition (N, S)	Switch position On or off	Measured Voltage (after 2 seconds)	ES Classification
240Vac, 50Hz	L to N	Normal/ Loading B	N/A	200mV	ES1
240Vac, 50Hz	L to N	Normal/ Output no load	N/A	200mV	ES1
250Vdc	+ to - *	Normal/ Output no load	N/A	250mV	ES1
240Vac, 50Hz	L to N	SFC – R1D/ OC Output no load	N/A	3.79V	ES1

Supplementary information:
X-capacitors installed for testing are: CX1 = 0.22µF
☒ bleeding resistor rating: R1A:R1B:R1C = 680kΩ, R1D:R1E = 1MΩ
☐ ICX:
Notes:
A. Test Location:
Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth.
B. Operating condition abbreviations:
N – Normal operating condition (e.g., normal operation, or open fuse); S – Single fault condition.
Note: * Tested with input 250Vdc

5.6.6.2	TABLE: Resistance of protective conductors and terminations			P
Accessible part	Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)
Model: PMC-12V050W1XX				
PE of inlet – Case cover at far end.	32	2	0.152	0.006
PE of inlet – Case cover at far end.	40	2	0.211	0.006
Model: PMC-12V060W1NX				
PE of inlet – Case cover at far end.	32	2	0.29	0.009
PE of inlet – Case cover at far end.	40	2	0.63	0.016
Supplementary information: n/a				

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Clause	Requirement + Test	Result - Remark	Verdict

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part		P
Supply voltage ..... …:		264Vac/ 60Hz	—
Location		Test conditions specified in 6.1 of IEC 60990 or Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7	Touch current (mA)
Model: PMC-12V050W1XX			
Chassis 264Vac/ 60Hz (Line-to-Neutral) TN/TT System		1	1.018mApk
		2*	1.098mApk
		3	-
		4	-
		5	-
		6	-
		8	-
Chassis 264Vac/ 60Hz (Line-to-Neutral) Star IT system		1	1.018mApk
		2*	1.154mApk
		3	1.996mApk
		4	-
		5	1.996mApk
		6	-
		8	-
Chassis 264Vac/ 60Hz (Line-to-Line) Star IT system		1	0.368mApk
		2*	-
		3	1.05mApk
		4	-
		5	1.106mApk
		6	-
		8	-
Model: PMC-12V060W1NX			
Chassis 264Vac/ 60Hz (Line-to-Neutral) TN/TT System		1	0.530mApk
		2*	0.616mApk
		3	-
		4	-

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Clause	Requirement + Test	Result - Remark	Verdict

	5	-
	6	-
	8	-
Chassis 264Vac/ 60Hz (Line-to-Line) TN/TT System	1	0.196mApk
	2*	-
	3	-
	4	-
	5	-
	6	-
	8	-
Chassis 264Vac/ 60Hz (Line-to-Neutral) Star IT system	1	0.512mApk
	2*	0.606mApk
	3	1.124mApk
	4	-
	5	1.148mApk
	6	-
	8	-
Chassis 264Vac/ 60Hz (Line-to-Line) Star IT system	1	0.196mApk
	2*	-
	3	0.648mApk
	4	-
	5	0.648mApk
	6	-
	8	-

Supplementary information:

Notes:

[1] Supply voltage is the anticipated maximum Touch Voltage.

[2] Earthed neutral conductor [Voltage differences less than 1% or more].

[3] Specify method used for measurement as described in IEC 60990 subclause 4.3.

[4] IEC60990, subclause 6.2.2.7, Fault 7 not applicable.

[5] (*) IEC60990, subclause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided.

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Clause	Requirement + Test	Result - Remark	Verdict

6.2.2	TABLE: Electrical power sources (PS) measurements for classification				P
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s*)	PS Classification
Model: PMC-12V050W1XX					
Output +11V	Normal condition: @ 264Vac/ 50Hz	Power (W):	-	73.22	PS2
		V_A (V):	-	11.23	
		I_A (A) :	-	6.55	
Output +12V	Normal condition: @ 375Vdc	Power (W):	-	77.12	PS2
		V_A (V):	-	12.25	
		I_A (A) :	-	6.32	
Output +14V	Single fault: IC2 (1-2) SC @ 264Vac/ 50Hz	Power (W):	-	80.0	PS2
		V_A (V):	-	14.53	
		I_A (A) :	-	5.52	
Output +11V	Single fault: IC2 (1-2) SC @ 375 dc	Power (W):	-	73.22	PS2
		V_A (V):	-	11.23	
		I_A (A) :	-	6.55	
Output +12V	Single fault: IC2 (1-2) SC @ 375 dc	Power (W):	-	77.12	PS2
		V_A (V):	-	12.25	
		I_A (A) :	-	6.32	
Output +14V	Single fault: IC2 (1-2) SC @ 375 dc	Power (W):	-	80.0	PS2
		V_A (V):	-	14.53	
		I_A (A) :	-	5.52	
Output +14V	Single fault: IC3 (1-2) SC @ 264V ac/ 50Hz	Power (W):	-	50	PS2
		V_A (V):	-	14	
		I_A (A):	-	3.572	
Output +14V	Single fault: IC3(1-2) SC @ 375V dc	Power (W):	-	50	PS2
		V_A (V):	-	14	
		I_A (A):	-	3.572	
Model: PMC-12V060W1NX					
Output +12V	Normal condition:	Power (W):	-	82.9	PS2
		V_A (V):	-	12.26	

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Clause	Requirement + Test		Result - Remark		Verdict
	@ 264Vac/ 50Hz	I_A (A) :	-	6.798	
Output +14V	Normal condition: @ 264Vac/ 50Hz	Power (W):	-	87.89	PS2
		V_A (V):	-	14.565	
		I_A (A) :	-	6.42	
Output +12V	Normal condition: @ 375V dc	Power (W):	-	82.9	PS2
		V_A (V):	-	12.26	
		I_A (A) :	-	6.798	
Output +14V	Normal condition: @ 375V dc	Power (W):	-	87.89	PS2
		V_A (V):	-	14.565	
		I_A (A) :	-	6.42	
Output +14V	Single fault: IC3 (1-2) SC @ 264Vac/50 Hz	Power (W):	-	60.5	PS2
		V_A (V):	-	14.3	
		I_A (A):	-	4.29	
Output +14V	Single fault: IC3(1-2) SC @ 375Vdc	Power (W):	-	60.5	PS2
		V_A (V):	-	14.3	
		I_A (A):	-	4.29	
Supplementary information: (*) Measurement taken only when limits at 3 seconds exceed PS1 limits. **Note:** The worst case is considered at the power measurement for worst-case fault.					

6.2.3.1	TABLE: Determination of Potential Ignition Sources (Arcing PIS)			N/A
Location	Open circuit voltage After 3 s (Vp)	Measured r.m.s current (Irms)	Calculated value (V_p x I_{rms})	Arcing PIS? Yes / No
--	--	--	--	--
Supplementary information: An Arcing PIS requires a minimum of 50 V (peak) a.c. or d.c. An Arcing PIS is established when the product of the open circuit voltage (V_p) and normal operating condition rms current (I_{rms}) is greater than 15. All components located within the EUT are considered as arcing PIS.				

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Clause	Requirement + Test	Result - Remark	Verdict

6.2.3.2	TABLE: Determination of Potential Ignition Sources (Resistive PIS)				N/A
Circuit Location (x-y)	Operating Condition (Normal / Describe Single Fault)	Measured w attage or VA During first 30 s (W / VA)	Measured w attage or VA After 30 s (W / VA)	Protective Circuit, Regulator, or PTC Operated? Yes / No (Comment)	Resistive PIS? Yes/No
--	--	--	--	--	--

Supplementary information:

A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter.

If a separate voltmeter and ammeter are used, the product of (VA x IA) is used to determine Resistive PIS classification.

A Resistive PIS: (a) dissipates more than 15 W, measured after 30 s of normal operation, or (b) under single fault conditions has either a power exceeding 100 W measured immediately after the introduction of the fault if electronic circuits, regulators or PTC devices are used, or has an available power exceeding 15 W measured 30 s after introduction of the fault.

All components located within the EUT are considered as resistive PIS.

8.5.5	TABLE: High Pressure Lamp	N/A

Description	Values	Energy Source Classification
Lamp type ..... :		—
Manufacturer..... :		—
Cat no..... :		—
Pressure (cold) (MPa)..... :		MS_
Pressure (operating) (MPa)..... :		MS_
Operating time (minutes)..... :		—
Explosion method ..... :		—
Max particle length escaping enclosure (mm). :		MS_
Max particle length beyond 1 m (mm)..... :		MS_
Overall result ..... :		
Supplementary information:		

B.2.5	TABLE: Input test						P
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
Model: PMC-12V050W1XX							
264Vac/ 50Hz	0.51	-	59.3	-	F1	0.51	Loading A/ Normal
240Vac/ 50Hz	0.54	1.3	59.0	-	F1	0.54	Loading A/ Normal

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Clause	Requirement + Test	Result - Remark	Verdict

B.2.5	TABLE: Input test						P
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
100Vac/ 50Hz	1.03	1.3	60.9	-	F1	1.03	Loading A/ Normal
90Vac/ 50Hz	1.12	-	61.5	-	F1	1.12	Loading A/ Normal
264Vac/ 60Hz	0.51	-	59.3	-	F1	0.51	Loading A/ Normal
240Vac/ 60Hz	0.54	1.3	59.2	-	F1	0.54	Loading A/ Normal
100Vac/ 60Hz	1.04	1.3	60.9	-	F1	1.04	Loading A/ Normal
90Vac/ 60Hz	1.13	-	61.6	-	F1	1.13	Loading A/ Normal
264Vac/ 50Hz	0.51	-	59.1	-	F1	0.51	Loading B/ Normal
240Vac/ 50Hz	0.54	1.3	58.7	-	F1	0.54	Loading B/ Normal
100Vac/ 50Hz	1.02	1.3	60.5	-	F1	1.02	Loading B/ Normal
90Vac/ 50Hz	1.11	-	61.1	-	F1	1.11	Loading B/ Normal
264Vac/ 60Hz	0.51	-	59.1	-	F1	0.51	Loading B/ Normal
240Vac/ 60Hz	0.54	1.3	58.8	-	F1	0.54	Loading B/ Normal
100Vac/ 60Hz	1.04	1.3	60.4	-	F1	1.04	Loading B/ Normal
90Vac/ 60Hz	1.12	-	59.1	-	F1	1.12	Loading B/ Normal
375Vdc	0.155	-	58.12	-	F1	0.155	Loading A/ Normal
250Vdc	0.228	1.3	57.02	-	F1	0.228	Loading A/ Normal
125Vdc	0.477	1.3	59.89	-	F1	0.477	Loading A/ Normal
100Vdc	0.596	-	59.56	-	F1	0.596	Loading A/ Normal
375Vdc	0.154	-	57.66	-	F1	0.154	Loading B/ Normal
250Vdc	0.224	1.3	55.96	-	F1	0.224	Loading B/ Normal
125Vdc	0.468	1.3	58.68	-	F1	0.468	Loading B/ Normal
100Vdc	0.589	-	58.87	-	F1	0.589	Loading B/ Normal

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Clause	Requirement + Test	Result - Remark	Verdict

B.2.5	TABLE: Input test						P
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
Model: PMC-12V060W1NX							
264Vac/ 50Hz	0.65	-	69.8	-	F1	0.65	Load condition:12Vdc/5A
240Vac/ 50Hz	0.69	1.65	69.9	-	F1	0.69	Load condition:12Vdc/5A
100Vac/ 50Hz	1.25	1.65	71.0	-	F1	1.25	Load condition:12Vdc/5A
90Vac/ 50Hz	1.36	-	72.1	-	F1	1.36	Load condition:12Vdc/5A
264Vac/ 60Hz	0.66	-	70.0	-	F1	0.66	Load condition:12Vdc/5A
240Vac/ 60Hz	0.70	1.65	70.0	-	F1	0.70	Load condition:12Vdc/5A
100Vac/ 60Hz	1.28	1.65	71.4	-	F1	1.28	Load condition:12Vdc/5A
90Vac/ 60Hz	1.39	-	72.1	-	F1	1.39	Load condition:12Vdc/5A
264Vac/ 50Hz	0.65	-	69.7	-	F1	0.65	Load condition:14Vdc/4.286A
240Vac/ 50Hz	0.69	1.65	69.7	-	F1	0.69	Load condition:14Vdc/4.286A
100Vac/ 50Hz	1.24	1.65	71.0	-	F1	1.24	Load condition:14Vdc/4.286A
90Vac/ 50Hz	1.35	-	71.6	-	F1	1.35	Load condition:14Vdc/4.286A
264Vac/ 60Hz	0.66	-	70.0	-	F1	0.66	Load condition:14Vdc/4.286A
240Vac/ 60Hz	0.71	1.65	70.0	-	F1	0.71	Load condition:14Vdc/4.286A
100Vac/ 60Hz	1.28	1.65	70.9	-	F1	1.28	Load condition:14Vdc/4.286A
90Vac/ 60Hz	1.38	-	71.6	-	F1	1.38	Load condition:14Vdc/4.286A
375Vdc	0.19	-	69.75	-	F1	0.19	Load condition:12Vdc/5A at DC input
250Vdc	0.28	1.65	69.25	-	F1	0.28	Load condition:12Vdc/5A at DC input
125Vdc	0.56	1.65	70.38	-	F1	0.56	Load condition:12Vdc/5A at DC input

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Clause	Requirement + Test	Result - Remark	Verdict

B.2.5	TABLE: Input test						P
U (V)	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
106.25Vdc	0.72	-	71.7	-	F1	0.72	Load condition:12Vdc/5A at DC input
375Vdc	0.19	-	69.75	-	F1	0.19	Load condition:14Vdc/4.286A at DC input
250Vdc	0.28	1.65	68.75	-	F1	0.28	Load condition:14Vdc/4.286A at DC input
125Vdc	0.56	1.65	69.63	-	F1	0.56	Load condition:14Vdc/4.286A at DC input
106.25Vdc	0.66	-	70.13	-	F1	0.66	Load condition:14Vdc/4.286A at DC input
Supplementary information: Equipment may be have rated current or rated power or both. Both should be measured.							

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Clause	Requirement + Test	Result - Remark	Verdict

B.3	TABLE: Abnormal operating condition tests							P
Ambient temperature (°C)				25 °C, if not specified				—
Power source for EUT: Manufacturer, model/type, output rating .				--				—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Model: PMC-12V050W1XX								
Unit	Covering of ventilation openings (all surface)	264Vac/ 60Hz	8h 16min	F1 /No	0.48	1) T1 2) IC2 3) CY3 4) Top side 5) Bottom side 6) Rigth side 7) Left side 8) Front side 9) Ambient	1) 77.6 2) 60.1 3) 56.2 4) 46.5 5) 42.8 6) 44.4 7) 43.7 8) 43.2 9) 24.9	Input final: 264V ac/ 0.48A/ 58.8 W. Output final: +14V/3.572 A. Comment: Normal operation, NB, NC, NT, CT.
Supplementary information: Tested with Loading B.								
Unit	Misused mounting location 1	240Vac/ 50Hz	2h 37min	F1 /No	0.44	1) T1 2) IC2 3) IC3 4) CY3 5) Ambient	1) 81 2) 60 3) 62 4) 52 5) 29.1	Input final: 240V ac/ 0.44A/ 60W. Output final: 11.98V/ 4.17A. Comment: Normal operation, NB, NC, NT,CT.
Supplementary information: Test with loading A. After misused mounting (location 1) applied input current remain the same as initial input current during normal operating condition, touch temperature and touch voltage, touch current refer to covering ventilation openings test results.								

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Clause	Requirement + Test	Result - Remark	Verdict

B.3	TABLE: Abnormal operating condition tests								P
Ambient temperature (°C)					25 °C, if not specified				—
Power source for EUT: Manufacturer, model/type, output rating .					--				—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation	
Unit	Misused mounting location 2	240Vac/ 50Hz	2h 5min	F1 /No	0.44	1) T1 2) IC2 3) IC3 4) CY3 5) Ambient	1) 92 2) 76 3) 78 4) 72 5) 25.7	Input final: 240V ac/ 0.44A/ 59W. Output final: 11.95V/ 4.17A. Comment: Normal operation, NB, NC, NT,CT.	
Supplementary information: Test with loading A. After misused mounting (location 2) applied input current remain the same as initial input current during normal operating condition, touch temperature and touch voltage, touch current refer to covering ventilation openings test results.									
Unit	Misused mounting location3	240Vac/ 50Hz	1h 46min	F1 /No	0.44	1) T1 2) IC2 3) IC3 4) CY3 5) Ambient	1) 78 2) 58 3) 60 4) 53 5) 25.2	Input final: 240V ac/ 0.44A/ 59W. Output final: 11.96V/ 4.18A. Comment: Normal operation, NB, NC, NT,CT.	
Supplementary information: Test with loading A. After misused mounting (location 3) applied input current remain the same as initial input current during normal operating condition, touch temperature and touch voltage, touch current refer to covering ventilation openings test results.									

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

B.3	TABLE: Abnormal operating condition tests								P
Ambient temperature (°C)				25 °C, if not specified					—
Power source for EUT: Manufacturer, model/type, output rating .				--					—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation	
Output +11V	Short circuit	240Vac/ 50Hz	2h 40min	F1 /No	0.11	1) T1 2) IC2 3) IC3 4) CY3 5) Ambient	1) 76 2) 58 3) 56 4) 61 5) 26.9	Input final: 240V ac/ 0.11A/ 5W. Output final: 0.20V/ 6.4A Comment: Unit hiccup, NB, NC, NT.	
Supplementary information: Test with loading A. After short circuit applied output hiccup and input current becomes smaller than normal operating condition.									
Output +12V	Short circuit	240Vac/ 50Hz	3h 15min	F1 /No	0.1	1) T1 2) IC3 3) CY3 4) Top side 5) Ambient	1) 80 2) 60 3) 61 4) 56 5) 27.2	Input final: 240V ac/ 0.1A/ 5W. Output final: 0.50V/ 11.5A Comment: Unit hiccup, NB, NC, NT.	
Supplementary information: Test with loading A. After short circuit applied output hiccup and input current becomes smaller than normal operating condition.									
Output +14V	Short circuit	264Vac/ 60Hz	10min	F1 /No	0.18	Ambient	26.3	Input final: 264V ac/ 0.18A/ 12.4W. Output final: 0V /13A. Comment: Unit hiccup, NB, NC, NT.	
Supplementary information: Test with loading B. After short circuit applied output hiccup and input current becomes smaller than normal operating condition.									

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Clause	Requirement + Test	Result - Remark	Verdict

B.3	TABLE: Abnormal operating condition tests								P
Ambient temperature (°C)				25 °C, if not specified					—
Power source for EUT: Manufacturer, model/type, output rating .				--					—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation	
Output +14V	Overload	264Vac/ 60Hz	4h 4min	F1 /No	0.50	1) T1 2) IC3 3) CY3 4) Top side 5) Bottom side 6) Rigth side 7) Left side 8) Front side 9) Ambient	1) 84 2) 60 3) 56 4) 50 5) 46 6) 47 7) 46 8) 44 9) 22.8	Input final: 264V ac/ 0.50A/ 60.8W. Output final: +14V/ 4.9A. Comment: Loaded to 4.9A, unit hiccup when load was beyond 5.1A, NB,NC, NT.	
Supplementary information: Test with loading B.									
Output +14V	Overload	375Vdc	5h 7min	F1 /No	0.2	1) T1 2) IC3 3) CY3 4) Top side 5) Bottom side 6) Rigth side 7) Left side 8) Front side 9) Ambient	1) 82 2) 59 3) 53 4) 49 5) 46 6) 44 7) 43 8) 42 9) 24.9	Input final: 375V dc/ 0.2A/ 75W. Output final: +14V/ 4.71A. Comment: Loaded to 4.71A, unit hiccup when load was beyond 5.1A, NB,NC, NT.	
Supplementary information: Test with loading B.									

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Clause	Requirement + Test	Result - Remark	Verdict

B.3	TABLE: Abnormal operating condition tests								P
Ambient temperature (°C)				25 °C, if not specified					—
Power source for EUT: Manufacturer, model/type, output rating .				--					—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation	
Output+11V	Overload	240Vac/ 50Hz	6 h 9min	F1 /No	0.56	1) T1 2) IC2 3) IC3 4) CY3 5) Ambient	1) 100 2) 67 3) 70 4) 64 5) 26.7	Final input: 240V ac/ 0.56A/ 81W. Final output: 10.8V /6.3A. Comment: loaded to 6.3A unit hiccup when load beyond 6.4A, NB, NC, NT.	
Supplementary information: Test with loading A. After overload output applied output hiccup and input current becomes smaller than normal operating condition, Touch temperature, and Touch voltage ,touch current refer to +14V overload test results.									
Output+12V	Overload	240Vac/ 50Hz	8 hr. 44min.	F1 /No	0.58	1) T1 2) IC2 3) IC3 4) CY3 5) Ambient	1) 100 2) 67 3) 70 4) 64 5) 26.7	Final input: 240V ac/ 0.58A/ 82W. Final output: 11.9V/ 5.9A. Comment: loaded to 5.9A unit hiccup when load beyond 6.04 A, NB, NC, NT.	
Supplementary information: Test with loading A. After overload output applied output hiccup and input current becomes smaller than normal operating condition, Touch temperature, and Touch voltage, touch current refer to +14V overload test results.									

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Clause	Requirement + Test	Result - Remark	Verdict

B.3	TABLE: Abnormal operating condition tests								P
Ambient temperature (°C)					25 °C, if not specified				—
Power source for EUT: Manufacturer, model/type, output rating .					--				—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation	
T1 (X1- X2) after D350	Overload	240Vac/ 50Hz	10h 2min.	F1 /No	0.62	1) T1 2) IC503 3) IC603 4) CY3 5) Ambient	1) 100 2) 67 3) 68 4) 62 5) 25.3	Final input: 240V ac/ 0.61A/ 87W. Final output: 11.9V/6.1A. Comment: Transformer tested current 6.1A unit turn on and turn off when load was beyond 6.21A and then still can increase current up to 6.3A unit hiccup, NB, NC, NT.	
Supplementary information: N/A									
Model: PMC-12V060W1NX									
Unit	Covering of ventilation openings (All side)	264Vac/ 60Hz	2h 25min	F1/ No	0.67	1) T1 2) IC3 3) CY3 4) CN1(L) 5) External enclosure Top T1 6) External enclosure near C1 7) External enclosure near FL1 8) External enclosure under T1 9) Ambient	1) 81.0 2) 67.0 3) 61.7 4) 34.0 5) 41.8 6) 40.0 7) 39.9 8) 40.0 9) 24.9	Input final: 264V ac/0.67A/70W Output final: 14.20V/4.29A Comment: Normal operation, NB, NC, NT, CT.	
Supplementary information: Tested with Loading B.									

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Clause	Requirement + Test	Result - Remark	Verdict

B.3	TABLE: Abnormal operating condition tests								P
Ambient temperature (°C)				25 °C, if not specified					—
Power source for EUT: Manufacturer, model/type, output rating .				--					—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation	
Output 12V	Short circut	240Vac /50Hz	4h 35min	F1/ No	0.26	Ambient	25.2	Input final: 240V ac/0.26A/13.1W Output final: 0.04V/5.3A Comment: Output hiccup, NB, NC, NT.	
Supplementary information: Tested with Loading A - After short circuit applied output hiccup and input current becomes less than normal operating condition									
Output 12V	Overload	240Vac /50Hz	7h 57min	F1/ No	0.8	Ambient	25.1	Input final: 240V ac/0.8A/99.2W Output final: 11.96V/7.093A Comment: Loaded to 7.093A. , unit hiccup when load was beyond 7.5A, NB, NC, NT.	
Supplementary information: Tested with Loading A - After overload applied output hiccup and input current becomes less than normal operating condition - Touch temperature touch volt and touch current refer test Output 14V Overload test.									

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Clause	Requirement + Test	Result - Remark	Verdict

B.3	TABLE: Abnormal operating condition tests								P
Ambient temperature (°C)					25 °C, if not specified				—
Power source for EUT: Manufacturer, model/type, output rating .					--				—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation	
Output 14V	Overload	264Vac /60Hz	7h 05min	F1/ No	0.71	1) T1 2) IC3 3) CY3 4) CN1(L) 5) External enclosure Top T1 6) External enclosure near C1 7) External enclosure near FL1 8) External enclosure under T1 9) Ambient	1) 88.0 2) 68.0 3) 60.0 4) 32.0 5) 44.0 6) 40.0 7) 38.0 8) 42.0 9) 25.0	Input final: 264V ac /0.71A/89.6W Output final: 14.20V/5.39A Comment: Loaded to 5.39A. , unit hiccup when load was beyond 5.55A, NB, NC, NT.	
Supplementary information: Tested with Loading B.									
Output 14V	Overload	375Vdc	6h 19min	F1/ No	0.3	1) T1 2) IC3 3) CY3 4) CN1(L) 5) External enclosure Top T1 6) External enclosure near C1 7) External enclosure near FL1 8) External enclosure under T1 9) Ambient	1) 88.0 2) 68.0 3) 60.0 4) 36.0 5) 44.0 6) 40.0 7) 40.0 8) 42.0 9) 25.0	Input final: 375V dc/0.3A/ 112.5W Output final: 14.19V/5.39A Comment: Loaded to 5.53A. , unit hiccup when load was beyond 5.55A, NB, NC, NT.	
Supplementary information: Tested with Loading B.									

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

B.3	TABLE: Abnormal operating condition tests							P
Ambient temperature (°C)			25 °C, if not specified					—
Power source for EUT: Manufacturer, model/type, output rating .			--					—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
T1(X1-X2) after D350	Overload	240Vac/ 50Hz	9h 14min	F1	0.79	1) T1 2) IC3 3) CY3 4) Ambient	1) 116 2) 90 3) 80 4) 24.7	Input final: 240V ac/0.79A/93.0W Output final: 11.68V/6.87A Comment: Transformer tested current 6.87A after that unit hiccup when load was beyond 7.0A,NB,NC,NT.
Supplementary information: N/A								

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests							P
Ambient temperature (°C) ……:		25 °C, if not specified						—
Power source for EUT: Manufacturer, model/type, output rating .:		--						—
Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Model: PMC-12V050W1XX								
R1	Short circuit	240Vac/ 50Hz	2h 56min	F1 /No	0.44	1) T1 2) IC503 3) IC603 4) CY3 5) Ambient	1) 83 2) 59 3) 61 4) 56 5) 26.8	Input final: 240V ac/ 0.44A/ 60W. Output final: 11.96V/ 4.18A. Comment: Normal operation, NB, NC, NT,CT.
Supplementary information: Test with loading A. After short circuit applied input current remain the same as initial input current during normal operating condition.								
BD1 (L to +)	Short circuit	240Vac/ 50Hz	5min	F1 /Yes	0	Ambient	27.9	Input final: 240V ac/ 0A/ 0W. Output final: 0V/ 0A. Comment: Unit shutdown immediately, NB, NC, NT, IP (F1).
Supplementary information: Tested with Loading A. After short circuit applied, main fuse opened it made no input current flow to circuit.								
T1 (2-3)	Short circuit	240Vac/ 50Hz	2h 30min	F1 /No	0.17	1) T1 2) IC503 3) IC603 4) CY3 5) Ambient	1) 82 2) 59 3) 61 4) 56 5) 27.9	Input final: 240V ac/ 0.17A/ 15W. Output final: 3.8V/ 0.25A. Comment: Unit hiccup, NB, NC, NT.
Supplementary information: Tested with Loading A. After short circuit applied output hiccup and input current becomes smaller than normal operating condition.								

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C) ..... :		25 °C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
T1 (4-5)	Short circuit	240Vac/ 50Hz	3 h 47min	F1 /No	0.23	1) T1 2) IC503 3) IC603 4) CY3 5) Ambient	1) 85 2) 58 3) 60 4) 53 5) 24.7	Input final: 240V ac/ 0.23A/ 35W. Output final: 3.8V/ 0.25A. Comment: Unit hiccup, NB, NC, NT.
Supplementary information: Tested with Loading A. After short circuit applied output hiccup and input current becomes smaller than normal operating condition.								
T1 (X1-X2)	Short circuit	240Vac/ 50Hz	3 hr. 13min.	F1 /No	0.2	1) T1 2) IC503 3) IC603 4) CY3 5) Ambient	1) 84 2) 60 3) 62 4) 57 5) 27.2	Final input: 240V ac/ 0.2A/13W. Final output: 3.8V/ 0.25A. Comment: Unit hiccup, NB, NC, NT.
Supplementary information: Tested with Loading A. After short circuit applied output hiccup and input current becomes smaller than normal operating condition.								

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C) ..... :		25 °C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Q1(D-G)	Short circuit	240Vac/ 50Hz	5min	F1 /Yes	0	Ambient	25.7	Input final: 240V ac/ 0A/ 0W. Output final: 0V/ 0A. Comment: Unit shutdown immediatel y, NB, NC, NT, CD (Q1, ZD5, D6, D7, D15, R8, R9, IC1), IP (F1).
Supplementary information: Tested with Loading A. After short circuit applied some components damaged and main fuse opened it made no input current flow to circuit.								
Q1(D-S)	Short circuit	240Vac/ 50Hz	5min	F1 /Yes	0	Ambient	24.5	Final input: 240V ac/ 0A/ 0W. Final output: 0V/ 0A. Comment: Unit shutdown immediately, NB, NC, NT, CD (Q1, D6, D7, IC1), IP (F1).
Supplementary information: Tested with loading A. After short circuit applied some components damaged and main fuse opened it made no input current flow to circuit.								

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C) ..... :		25 °C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Q1(G-S)	Short circuit	240Vac/ 50Hz	5min	F1 /No	0.02	Ambient	24.9	Final input: 240V ac/ 0.02A/ 0.5W. Final output: 0V/ 0A. Comment: Unit shutdown, NB, NC, NT.
Supplementary information: Tested with loading A. After short circuit applied output shutdown and input current becomes smaller than normal operating condition.								
C1	Short circuit	240Vac/ 50Hz	5min	F1 /Yes	0	Ambient	24.0	Final input: 240Vac/ 0A / 0W. Final output: 0V/0A. Comment: Unit shutdown, NB, NC, NT, IP (F1).
Supplementary information: Tested with loading A. After short circuit applied, main fuse opened it made no input current flow to circuit.								

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C) ..... :		25 °C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
IC1 (1-2)	Short circuit	240Vac /50Hz	5min	F1 /No	0.02	Ambient	24.9	Final input: 240V ac/ 0.02A/ 0.6W. Final output: 0V/0A. Comment: Unit shutdown, NB, NC, NT.
Supplementary information: Tested with loading A. After short circuit applied output shutdown and input current becomes smaller than normal operating condition.								
IC1 (1-3)	Short circuit	240Vac /50Hz	5min	F1 /No	0.02	Ambient	23.6	Final input: 240V ac / 0.02A/ 0.6W. Final output: 0V/0A. Comment: Unit shutdown, NB, NC, NT.
Supplementary information: Tested with loading A. After short circuit applied output shutdown and input current becomes smaller than normal operating condition.								

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Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C)		25 °C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
IC1 (2-4)	Short circuit	240Vac/ 50Hz	5min	F1 /No	0.02	Ambient	24.9	Final input: 240V ac/ 0.02A/ 0.6W Final output: 0V/0A. Comment: Unit shutdown, NB, NC, NT.
Supplementary information: Tested with loading A. After short circuit applied output shutdown and input current becomes smaller than normal operating condition.								
IC2 (1-2)	Short circuit	264Vac/ 60Hz	5min	F1 /No	0.19	Ambient	26.7	Final input: 264V ac/ 0.19A/ 8.2W. Final output: 5.8V/1.2A. Comment: Unit hiccup, NB, NC, NT.
Supplementary information: Tested with loading B. After short circuit applied output hiccup and input current becomes smaller than normal operating condition.								

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C)		25 °C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
IC2 (1-2)	Short circuit	264Vac/ 60Hz	5min	F1 /No	0.17	Ambient	24.9	Final input: 264V ac/ 0.17A/1.7W. Final output: 11.2V/ 0A. Comment: Unit hiccup, NB, NC, NT.
Supplementary information: Tested with loading B. After short circuit applied output hiccup and input current becomes smaller than normal operating condition.								
IC2:IC3 (3-4)	Short circuit	240Vac/ 50Hz	5min	F1 /No	0.2	Ambient	25.7	Final input: 240V ac/ 0.2A/ 1W. Final output: 0V/0A. Comment: Unit shutdown, NB, NC, NT.
Supplementary information: Tested with Loading A. After short circuit applied output shutdown and input current becomes smaller than normal operating condition.								

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C) ..... :		25 °C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
IC3 (1-2)	Short circuit	264Vac/ 60Hz	5min	F1 /No	0.52	Ambient	25.5	Final input: 264V ac/ 0.52A/ 60.5W Final output: 14V/ 3.572A Comment: Normal operation, NB, NC, NT, CT.
Supplementary information: Tested with loading B. After short circuit applied input current remain the same as initial input current during normal operating condition.								
IC3 (1-2)	Short circuit	375Vdc	5min	F1 /No	0.23	Ambient	26.7	Final input: 375V dc/ 0.23A/ 86.25W Final output: 14V/3.572A. Comment: Normal operation, NB NC, NT, CT.
Supplementary information : Tested with loading B. After short circuit applied input current remain the same as initial input current during normal operating condition.								

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C) ..... :		25 °C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
IC510 (R-K)	Short circuit	240Vac/ 50Hz	5min	F1 /No	0.07	1) T1 2) IC2 3) IC3 4) CY3 5) Ambient	1) 80 2) 55 3) 56 4) 52 5) 24.9	Final input: 240V ac/ 0.07A/ 2W. Final output: 5.8V/ 1.2A. Comment: Unit hiccup, NB, NC, NT.
Supplementary information: Tested with loading A. After short circuit applied unit hiccup and input current becomes smaller than normal operating condition.								
D350	Short circuit	240Vac/ 50Hz	5min	F1 /No	0.2	1) T1 2) IC503 3) IC603 4) CY3 5) Ambient	1) 83 2) 58 3) 60 4) 55 5) 26.8	Final input: 240V ac/ 0.2A/ 14W. Final output: 3.8V/ 0.25A. Comment: Unit hiccup, NB, NC, NT.
Supplementary information: Tested with loading A. After short circuit applied unit hiccup and input current becomes smaller than normal operating condition.								

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Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C) ..... :		25 °C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
C350	Short circuit	240Vac/ 50Hz	5min	F1 /No	0.2	1) T1 2) IC2 3) IC3 4) CY3 5) Ambient	1) 88 2) 61 3) 64 4) 58 5) 25.0	Final input: 240V ac / 0.2A/ 10W. Final output: 3.8V/ 0.25A. Comment: Unit hiccup, NB, NC, NT.
Supplementary information: Tested with loading A. After short circuit applied unit hiccup and input current becomes smaller than normal operating condition.								
R12	Short circuit	240Vac/ 50Hz	3h 22min	F1 /No	0.44	1) T1 2) IC2 3) IC3 4) CY3 5) Ambient	1) 80 2) 56 3) 57 4) 52 5) 25.0	Final input: 240V ac/ 0.44A/ 58W. Final output: 12.02V/4.2A. Comment: Normal operation, NB NC, NT,CT.
Supplementary information: Tested with loading A. After short circuit applied input current remain the same as initial input current during normal operating condition.								

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C)		25 °C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
C5	Short circuit	240Vac/ 50Hz	5min	F1 /No	0.02	Ambient	24.9	Final input: 240V ac/ 0.02A/ 0.5W. Final output: 0V/0A. Comment: Unit shutdown, NB, NC, NT.
Supplementary information: Tested with loading A. After short circuit applied unit shutdown and input current becomes smaller than normal operating condition.								
C1	Short circuit	375Vdc	<1s	F1 /Yes	0	Ambient	24.7	Final input: 375V dc/ 0A/ 0W. Final output: 0V/ 0A. Comment: Unit shutdown Immediately, NB, NC, NT, IP (F1).
Supplementary information: Tested with loading A. After short circuit applied, main fuse opened it made no input current flow to circuit. Test repleted total 10 times with F1: - Bel fuse type 5HT series. - Littlefuse type 215 series. - Schurter spt series.								

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Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C) ..... :		25 °C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Model: PMC-12V060W1NX								
T1(1-2) [1)]	Short circuit	240Vac/ 50Hz	4h 20min	F1 /NO	0.12	Ambient	25.1	Input final: 240V ac/0.12A/5.2W. Output final: 0V/ 0A. Comment: Output shutdown , NB, NC, NT.
T1(4-5) [2)]	Short circuit	240Vac/ 50Hz	5h 05min	F1 /NO	0.23	Ambient	24.4	Input final: 240V ac/0.23A/11.33W. Output final: 3.2V/ 1.23A. Comment: Output hiccup. NB, NC, NT.

Supplementary information: N/A

[1)] After short circuit applied output shutdown and input current becomes less than normal operating condition

[2)] After short circuit applied output hiccup and input current becomes less than normal operating condition

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Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C) ..... :		25 °C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
T1 (X1 – X2)	Short circuit	264Vac /60Hz	4h 33min	F1/ No	0.23	1) T1 2) IC3 3) CY3 4) CN1(L) 5) External enclosure Top T1 6) External enclosure near C1 7) External enclosure near FL1 8) External enclosure under T1 9) Ambient	1) 76.6 2) 59.3 3) 53.4 4) 32.2 5) 41.6 6) 39.1 7) 37.3 8) 39.6 9) 24.9	Input final: 264V ac/0.23A/12.1W Output final: 0~4.4V/0~1.3A Comment: Output hiccup, NB, NC, NT.
Supplementary information: Tested with Loading B.								
Q1 (D - S)	Short circuit	240Vac/ 50Hz	3h 29min	F1 /Yes	0	Ambient	24.2	Input final: 240V ac/0A/0W. Output final: 0V/ 0A. Comment: Unit shutdown immediately, NB, NC, NT, IP(F1 opened), CD(Q1, D6, D7, R8, R9, IC1, R3 ,D15).
Supplementary information: N/A - After short circuit applied, main fuse opened it made no input current flow to circuit.								

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Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C) ..... :		25 °C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Q1 (D - G)	Short circuit	240Vac/ 50Hz	4h 13min	F1 /Yes	0	Ambient	24.6	Input final: 240V ac/0A/0W. Output final: 0V/ 0A. Comment: Unit shutdown immediately, NB, NC, NT, IP(F1 opened), CD(Q1, D6, D7, R8, R9, IC1,Q2, R3 ,D15).
C1	Short circuit	240Vac/ 50Hz	2h 51min	F1 /Yes	0	Ambient	24.6	Input final: 240V ac/0A/0W. Output final: 0V/ 0A. Comment: Unit shutdown immediately, NB, NC, NT, IP(F1 opened).

Supplementary information: N/A

- After short circuit applied, main fuse opened it made no input current flow to circuit.

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Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C) ..... :		25 °C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
R4A	Short circuit	240Vac/ 50Hz	4h 34min	F1 /no	0.57	Ambient	24.5	Input final: 240V ac/0.57A/70.4W. Output final: 11.96V/ 5A. Comment: Normal operation, NB, NC, NT.
Supplementary information: N/A -After short circuit applied input current remain the same as initial input current during normal operating condition								
IC2 (1 - 2)[1)]	Short circuit	240Vac /50Hz	2h 28min	F1/ no	0.29	Ambient	25.5	Input final: 240V ac/0.29/12.7W Output final: 4.5V/2.0A Comment: Output hiccup, NB, NC, NT.
IC2 (3 - 4)[2)]	Short circuit	240Vac /50Hz	3h 44min	F1/ no	0.009	Ambient	25.5	Input final: 240V ac/0.009/0.2W Output final: 0V/0A Comment: Output shutdown, NB, NC, NT.
Supplementary information: N/A [1)] After short circuit applied output hiccup and input current becomes less than normal operating condition [2)] After short circuit applied output shutdown and input current becomes less than normal operating condition								

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Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C) ..... :		25 °C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
IC3 (1 - 2)	Short circuit	264Vac /60Hz	3h 09min	F1/ no	0.3	1) T1 2) IC3 3) CY3 4) CN1(L) 5) External enclosure Top T1 6) External enclosure near C1 7) External enclosure near FL1 8) External enclosure under T1 9) Ambient	1) 76.6 2) 59.3 3) 53.4 4) 32.2 5) 41.6 6) 39.1 7) 37.3 8) 39.6 9) 24.9	Input final: 264V ac/0.3A/69W Output final: 14.20V/4.29 A Comment: Normal operation, NB, NC, NT.
Supplementary information: Tested with Loading B.								

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Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C) ..... :		25 °C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
IC3 (3 - 4) [1]	Short circuit	240Vac/ 50Hz	2h 40min	F1/ no	0.023	Ambient	25.8	Input final: 240V ac/0.023A/0.088W. Output final: 0.24V/0.078A Comment: Output hiccup, NB, NC, NT.
D350 [2]	Short circuit	240Vac/ 50Hz	4h 25min	F1/ no	0.26	Ambient	24.6	Input final: 240V ac/0.26A/12W. Output final: 0V/0A Comment: Output shutdow, NB, NC, NT.

Supplementary information: N/A

[1] After short circuit applied output hiccup and input current becomes less than normal operating condition

[2] After short circuit applied output shutdown and input current becomes less than normal operating condition

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Clause	Requirement + Test	Result - Remark	Verdict

B.4	TABLE: Fault condition tests		P
Ambient temperature (°C) ……:		25 °C, if not specified	—
Power source for EUT: Manufacturer, model/type, output rating .:		--	—

Component No.	Fault Condition	Supply voltage, (V)	Test time (ms)	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
IC3 (1 - 2)	Short circuit	375Vdc	2h 37min	F1/ no	0.19	1) T1 2) IC3 3) CY3 4) CN1(L) 5) External enclosure Top T1 6) External enclosure near C1 7) External enclosure near FL1 8) External enclosure under T1 9) Ambient	1) 73.3 2) 58.1 3) 51.9 4) 31.6 5) 41.6 6) 38.7 7) 36.8 8) 38.9 9) 24.7	Input final: 375V dc/0.19A/69.75W Output final: 14.19V/4.29A Comment: Normal operation, NB, NC, NT,CT
Supplementary information: Tested with Loading B.								

Annex M	TABLE: Batteries		N/A
The tests of Annex M are applicable only when appropriate battery data is not available			
Is it possible to install the battery in a reverse polarity position?…… :			

	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition									
Max. current during fault condition									
Test results:									Verdict

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Clause	Requirement + Test	Result - Remark	Verdict

- Chemical leaks		
- Explosion of the battery		
- Emission of flame or expulsion of molten metal		
- Electric strength tests of equipment after completion of tests		
Supplementary information:		

Annex M.4	**Table: Additional safeguards for equipment containing secondary lithium batteries**	N/A

Battery/Cell No.	Test conditions	Measurements			Observation
		U	I (A)	Temp (C)	
	Normal				
	Abnormal				
	Single fault –SC/OC				
	Normal				
	Abnormal				
	Single fault – SC/OC				
Supplementary Information:					

Battery identification	Charging at T_{lowest} (°C)	Observation	Charging at $T_{highest}$ (°C)	Observation
Supplementary Information:				

Annex Q.1	**TABLE: Circuits intended for interconnection with building wiring (LPS)**	P

Note: Measured UOC (V) with all load circuits disconnected:

Output Circuit	Components	U_{oc} (Vdc)	I_{sc} (A)		S (VA)	
			Meas.	Limit	Meas.	Limit
Model: PMC-12V060W1NX						
12V	Normal condition	12.05	6.62	8.0	79.36	100
12V	Single fault: SC IC2 (1-2) *	12.05	2.0	8.0	8.2	100

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Clause	Requirement + Test			Result - Remark		Verdict
12V	Single fault: SC IC2 (3-4)	0	0	8.0	0	100
12V	Single fault: SC IC3 (1-2)	12.05	6.29	8.0	75.8	100
12V	Single fault: SC IC3 (3-4) *	12.05	0.08	8.0	0.02	100
12V	Single fault: SC R6	12.05	7.06	8.0	82.66	100
12V	Single fault: SC R25*	12.05	3.0	8.0	14.0	100
12V	Single fault: SC R4A	12.05	7.4	8.0	86.51	100
12V	Single fault: SC R3	0	0	8.0	0	100
12V	Single fault: SC R515	12.05	6.27	8.0	73.84	100
12V	Single fault: SC IC510 (A-K) *	12.05	0.7	8.0	0.95	100
12V	Single fault: SC IC510 (A-G) *	12.05	2.9	8.0	16.5	100
12V	Single fault: SC IC510 (G-K) *	12.05	1.4	8.0	2.6	100
12V	Single fault: OC IC2 (1) *	12.07	2.8	8.0	5.3	100
12V	Single fault: OC IC2 (3) *	12.07	2.8	8.0	14.0	100
12V	Single fault: OC IC3 (1)	12.07	6.27	8.0	73.81	100
12V	Single fault: OC IC3 (3) *	12.07	2.8	8.0	15.0	100
12V	Single fault: OC R6	12.07	2.8	8.0	16.0	100
12V	Single fault: OC R25	12.07	6.95	8.0	81.74	100
12V	Single fault: OC R4A	0	0	8.0	0	100
12V	Single fault: OC R3	0	0	8.0	0	100
12V	Single fault: OC R515	12.07	6.27	8.0	73.81	100
12V	Single fault: OC IC510 (A) *	12.07	2.9	8.0	16.0	100
12V	Single fault: OC IC510 (A) *	12.07	2.9	8.0	15.0	100
12V	Single fault: OC IC510 (G) *	12.07	2.9	8.0	16.0	100

IEC 62368-1						
Clause	Requirement + Test			Result - Remark		Verdict
14V	Normal condition	14.58	5.69	8,0	82.49	100
14V	Single fault: SC IC2 (1-2)	14.58	5.87	8,0	83.7	100
14V	Single fault: OC R6	14.58	5.87	8,0	83.7	100
14V	Single fault: SC R4A	14.58	5.8	8,0	82.5	100
14V	Single fault: SC R3	0	0	8,0	0	100
14V	Single fault: SC IC510 (G-K)	14.60	1.2	8,0	4.1	100
14V	Single fault: OC R515	14.60	5.4	8,0	76.5	100
14V	Single fault: OC IC3 (1)	14.60	5.4	8,0	76.5	100
14V	Single fault: OC R25	14.60	6.04	8,0	86.5	100
Supplementary information: SC = Short-circuited; OC = Open-circuited. Note: (*) Hiccup mode						

T.2, T.3, T.4, T.5	TABLE: Steady force test				P
Part/Location	Material	Thickness (mm)	Force (N)	Test duration (sec)	Observation
Model: PMC-12V050W1XX					
Enclosure over T1	Metal	0.8	30	5	No damaged.
Enclosure over C1	Metal	0.8	30	5	No damaged.
Enclosure over FL1	Metal	0.8	30	5	No damaged.
Enclosure over CY3	Metal	0.8	30	5	No damaged.
Enclosure over Z1	Metal	0.8	30	5	No damaged.
Enclosure over Q1	Metal	0.8	30	5	No damaged.
Enclosure under T1	Metal	0.8	30	5	No damaged.
Enclosure under C1	Metal	0.8	30	5	No damaged.

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

Enclosure under FL1	Metal	0.8	30	5	No damaged.
Enclosure under CY3	Metal	0.8	30	5	No damaged.
Enclosure under Z1	Metal	0.8	30	5	No damaged.
Enclosure under Q1	Metal	0.8	30	5	No damaged.
Enclosure label side near Q1	Metal	0.8	30	5	No damaged.
Enclosure label side near D350	Metal	0.8	30	5	No damaged.
Enclosure label side near C1	Metal	0.8	30	5	No damaged.
Enclosure side near CY4	Metal	0.8	30	5	No damaged.
Enclosure side near F1	Metal	0.8	30	5	No damaged.
Enclosure side near FL1	Metal	0.8	30	5	No damaged.
Supplementary information: N/A					

T.6, T.9	TABLE: Impact tests			N/A
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation
Supplementary information:				

T.7	TABLE: Drop tests			N/A
Part/Location	Material	Thickness (mm)	Drop height (mm)	Observation
Supplementary information:				

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

T.8	TABLE: Stress relief test				N/A
Part/Location	Material	Thickness (mm)	Oven temperature (°C)	Duration (h)	Observation
Supplementary information:					

List of test equipment used:

Instr. Code	Instrument I.D.	Instrument Type	Range Used Or ***	Make and Model **	Calibration Date	
					Last	Due
1	DT324-1088	Temperature & Humidity & Time Display	Temperature 10'C~30'C; Humidity 50%RH~80%RH; Timer 1s-24Hrs	GE OUTSOURCE	2018-09-19	2019-09-18
2	DT311-365	AC power source	ACV 1~300V; DCV 1.4~424V; ACA 20/10A; DCA10/5A	KIKUSUI/ PCR2000L	2019-04-27	2020-04-26
3	DT311-1608	Programmable 3Ø AC Power Source.	3Phase 5-600Vac, 50/60Hz	EXTECH/ 6300	2019-01-12	2020-01-11
4	DT311-1195	AC power source	ACV 5~300V; 47-63/400Hz; 30KVA	APC AC POWER / AFC-31030	2019-01-12	2020-01-11
5	DT312-368	Withstanding voltage tester	ACV/DCV 0~10KV; AC cut off current 55mA; DC cut off current 5.5mA	KIKUSUI/TOS5101	2019-03-05	2019-09-04
6	DT324-293	Open chamber	Temperature 0~70'C	TAKAMISAWA / OTC-2C-N	2018-10-27	2019-10-26
7	DT326-232	IEC 60990 NETWORK	U1/500, U2/500,U3/500	-	2018-08-20	2019-08-19
8	DT311-3056	Programmable dc power supply	DCV 0~500V; DCA 0~30A, 15KW	AMATEX/SGI500X 30D-1AAA	2018-11-24	2019-11-23
9	-	Chemicals	n-Hexane	-	-	-
10	DT306-108	Stop watch	0 - 9 Hours	CASIO/ HS-30W	2019-06-05	2020-06-04
11	DT319-141	Passive probe100:1	100 Mohm / 4 pF	TESTEC / TT-HV150	2019-03-29	2020-03-28
12	DT307-606	Oscilloscope 200 MHz	DC gain 1 mV/div - 10 V/div (1 Mohm); 1 mV/div - 1 V/div (50 ohm); Time/div 200 pS - 1kS	LECROY/ HDO4024A	2018-10-29	2019-10-28
13	DT309-074	Digital power meter	ACV 0 - 500 V; ACA 0 - 11 A; Power 0 - 5000 W	ZENTECH/ 2100	2018-10-05	2019-10-04
14	DT318-1388	Smart electronic load	CR&CC mode: DCV 0~60V; DCA 0~50A	CHROMA/ 63030	2018-10-18	2019-10-17
15	DT318-1653	Smart electronic load	CR&CC mode: DCV 0~60V; DCA 0~50A	CHROMA/ 63030	2019-03-15	2020-03-14
16	DT324-216	Hybrid recorder	Temperature; thermocouple type T0~200°C	YOKOGAWA/ DR130	2018-11-01	2019-10-31
17	DT324-301	Close chamber	Temperature 0~150'C; Humidity 75%RH - 95%RH	ETAC HIFLEX/ FX233PH	2019-03-17	2020-03-16
18	DT309-129	Power analyzers	ACV/DCV 6~600V; ACA/DCA 0.1~20A; Power 0.26W~1.2KW; Frequency DC and 45~67Hz	CHROMA / 6630	2019-01-18	2020-01-17
19	DT303-564	NON INDUCTIVE RESISTOR	Resistance 1000 ohm	-	2019-04-29	2020-04-28

Equipment List Revision: 145.

5.4.1.8	TABLE: Working voltage measurement		P
Location	Peak voltage (V)	RMS voltage (V)	Comments
Model: PMC-12V050W1XX			
Test voltage 240Vac/50Hz, Loading A			
T1 Pin 1 to Pin X1	590	288	-
T1 Pin 1 to Pin X2	570	247	-
T1 Pin 1 to Pin PE	590	260	-
T1 Pin 2 to Pin X1	360	211	-
T1 Pin 2 to Pin X2	410	212	-
T1 Pin 2 to Pin PE	360	211	-
T1 Pin 3 to Pin X1	450	217	-
T1 Pin 3 to Pin X2	430	212	-
T1 Pin 3 to Pin PE	450	217	-
T1 Pin 4 to Pin X1	360	212	-
T1 Pin 4 to Pin X2	375	214	-
T1 Pin 4 to Pin PE	360	212	-
T1 Pin 5 to Pin X1	440	215	-
T1 Pin 5 to Pin X2	380	212	-
T1 Pin 5 to Pin PE	440	215	-
IC2, pin 3 - 1	370	221	-
IC2, pin 3 - 2	370	220	-
IC2, pin 4 – 1	370	218	-
IC2, pin 4 - 2	370	218	-
IC3, pin 3 - 1	370	221	-
IC3, pin 3 - 2	370	220	-
IC3, pin 4 – 1	370	219	-
IC3, pin 4 - 2	370	218	-
CY3,primary pin, secondary pin	360	212	-
CY1,primary pin to PE	360	240	-
CY2,primary pin to PE	0	0	-
Test voltage 250Vdc, Loading A			
T1 Pin 1 to Pin X1	515	288	-

5.4.1.8	TABLE: Working voltage measurement			P
T1 Pin 1 to Pin X2	490	278	-	
T1 Pin 1 to Pin PE	515	288	-	
T1 Pin 2 to Pin X1	280	252	-	
T1 Pin 2 to Pin X2	320	254	-	
T1 Pin 2 to Pin PE	280	252	-	
T1 Pin 3 to Pin X1	365	256	-	
T1 Pin 3 to Pin X2	345	253	-	
T1 Pin 3 to Pin PE	365	256	-	
T1 Pin 4 to Pin X1	0	0	-	
T1 Pin 4 to Pin X2	54	22	-	
T1 Pin 4 to Pin PE	0	0	-	
T1 Pin 5 to Pin X1	71	30	-	
T1 Pin 5 to Pin X2	37	10	-	
T1 Pin 5 to Pin PE	71	30	-	
IC2, pin 3 - 1	14.2	12.0	-	
IC2, pin 3 - 2	14.2	12.0	-	
IC2, pin 4 – 1	10.8	10.0	-	
IC2, pin 4 - 2	10.8	8.4	-	
IC3, pin 3 - 1	15.0	13.8	-	
IC3, pin 3 - 2	14.8	13.8	-	
IC3, pin 4 – 1	10.8	10.6	-	
IC3, pin 4 - 2	12.0	10.0	-	
CY3,primary pin, secondary pin	2.4	1.0	-	
CY1,primary pin to PE	256	251	-	
CY2,primary pin to PE	0	0	-	
Model: PMC-12V060W1NX				
Test voltage 240Vac/50Hz, Loading A				
T1 Pin 1 to Pin X1	532	264	-	
T1 Pin 1 to Pin X2	552	280	-	
T1 Pin 1 to PE	544	280	-	
T1 Pin 2 to Pin X1	412	223	-	

5.4.1.8	TABLE: Working voltage measurement			P
T1 Pin 2 to Pin X2	364	220	-	
T1 Pin 2 to PE	368	222	-	
T1 Pin 3 to Pin X1	412	222	-	
T1 Pin 3 to Pin X2	424	226	-	
T1 Pin 3 to PE	426	227	-	
T1 Pin 4 to Pin X1	388	226	-	
T1 Pin 4 to Pin X2	372	224	-	
T1 Pin 4 to PE	372	225	-	
T1 Pin 5 to Pin X1	424	223	-	
T1 Pin 5 to Pin X2	476	226	-	
T1 Pin 5 to PE	472	228	-	
Test voltage 100Vac/60Hz, Loading A				
T1 pin 1 to X2	360	143	-	
T1 pin 1 to PE	360	143	-	
Test voltage 250Vdc, Loading A				
T1 Pin 1 to Pin X1	448	281	-	
T1 Pin 1 to Pin X2	452	293	-	
T1 Pin 1 to PE	462	294	-	
T1 Pin 2 to Pin X1	314	255	-	
T1 Pin 2 to Pin X2	280	252	-	
T1 Pin 2 to PE	280	253	-	
T1 Pin 3 to Pin X1	318	253	-	
T1 Pin 3 to Pin X2	334	257	-	
T1 Pin 3 to PE	336	256	-	
T1 Pin 4 to Pin X1	67	23	-	
T1 Pin 4 to Pin X2	11	3	-	
T1 Pin 4 to PE	11	3	-	
T1 Pin 5 to Pin X1	68	15	-	
T1 Pin 5 to Pin X2	104	35	-	
T1 Pin 5 to PE	102	35	-	
Test voltage 125Vdc, Loading A				
T1 pin 1 to X2	358	165	-	

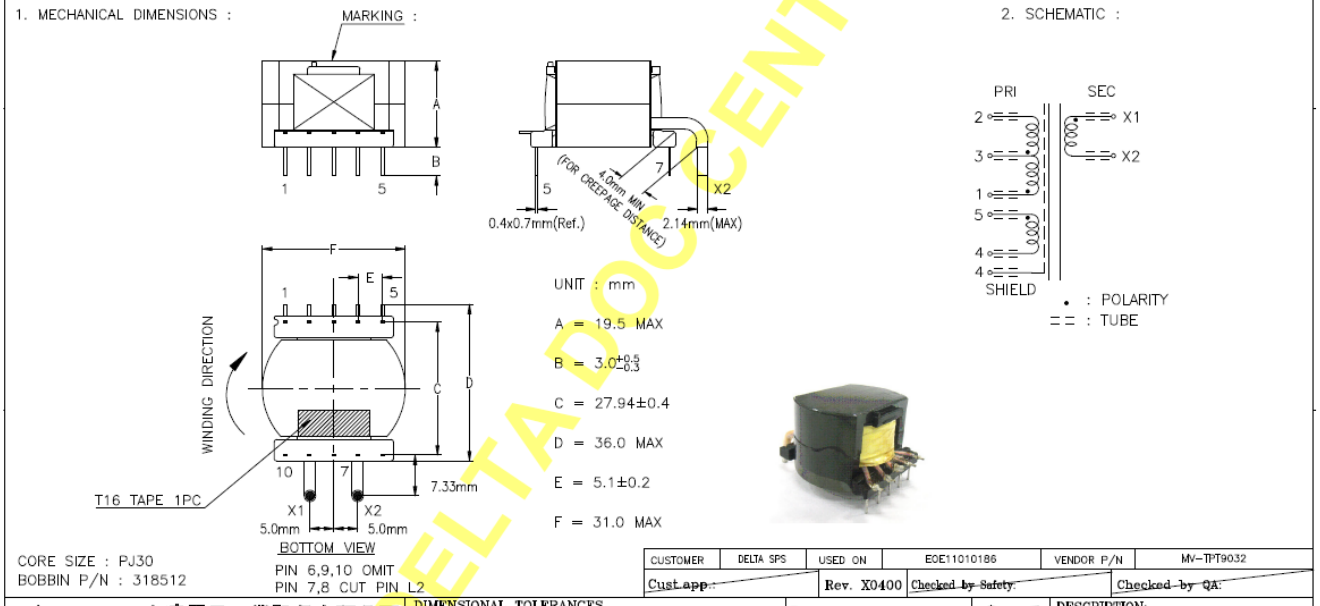
5.4.1.8	**TABLE: Working voltage measurement**			P
T1 pin 1 to PE	348	165	-	
Supplementary information:				

G.5.3.2	TABLE: Transformers	P

Transformer T1: For PMC-12V050W1XX

TEST TERMINAL	TEST CONDITION	L(uH)	LK(uH)	DCR(mΩ)	TURN RATIO(mV)	TURNS	WIRE GAUGE	HI-POT TEST @50/60Hz.,2SEC
(1–3–2)	@40kHz.,1.0V	400.0±5%	6.5 MAX	150.0 MAX	@20kHz.,1.0V			PRI,CORE TO SEC 4000 Vac
(1–3)			SEC SHORTED			22	ø0.4*2 2UEWN	PRI TO CORE 500 Vac
(5–4)				85.0 MAX	218.5±3%	7	ø0.2*3 2UEWN	PRI TO PRI 500 Vac
(X1–X2)				6.0 MAX	156.2±3%	5	ø0.7*4 TEX-E	
SHIELD TO PIN 4						1	T9*0.001" CU	LAYER TEST (1–3–2) : 1.0 kVo-p
(3–2)						10	ø0.4*2 2UEWN	CUT OFF CURRENT : 1.0 mA MAX
								ARCING CURRENT : 10.0 mA MAX

1. MECHANICAL DIMENSIONS :



2. SCHEMATIC :

CORE SIZE : PJ30
BOBBIN P/N : 318512

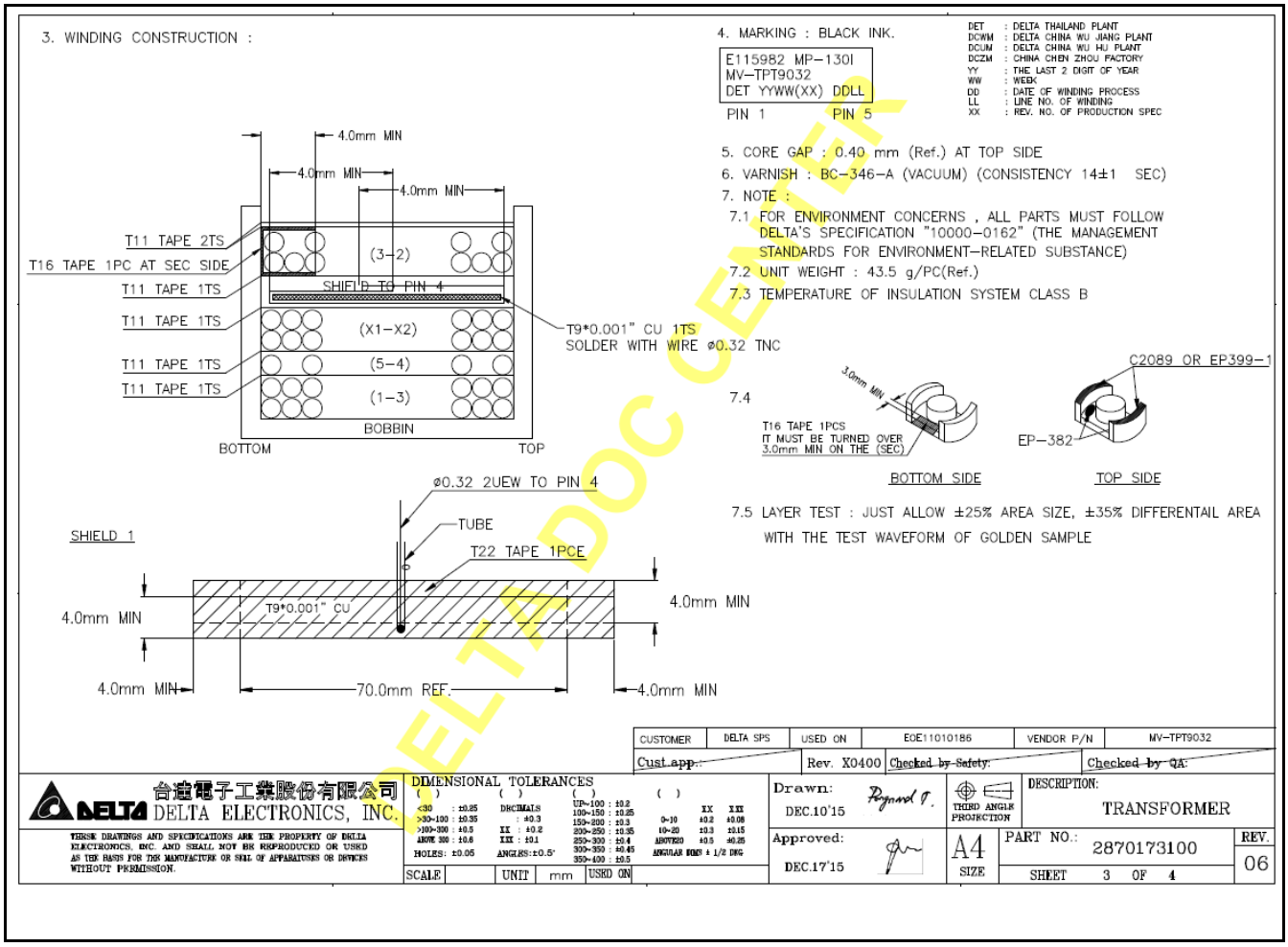
PIN 6,9,10 OMIT
PIN 7,8 CUT PIN L2

CUSTOMER	DELTA SPS	USED ON	EOE11010186	VENDOR P/N	MV-TPT9032
Cust app.:		Rev. X0400	Checked by Safety:		Checked by QA:

台達電子工業股份有限公司
DELTA ELECTRONICS, INC.

DIMENSIONAL TOLERANCES
( ) <30 : ±0.25 >30~100 : ±0.35 >100~300 : ±0.5 ABOVE 300 : ±0.8 HOLES: ±0.05
( ) DECIMALS X : ±0.3 XX : ±0.2 XXX : ±0.1 ANGLES:±0.5°
( ) 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
( ) X XX XXX 0~10 ±0.2 ±0.05 10~20 ±0.3 ±0.15 ABOVE20 ±0.5 ±0.25 ANGULAR MINS ± 1/2 DEG

Drawn: DEC.10'15
Approved: DEC.17'15
THIRD ANGLE PROJECTION
DESCRIPTION: TRANSFORMER
A4 SIZE
PART NO.: 2870173100
REV. 06
SHEET 2 OF 4
SCALE
UNIT mm
USED ON



MATERIAL LIST :

NO.	PART	MANUFACTURER	MANUFACTURER PART NO.	DESCRIPTION	UL FILE NO.
1	MAGNET WIRE	PACIFIC-THAI ELECTRIC WIRE & CABLE CO.,LTD	MW-28C 130°C UEW-NY	POLYURETHANE OVERCOAT POLYAMIDE	E142108
			MW-75C 130°C UEW-U	POLYURETHANE	
		JUNG SHING WIRE CO.,LTD.	MW28-C UEY-2 130°C	POLYURETHANE OVERCOAT POLYAMIDE	E174837
			MW75C UEW-4 130°C	POLYURETHANE	
		FURUKAWA ELECTRIC CO.,LTD	130°C NO.TEX-E	TRIPLE INSULATED WINDING PROVIDING REINFORCED	E206440
		TOTOKU ELECTRIC CO.,LTD	130°C NO.TIW-2 155°C NO.TIW-3	TRIPLE INSULATED WINDING PROVIDING REINFORCED	E166483 VDE(113350/113356) (TUV(9551153)
		HSIEH HO INDUSTRY	TNC WIRE	TINNED CU WIRE	N/A
2	BOBBIN	SUMITOMO BAKELITE CO.,LTD.	150°C 94V-0 PM-9820	PHENOLIC (Thk.0.30mm MIN)	E41429
		SUMITOMO BAKELITE CO.,LTD.	150°C 94V-0 PM-9630	PHENOLIC (Thk.0.30mm MIN)	E41429
3	TAPE	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	130°C CTI II TAPE NO. 1350F-1(YELLOW)	POLYESTER FILM TAPE 0.063mm THICKNESS	E17385
		SYMBIO INC.	130°C CTI II TAPE NO.35660Y	POLYESTER FILM TAPE 0.055mm THICKNESS	E50292
4	SLEEVING	GREAT HOLDING INDUSTRIAL CO..LTD.	200°C VW-1 TFL 150V 200°C VW-1 TFT 300V	PTFE	E156256
5	VARNISH	KYOCERA CHEMICAL CORP. (TOSHIBA CHEMICAL CO.,LTD)	TVB2180T	POLYESTER	E83702
		JOHN C. DOLPH CO.	BC-346A	POLYESTER	E317427

CUSTOMER	DELTA SPS	USED ON	EOE11010186	VENDOR P/N	MV-TPT9032
Cust app.:		Rev. X0400	Checked by Safety:		Checked by QA:

台達電子工業股份有限公司
DELTA ELECTRONICS, INC.

DIMENSIONAL TOLERANCES

( )		( )		( )		( )		
<30	: ±0.25	DECIMALS		UP~100	: ±0.2		XX	XXX
>30~100	: ±0.35		: ±0.3	100~150	: ±0.25			
>100~300	: ±0.5	XX	: ±0.2	150~200	: ±0.3	0~10	±0.2	±0.08
ABOVE 300	: ±0.6	XXX	: ±0.1	200~250	: ±0.35	10~80	±0.3	±0.15
				250~300	: ±0.4	ABOVE80	±0.5	±0.25
HOLES: ±0.05		ANGLES:±0.5°		300~350	: ±0.45	ANGULAR DIMS ± 1/2 DEG		
				350~400	: ±0.5			

SCALE		UNIT	mm	USED ON	

Drawn: Raynard P. DEC.10'15

Approved: DEC.17'15

THIRD ANGLE PROJECTION

A4 SIZE

DESCRIPTION: TRANSFORMER

PART NO.: 2870173100

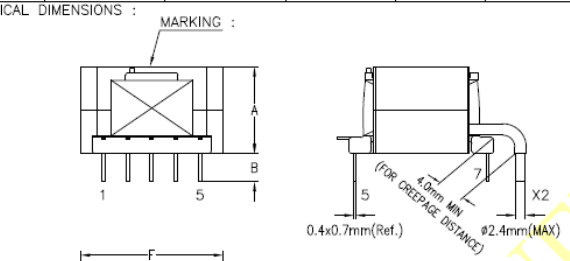
REV. 06

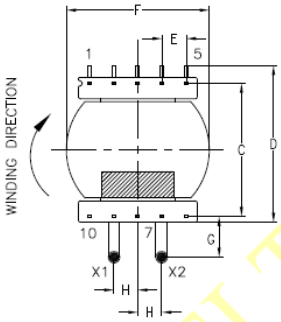
SHEET 4 OF 4

Transformer T1: For PMC-12V050W1XX

TEST TERMINAL	TEST CONDITION	L(uH)	LK(uH)	DCR(mΩ)	TURN RATIO(mV)	TURNS	WIRE GAUGE	HI-POT TEST @50/60Hz.,2S	Q
(1-3-2)	@65kHz.,1.0V	500.0+3%/-5%	6.0 MAX		@20kHz.,1.0V			(PRI SHORT CORE) TO SEC 3600 Vac	40.0 MIN
(1-3)			SEC SHORTED	100.0 MAX	735.3±3%	25	ø0.2*8C 2UEWN	PRI TO CORE 500 Vac	
(X1-X2)				4.0 MAX	147.1±3%	5	ø0.7*4 TEX-E	PRI TO PRI 500 Vac	
SHIELD 1 TO PIN 4						1	T9*0.001" CU	LAYER TEST (1-2) : 1.4kVo-p	
(3-2)				66.0 MAX	264.7±3%	9	ø0.2*8C 2UEWN	CUT OFF CURRENT : 1.0 mA MAX	
(5-4)				95.0 MAX	235.3±3%	8	ø0.3*2 2UEWN	ARCING CURRENT : 10.0 mA MAX	

1. MECHANICAL DIMENSIONS :

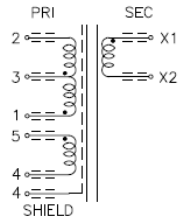




BOTTOM VIEW
PIN 6,9,10 OMIT
PIN 7,8 CUT PIN L2

UNIT : mm
A = 19.5 MAX
B = 3.0+0.5/-0.3
C = 27.94±0.4
D = 36.0 MAX
E = 5.1±0.2
F = 31.0 MAX
G = 7.33±0.2
H = 5.0±0.2

2. SCHEMATIC :



• : POLARITY
=: PIN 1,2,3,4,5 ADD TUBE(LW)
: PIN X1,X2 ADD TUBE(TW)

CORE SIZE : PJ30
BOBBIN P/N : 318512
PCB HOLE DIMENSION : ø2.5mm FOR PON X1,X2
: 1.10mm FOR PIN 1,2,3,4,5,7,8

CUSTOMER	DELTA SPS	USED ON	PMC-12V060W1NA	VENDOR P/N	MV-MPT12087
Cust.app.:		Rev. X0000	Checked by Safety:		Checked by QA:

合定電子工業股份有限公司
DELTA ELECTRONICS, INC.

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DIMENSIONAL TOLERANCES
( ) DECIMALS: X : ±0.3, XX : ±0.2, XXX : ±0.1; ANGLES: ±0.5°; HOLES: ±0.05
( ) <30 : ±0.25; >30~100 : ±0.35; >100~300 : ±0.5; ABOVE 300 : ±0.8
( ) 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
( ) 0~10 XX ±0.2 XXX ±0.08; 10~20 ±0.3 ±0.15; ABOVE20 ±0.5 ±0.25; ANGULAR DIMS ± 1/2 DEG

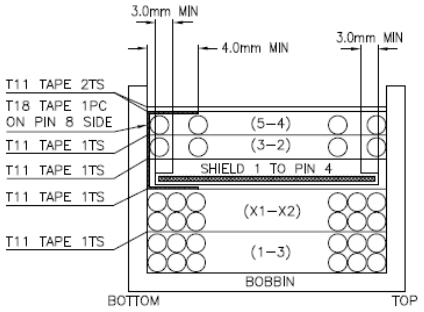
SCALE | UNIT mm | USED ON

Drawn: NOV.23'18
Approved: NOV.27'18

THIRD ANGLE PROJECTION | A4 SIZE

DESCRIPTION: TRANSFORMER
PART NO.: 2870373700
SHEET 2 OF 5
REV. 05

3. WINDING CONSTRUCTION :



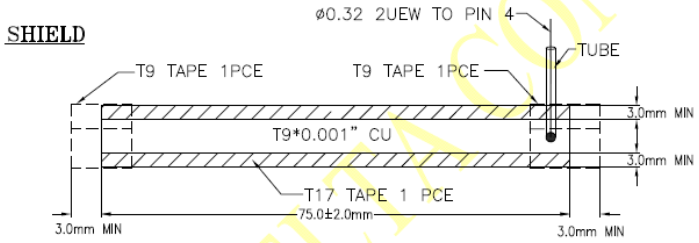
4. MARKING : BLACK INK.

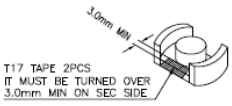
E115982 MP-130I
MV-MPT12087
DET YYWW(XX) DDLL
PIN 1 PIN 5

DET : DELTA THAILAND PLANT
DCWM : DELTA CHINA WU JIANG PLANT
DCUM : DELTA CHINA WU HU PLANT
DCZM : CHINA CHEN ZHOU FACTORY
YY : THE LAST 2 DIGIT OF YEAR
WW : WEEK
DD : DATE OF WINDING PROCESS
LL : LINE NO. OF WINDING
XX : REV. NO. OF PRODUCTION SPEC

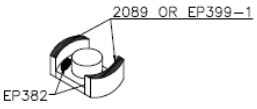
5. CORE GAP : 0.37mm (Ref.) AT TOP SIDE
6. VARNISH : BC-346-A (VACUUM) (CONSISTENCY 14±1 SEC)
7. NOTE :
   7.1 FOR ENVIRONMENT CONCERNS , ALL PARTS MUST FOLLOW DELTA'S SPECIFICATION "10000-0162" (THE MANAGEMENT STANDARDS FOR ENVIRONMENT-RELATED SUBSTANCE)
   7.2 UNIT WEIGHT : 44.53g/PC (Ref.)
   7.3 CORE SOURCE : 2HM5/3C96/DMR44/TP4A
   7.4 FIXED CORE & CORE BY 2089 OR EP399-1
   7.5 FIXED CORE & BOBBIN BY EP382 OR EP376FR
   7.6 LAYER TEST : JUST ALLOW ±10% AREA SIZE, ±35% DIFFERENTAIL AREA WITH THE TEST WAVEFORM OF GOLDEN SAMPLE
   7.7 TEMPERATURE INSULATION LEVEL : CLASS B ACCORDING TO UL FILE NO. E115982 DESIGNATION MP-130I
   7.8 NOT FULL ONE LAYER MUST USE SPACE WINDING

SHIELD





BOTTOM SIDE



TOP SIDE

CUSTOMER	DELTA SPS	USED ON	PMC-12V060W1NA	VENDOR P/N	MV-MPT12087
Cust.app.:		Rev. X0000	Checked by Safety:		Checked by QA:

台達電子工業股份有限公司
DELTA ELECTRONICS, INC.

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DIMENSIONAL TOLERANCES
( ) : ±0.25 (>30 : ±0.35, >100~300 : ±0.5, ABOVE 300 : ±0.6)
HOLES: ±0.05
DECIMALS: X : ±0.3, XX : ±0.2, XXX : ±0.1
ANGLES: ±0.5°
( ) : 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
XX: 0~10 ±0.2, 10~20 ±0.3, ABOVE20 ±0.5
XXX: ±0.08, ±0.15, ±0.25
ANGULAR DIMS ± 1/2 DEG

SCALE | UNIT mm | USED ON

Drawn: Reynard P. NOV.23'18
Approved: NOV.27'18

THIRD ANGLE PROJECTION

A4 SIZE

DESCRIPTION: TRANSFORMER

PART NO.: 2870373700

REV. 05

SHEET 3 OF 5

MATERIAL LIST :

NO.	PART	MANUFACTURER	MANUFACTURER PART NO.	DESCRIPTION	UL FILE NO.
1	MAGNET WIRE	FURUKAWA ELECTRIC CO LTD	130°C NO: TEX-E(VDE NO: 006735) 130°C NO: TEX-ELZ(TUV NO.9251520) 130°C NO: TEX-ECEW3(TUV NO.9251520)	SINGLE-AND MULTI-LAYER INSULATED WINDING WIRE	E206440
		TOTOKU ELECTRIC CO LTD	155°C NO: TIW-3X(FOR UL) 155°C NO: TIW-3(FOR VDE) 155°C NO: TIW-3LZ(FOR VDE) 155°C NO: TIW-3LZX(FOR UL)	SINGLE-AND MULTI-LAYER INSULATED WINDING WIRE	E166483
		TOTOKU ELECTRIC CO LTD	130°C NO: TIW-2X(FOR UL) 130°C NO: TIW-2(FOR VDE) 130°C NO: TIW-2LZ(FOR VDE) 130°C NO: TIW-2LZX(FOR UL) 130°C NO. TIW-2SX(FOR UL) 130°C NO: TIW-2S(FOR VDE)	SINGLE-AND MULTI-LAYER INSULATED WINDING WIRE	E166483
		UL RECOGNIZED	UL RECOGNIZED	130°C MW-28C/130°C MW-75C	UL RECOGNIZED
		UL RECOGNIZED	UL RECOGNIZED	155°C MW-79C/155°C MW-80C	UL RECOGNIZED
		UL RECOGNIZED	UL RECOGNIZED	180°C MW-83C/180°C MW-82C	UL RECOGNIZED
2	BOBBIN	SUMITOMO BAKELITE CO LTD	150°C 94V-0 PM-9630 (0.4mm MIN BOBBIN WALL)	PHENOLIC (PF), "SUMIKON", FURNISHED AS PELLETS,GRANULAR MATERIAL.	E41429
		SUMITOMO BAKELITE CO LTD	150°C 94V-0 PM-9820 (0.4mm MIN BOBBIN WALL)	PHENOLIC (PF), "SUMIKON", FURNISHED AS PELLETS,GRANULAR MATERIAL.	E41429
3	SLEEVING	ZEUS INDUSTRIAL PRODUCTS INC	200°C TFE-LW-150 VW-1 200°C TFE-TW-300 VW-1	POLYTETRAFLUOROETHYLENE (PTFE).	E64007
		GREAT HOLDING INDUSTRIAL CO LTD	200°C VW-1 TFL 150V 200°C VW-1 TFT 300V 200°C VW-1 TFS 600V	NOT HEAT-SHRINKABLE POLYTETRAFLUOROETHYLENE PTFE	E156256
		CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	200°C CB-TT-L VW-1 200°C CB-TT-T VW-1 200°C CB-TT-S VW-1	TEFLON(PTFE) NON-HEAT-SHRINKABLE TUBING	E180908

CUSTOMER	DELTA SPS	USED ON	PMC-12V060W1NA	VENDOR P/N	MV-MPT12087
Cust.app.:		Rev. X0000	Checked by Safety:		Checked by QA:

台達電子工業股份有限公司
DELTA ELECTRONICS, INC.

DIMENSIONAL TOLERANCES
( ) DECIMALS: .X ±0.3, .XX ±0.2, .XXX ±0.1; ANGLES: ±0.5°; HOLES: ±0.05
( ) 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
( ) 0~10: .XX ±0.02, .XXX ±0.008; 10~20: .XX ±0.03, .XXX ±0.015; ABOVE20: .XX ±0.5, .XXX ±0.25; ANGULAR DIMS ± 1/2 DEG

SCALE | UNIT: mm | USED ON

Drawn: Bernard C. NOV.23'18
Approved: NOV.27'18

THIRD ANGLE PROJECTION

DESCRIPTION: TRANSFORMER

A4 SIZE

PART NO.: 2870373700

SHEET 4 OF 5

REV. 05

MATERIAL LIST :

NO.	PART	MANUFACTURER	MANUFACTURER PART NO.	DESCRIPTION	UL FILE NO.
4	VARNISH	JOHN C DOLPH CO	BC-346-A		E317427
		KYOCERA CHEMICAL CORP	TVB2180T		E83702
		ELANTAS ELECTRICAL INSULATION ELANTAS PDG INC	V1380FC V1630FS		E75225
5	TAPE	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	130°C MATERIAL GROUP II NO.1350F-1	FLAME RETARDANT POLYESTER FILM INSULATING TAPE	E17385
		JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	130°C MATERIAL GROUP I NO.CT	POLYETHYLENE TEREPHTHALATE FILM TAPE	E165111
		3M COMPANY ELECTRICAL MARKETS DIV (EMD)	130°C MATERIAL GROUP II NO.1350T-3	FLAME RETARDANT POLYESTER FILM INSULATING TAPE	E17385
		3M COMPANY ELECTRICAL MARKETS DIV (EMD)	130°C MATERIAL GROUP IIIa NO.1350F-2	FLAME RETARDANT POLYESTER FILM INSULATING TAPE	E17385
		3M COMPANY ELECTRICAL MARKETS DIV (EMD)	180°C NO.92	FLAME RETARDANT POLYESTER FILM INSULATING TAPE	E17385
		SYMBIO INC	130°C MATERIAL GROUP I(FOR UL), GROUP I(FOR TUV) NO.35660Y	POLYETHYLENE-TEREPHTHALATE FILM INSULATING TAPE WITH ACRYLIC ADHESIVE	E50292
		P LEO & CO (B C) LTD	220°C 1K7170	POLYIMIDE(KAPTON) FILM INSULATING TAPE WITH SILICONE BASE ADHESIVE	E126174
		TERAOKA SEISAKUSHO CO LTD	200°C NO.560S #3 200°C NO.560S #5	FLAME RETARANT ARAMID PAPER TAPE, ACRYLIC ADHESIVE	E56086

CUSTOMER	DELTA SPS	USED ON	PMC-12V060W1NA	VENDOR P/N	MV-MPT12087
Cust.app.:		Rev. X0000	Checked by Safety:		Checked by QA:

台達電子工業股份有限公司
DELTA ELECTRONICS, INC.

DIMENSIONAL TOLERANCES

( )		( )		( )		( )			
<30	: ±0.25	DECIMALS		UP~100	: ±0.2		XX	XXX
>30~100	: ±0.35	X	: ±0.3	100~150	: ±0.25	0~10	±0.2	±0.05
>100~300	: ±0.5	XX	: ±0.2	150~200	: ±0.3	10~20	±0.3	±0.15
ABOVE 300	: ±0.8	XXX	: ±0.1	200~250	: ±0.35	ABOVE20	±0.5	±0.25
HOLES: ±0.05		ANGLES: ±0.5°		250~300	: ±0.4	ANGULAR DIMS ± 1/2 DEG		
				300~350	: ±0.45			
				350~400	: ±0.5			

SCALE | UNIT mm | USED ON

Drawn: NOV.23'18

Approved: NOV.27'18

THIRD ANGLE PROJECTION

A4 SIZE

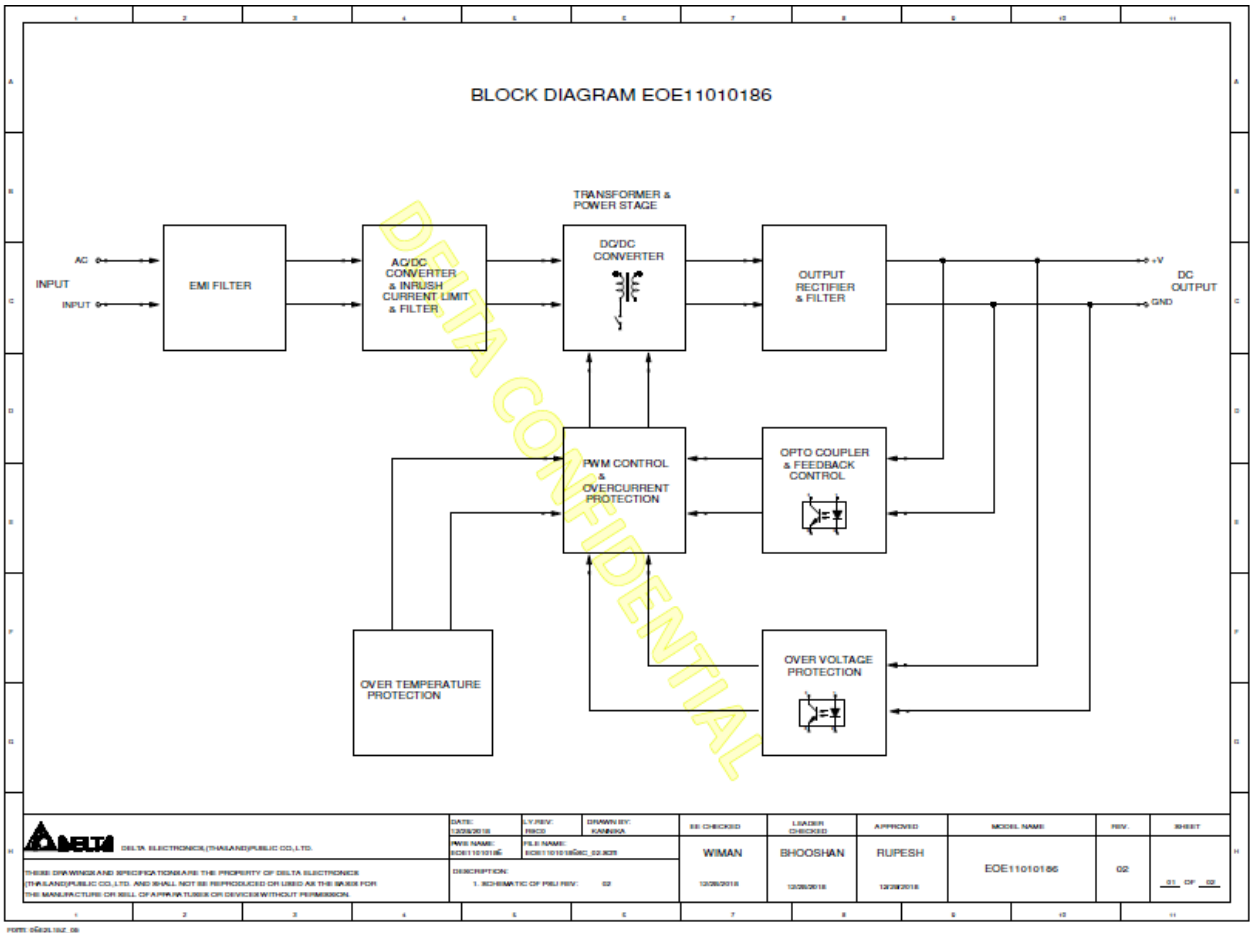
DESCRIPTION: TRANSFORMER

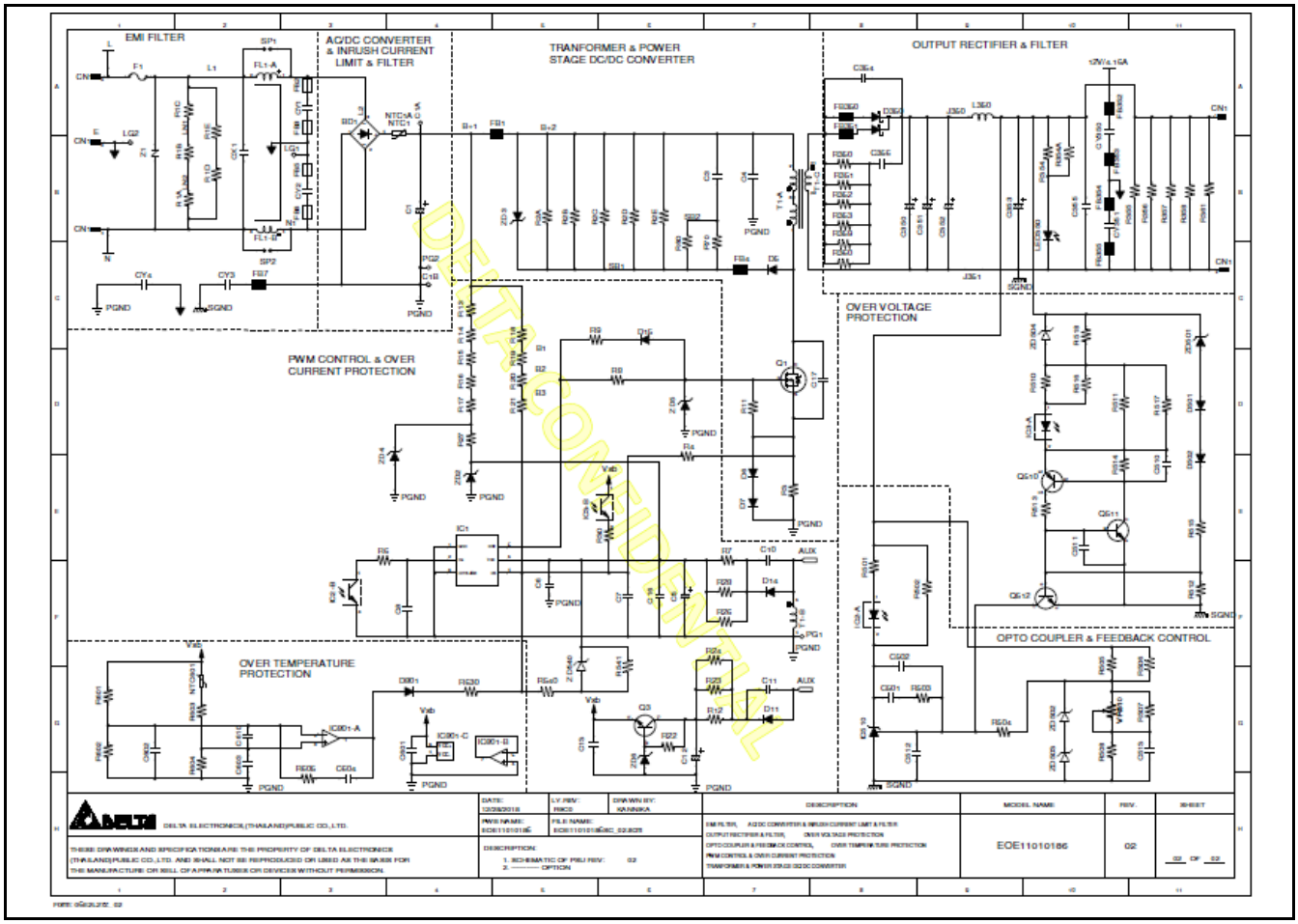
PART NO.: 2870373700

REV. 05

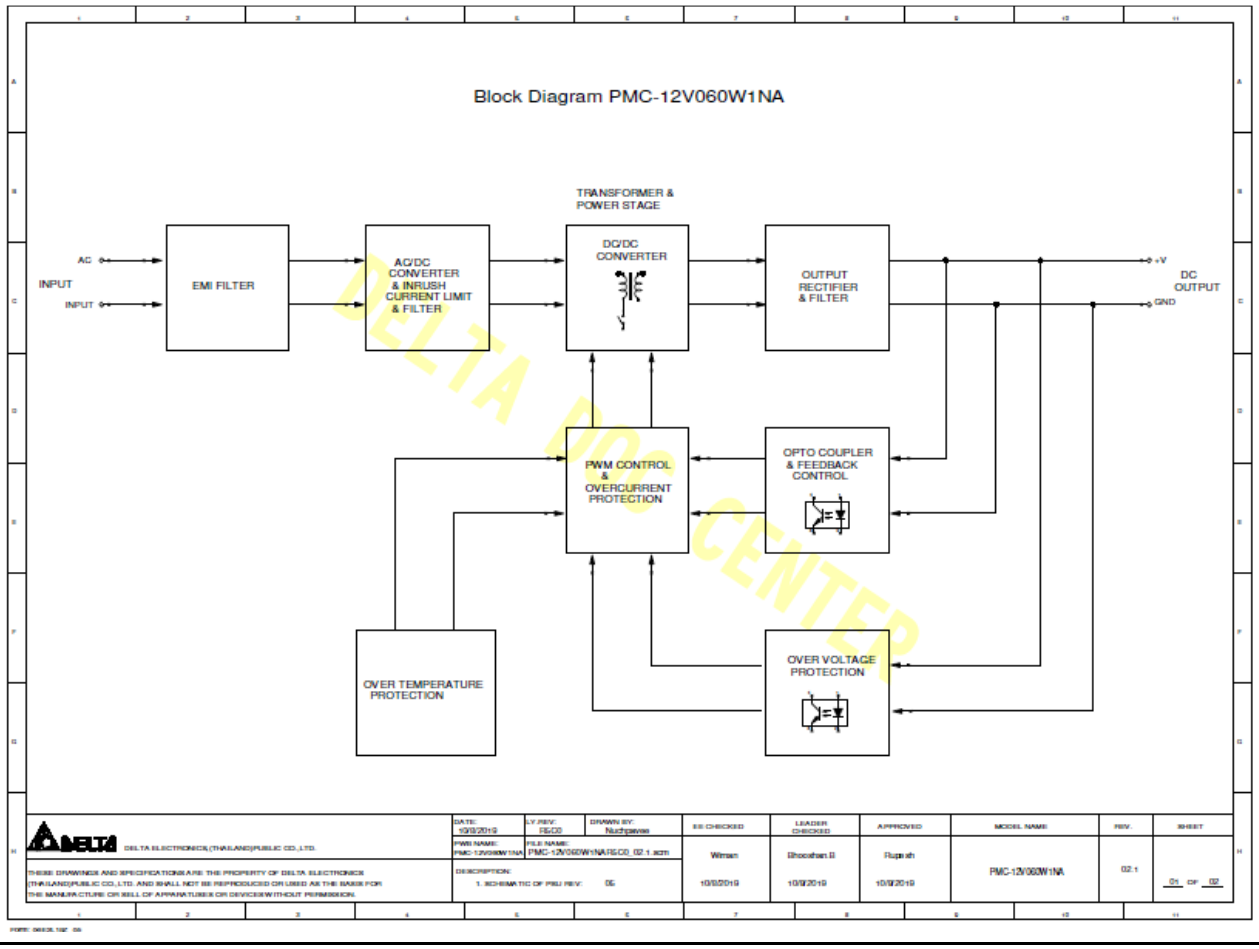
SHEET 5 OF 5

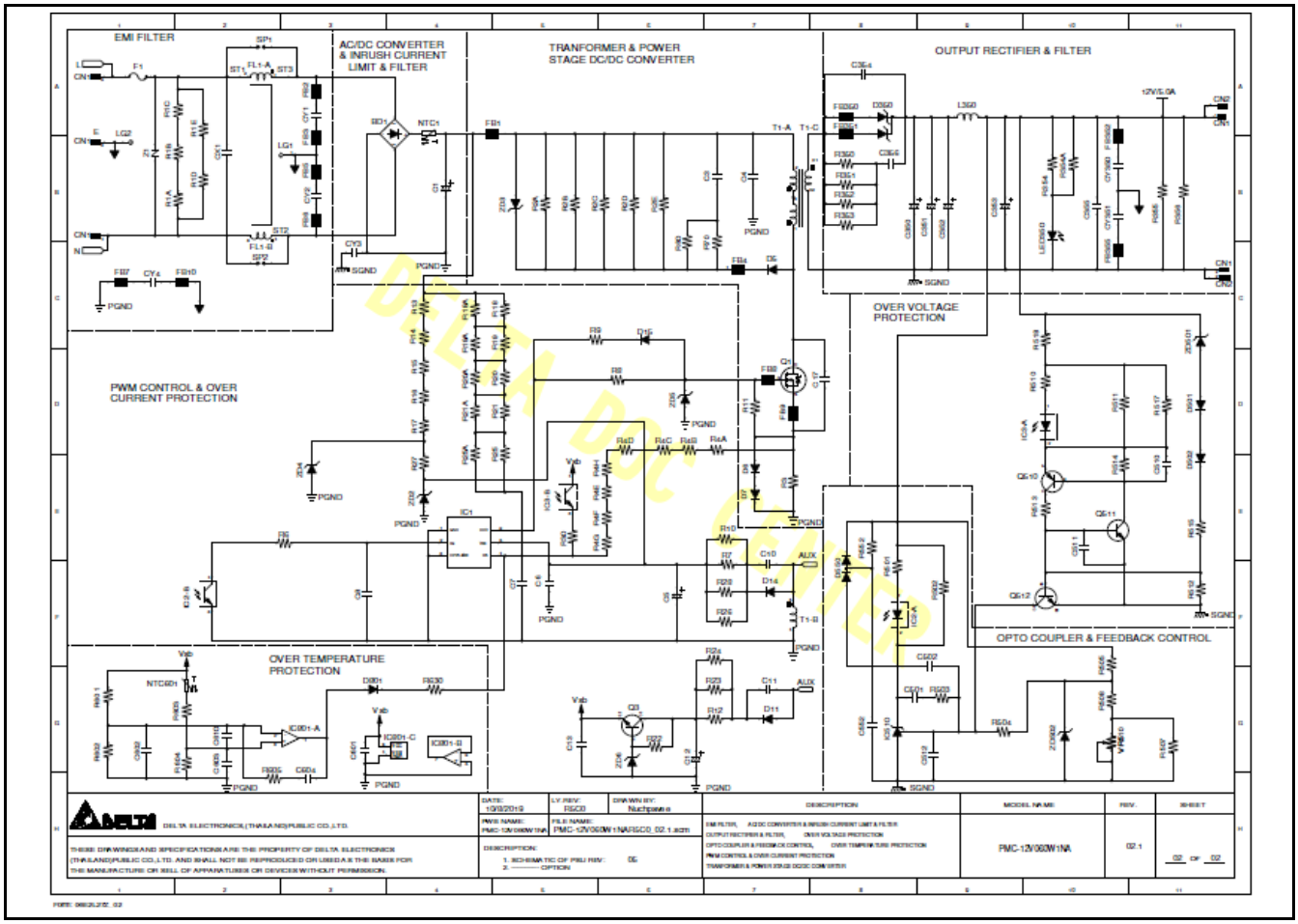
TABLE: Schematic Circuit
PMC-12V050W1XX




EMI FILTER
AC/DC CONVERTER & INRUSH CURRENT LIMIT & FILTER
TRANFORMER & POWER STAGE DC/DC CONVERTER
OUTPUT RECTIFIER & FILTER
PWM CONTROL & OVER CURRENT PROTECTION
OVER VOLTAGE PROTECTION
OVER TEMPERATURE PROTECTION
OPTO COUPLER & FEEDBACK CONTROL
DELTA CONFIDENTIAL
DELTA ELECTRONICS (THAILAND) PUBLIC CO., LTD.
EOE11010186
02

PMC-12V060W1NX




EMI FILTER
AC/DC CONVERTER & INRUSH CURRENT LIMIT & FILTER
TRANFORMER & POWER STAGE DC/DC CONVERTER
OUTPUT RECTIFIER & FILTER
PWM CONTROL & OVER CURRENT PROTECTION
OVER VOLTAGE PROTECTION
OVER TEMPERATURE PROTECTION
OPTO COUPLER & FEEDBACK CONTROL
PMC-12V/060W1NA
DELTA ELECTRONICS (THAILAND) PUBLIC CO.,LTD.

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT
IEC 62368-1
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES
(Audio/video, information and communication technology equipment - Part 1: Safety requirements)

Differences according to ..... : EN 62368-1:2014+A11:2017

Attachment Form No..... : EU_GD_IEC62368_1B_II

Attachment Originator..... : Nemko AS

Master Attachment ..... : Date 2017-09-22

	CENELEC COMMON MODIFICATIONS (EN)	
	Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62368-1:2014 are prefixed "Z".	P
CONTENTS	**Add** the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations Annex ZD (informative) IEC and CENELEC code designations for flexible cords	P
	Delete all the "country" notes in the reference document (IEC 62368-1:2014) according to the following list:	P

0.2.1	Note	1	Note 3	4.1.15	Note
4.7.3	Note 1 and 2	5.2.2.2	Note	5.4.2.3.2.2 Table 13	Note c
5.4.2.3.2.4	Note 1 and 3	5.4.2.5	Note 2	5.4.5.1	Note
5.5.2.1	Note	5.5.6	Note	5.6.4.2.1	Note 2 and 3
5.7.5	Note	5.7.6.1	Note 1 and 2	10.2.1 Table 39	Note 2, 3 and 4
10.5.3	Note 2	10.6.2.1	Note 3	F.3.3.6	Note 3

	For special national conditions, see Annex ZB.		P
1	**Add** the following note: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2011/65/EU.		P

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.Z1	**Add** the following new subclause after 4.9: To protect against excessive current, short-circuits and earth faults in circuits connected to an a.c. **mains**, 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 devices necessary to comply with the requirements of B.3.1 and B.4 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.		P
5.4.2.3.2.4	**Add** the following to the end of this subclause: The requirement for interconnection with **external circuit** is in addition given in EN 50491-3:2009.		N/A
10.2.1	Add the following to [c] and [d] in table 39: For additional requirements, see 10.5.1.		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
10.5.1	**Add** the following after the first paragraph: *For RS 1 compliance is checked by measurement under the following conditions:* *In addition to the normal operating conditions, all controls adjustable from the outside by hand, by any object such as a tool or a coin, and those internal adjustments or presets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made.* NOTE Z1 Soldered joints and paint lockings are examples of adequate locking. *The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm², at any point 10 cm from the outer surface of the apparatus.* *Moreover, the measurement shall be made under fault conditions causing an increase of the high-voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made.* *For RS1, the dose-rate shall not exceed 1 µSv/h taking account of the background level.* NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.		N/A
10.6.1	**Add** the following paragraph to the end of the subclause: EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.		N/A
10.Z1	**Add** the following new subclause after 10.6.5. **10.Z1 Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz** The amount of non-ionizing radiation is regulated by European Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz). For intentional radiators, ICNIRP guidelines should be taken into account for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz). For hand-held and body-mounted devices, attention is drawn to EN 50360 and EN 50566		N/A
G.7.1	**Add** the following note: NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Bibliography	**Add** the following standards: **Add** the following notes for the standards indicated: IEC 60130-9 NOTE Harmonized as EN 60130-9. IEC 60269-2 NOTE Harmonized as HD 60269-2. IEC 60309-1 NOTE Harmonized as EN 60309-1. IEC 60364 NOTE some parts harmonized in HD 384/HD 60364 series. IEC 60601-2-4 NOTE Harmonized as EN 60601-2-4. IEC 60664-5 NOTE Harmonized as EN 60664-5. IEC 61032:1997 NOTE Harmonized as EN 61032:1998 (not modified). IEC 61508-1 NOTE Harmonized as EN 61508-1. IEC 61558-2-1 NOTE Harmonized as EN 61558-2-1. IEC 61558-2-4 NOTE Harmonized as EN 61558-2-4. IEC 61558-2-6 NOTE Harmonized as EN 61558-2-6. IEC 61643-1 NOTE Harmonized as EN 61643-1. IEC 61643-21 NOTE Harmonized as EN 61643-21. IEC 61643-311 NOTE Harmonized as EN 61643-311. IEC 61643-321 NOTE Harmonized as EN 61643-321. IEC 61643-331 NOTE Harmonized as EN 61643-331.		P
ZB	**ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)**		N/A
4.1.15	**Denmark, Finland, Norway** and **Sweden** To the end of the subclause the following is added: **Class I pluggable equipment type A** intended for connection to other equipment or a network shall, if safety relies on connection to reliable earthing or if surge suppressors are connected between the network terminals and **accessible** parts, have a marking stating that the equipment shall be connected to an earthed **mains** socket-outlet. The marking text in the applicable countries shall be as follows: In **Denmark**: “Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord.” In **Finland**: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In **Norway**: “Apparatet må tilkoples jordet stikkontakt” In **Sweden**: “Apparaten skall anslutas till jordat uttag”		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.3	**United Kingdom** To the end of the subclause the following is added: The torque test is performed using a socket-outlet complying with BS 1363, and the plug part shall be assessed to the relevant clauses of BS 1363. Also see Annex G.4.2 of this annex		N/A
5.2.2.2	**Denmark** After the 2nd paragraph add the following: A warning (marking **safeguard**) for high **touch current** is required if the **touch current** exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.11.1 and Annex G	**Finland and Sweden** To the end of the subclause the following is added: For separation of the telecommunication network from earth the following is applicable: 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. If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that clearances and creepage distances do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition • passes the tests and inspection criteria of 5.4.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 5.4.9 shall be performed using 1,5 kV), and • is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5kV. It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to 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 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in 5.4.11; • the additional testing shall be performed on all the test specimens as described in EN 60384-14; the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		N/A
5.5.2.1	**Norway** After the 3rd paragraph the following is added: Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.5.6	**Finland, Norway** and **Sweden** To the end of the subclause the following is added: Resistors used as **basic safeguard** or bridging **basic insulation** in **class I pluggable equipment type A** shall comply with G.10.1 and the test of G.10.2.		N/A
5.6.1	**Denmark** **Add** to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. *Justification:* In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.		N/A
5.6.4.2.1	**Ireland and United Kingdom** After the indent for **pluggable equipment type A**, the following is added: – the **protective current rating** is taken to be 13 A, this being the largest rating of fuse used in the **mains** plug.		N/A
5.6.5.1	To the second paragraph the following is added: The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current over 10 A and up to and including 13 A is: 1,25 mm^2 to 1,5 mm^2 in cross-sectional area.		N/A
5.7.5	**Denmark** To the end of the subclause the following is added: The installation instruction shall be affixed to the equipment if the **protective conductor current** exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.1	**Norway and Sweden** To the end of the subclause the following is added: The screen of the television 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 needs 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 a retailer, for example. 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: “Apparatus connected to the protective earthing of the building installation through the mains connection or through other apparatus with a connection to protective earthing – and to a television distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a television distribution system therefore has 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 CATV-installations, 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): “Apparater som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et koaksialbasert kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av apparater til kabel-TV nett installeres en galvanisk isolator mellom apparatet og kabel-TV nettet.” Translation to Swedish: ”Apparater 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 apparaten till kabel-TV nät galvanisk isolator finnas mellan apparaten och kabel-TV nätet.”.		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.2	**Denmark** To the end of the subclause the following is added: The warning (marking safeguard) for high touch current is required if the touch current or the protective current exceed the limits of 3,5 mA .		N/A
B.3.1 and B.4	**Ireland and United Kingdom** The following is applicable: To protect against excessive currents and short-circuits in the primary circuit of **direct plug-in equipment**, tests according to Annexes B.3.1 and B.4 shall be conducted using an external miniature circuit breaker complying with EN 60898-1, Type B, rated 32A. If the equipment does not pass these tests, suitable protective devices shall be included as an integral part of the **direct plug-in equipment**, until the requirements of Annexes B.3.1 and B.4 are met		N/A
G.4.2	**Denmark** To the end of the subclause the following is added: Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1:2011. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Mains socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance DS 60884-2-D1:2011 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c. Mains socket-outlets with earth shall be in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a *Justification:* Heavy Current Regulations, Section 6c		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	**United Kingdom** To the end of the subclause the following is added: 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.		N/A
G.7.1	**United Kingdom** To the first paragraph the following is added: Equipment 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 shall be fitted with a 'standard plug' in accordance with the Plugs and Sockets etc (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768, unless exempted by those regulations. NOTE "Standard plug" is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
G.7.1	**Ireland** To the first paragraph the following is added: Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. S.I. 525 provides for the recognition of a standard of another Member State which is equivalent to the relevant Irish Standard		N/A
G.7.2	**Ireland and United Kingdom** To the first paragraph the following is added: A power supply cord with a conductor of 1,25 mm^2 is allowed for equipment which is rated over 10 A and up to and including 13 A.		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		N/A
10.5.2	**Germany** The following requirement applies: For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorization is required, or application of type approval (Bauartzulassung) and marking. *Justification:* German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM. **NOTE** Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int +49-531-592-6320, Internet: http://www.ptb.de		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 62368-1
DENMARK NATIONAL DIFFERENCES

Audio/video, information and communication technology equipment –
Part 1: Safety requirements

Differences according to..... :	DS/EN 62368-1:2014
Attachment Form No. ..... :	DK_ND_IEC62368_1B
Attachment Originator..... :	UL (Demko)
Master Attachment..... :	2014-10

	National Differences		P
4.1.15	To the end of the subclause the following is added: Class I pluggable equipment type A intended for connection to other equipment or a network shall, if safety relies on connection to reliable earthing or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment shall be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: “Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord.”	Added. The equipment is for building-in into a Class I equipment. The marking text must be provided when marketed in Denmark.	N/A
5.2.2.2	After the 2nd paragraph add the following: A warning (marking safeguard) for high touch current is required if the touch current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		N/A
5.6.1	Add to the end of the subclause: Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. Justification: In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.		N/A
5.7.5	To the end of the subclause the following is added: The installation instruction shall be affixed to the equipment if the protective conductor current exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		N/A

IEC62368_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.2	To the end of the subclause the following is added: The warning (marking safeguard) for high touch current is required if the touch current or the protective current exceed the limits of 3,5 mA.		N/A
G.4.2	To the end of the subclause the following is added: Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1:2011. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Mains socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance DS 60884-2-D1:2011 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c. Mains socket-outlets with earth shall be in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a Justification: Heavy Current Regulations, Section 6c		N/A

ATTACHMENT TO TEST REPORT IEC 62368-1 2th Ed. U.S.A. NATIONAL DIFFERENCES Audio/video, information and communication technology equipment – Part 1: Safety requirements	
Differences according to..... :	CSA/UL 62368-1:2014
Attachment Form No. ..... :	US&CA_ND_IEC623681B
Attachment Originator..... :	UL(US)
Master Attachment..... :	Date 2015-06

Clause	Requirement + Test	Result - Remark	Verdict
IEC 62368-1 - US and Canadian National Differences Special National Conditions based on Regulations and Other National Differences			
1.1	All equipment is to be designed to allow installation according to the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, for such equipment marked or otherwise identified, installation is allowed per the Standard for the Protection of Information Technology Equipment, ANSI/NFPA 75.	In accordance with the National Electrical Code (NEC) and the Canadian Electrical Code (CEC) part 1 CAN/CSA C22.1, ANSI/NFPA 70, and unless marked or otherwise identified, the Standard for Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	P
1.4	Additional requirements apply to some forms of power distribution equipment, including sub-assemblies.		N/A
4.1.17	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the NEC.		N/A
	For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC generally are required to have special construction features and identification markings.		N/A
4.8	Lithium coin / button cell batteries have modified special construction and performance requirements.		N/A
5.6.3	Protective earthing conductors comply with the minimum conductor sizes in Table G.5, except as required by Table G.7ADV.1 for cord connected equipment, or Annex DVH for permanently connected equipment		N/A
5.7.7	Equipment intended to receive telecommunication ringing signals complies with a special touch current measurement tests.		N/A

Clause	Requirement + Test	Result - Remark	Verdict
6.5.1	PS3 wiring outside a fire enclosure complies with single fault testing in B.4, or be current limited per one of the permitted methods.		N/A
Annex F (F.3.3.8)	Output terminals provided for supply of other equipment, except mains, supply are marked with a maximum rating or references to which equipment it is permitted to be connected.		P
Annex G (G.7.1)	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.		N/A
Annex G (G.7.3)	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.		N/A
	Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		N/A
Annex G (G.7.5)	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. Power supply cords are required to be no longer than 4.5 m in length if used in ITE Rooms.		N/A
Annex H.2	Continuous ringing signals under normal operating conditions up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.		N/A
Annex H.4	For circuits with other than ringing signals and with voltages exceeding 42.4 V_{peak} or 60 V d.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.		N/A
Annex M	Battery packs for stationary applications comply with special component requirements.		N/A
Annex DVA (1)	Equipment intended for use in spaces used for environmental air are subjected to special flammability requirements for heat and visible smoke release.		N/A
	For ITE room applications, automated information storage systems with combustible media greater than 0.76 m^3 (27 cu ft) have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.		N/A

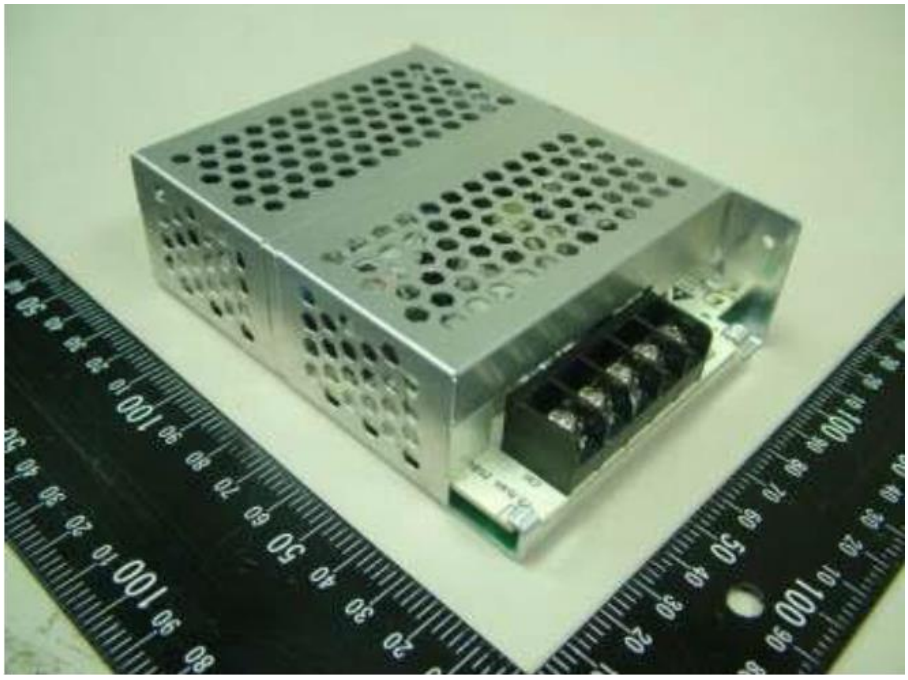
Clause	Requirement + Test	Result - Remark	Verdict
	Consumer products designed or intended primarily for children 12 years of age or younger are subject to additional requirements in accordance with U.S. & Canadian Regulations.		N/A
	Baby monitors additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.		N/A
Annex DVA (5.6.3)	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.		N/A
Annex DVA (6.3)	The maximum quantity of flammable liquid stored in equipment complies with NFPA 30.		N/A
Annex DVA (6.4.8)	For ITE room applications, enclosures with combustible material measuring greater than 0.9 m^2 (10 sq ft) or a single dimension greater than 1.8 m (6 ft) have a flame spread rating of 50 or less. For equipment with the same dimensions for other applications, an external surface that is not a fire enclosure requires a min. flammability classification of V-1.		N/A
Annex DVA (10.3.1)	Equipment with lasers meets the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A
Annex DVA (10.5.1)	Equipment that produces ionizing radiation complies with the U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).		N/A
Annex DVA (F.3.3.3)	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings. Additional considerations apply for voltage ratings that exceed the attachment cap rating or are lower than the “Normal Operating Condition” in Table 2 of CAN/CSA C22.2 No. 235.”		N/A
Annex DVA (F.3.3.5)	Equipment identified for ITE (computer) room installation is marked with the rated current		N/A
Annex DVA (G.1)	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position		N/A
Annex DVA (G.3.4)	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.		N/A
Annex DVA (G.4.2)	Equipment with isolated ground (earthing) receptacles complies with NEC 250.146(D) and CEC 10-112 and 10-906(8).		N/A

Clause	Requirement + Test	Result - Remark	Verdict
Annex DVA (G.4.3)	Where a fuse is used to provide Class 2 or Class 3 current limiting, it is not operator-accessible unless it is non- interchangeable.		N/A
Annex DVA (G.5.3)	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.		N/A
Annex DVA (G.5.4)	Motor control devices are required for cord-connected equipment with a mains-connected motor if the equipment is rated more than 12 A, or if the equipment has a nominal voltage rating greater than 120 V, or if the motor is rated more than 1/3 hp (locked rotor current over 43 A).		N/A
Annex DVA (Annex M)	For ITE room applications, equipment with battery systems capable of supplying 750 VA for five minutes have a battery disconnect means that may be connected to the ITE room remote power-off circuit.		N/A
Annex DVA (Q)	Wiring terminals intended to supply Class 2 outputs according to the NEC or CEC Part 1are marked with the voltage rating and “Class 2” or equivalent; marking is located adjacent to the terminals and visible during wiring.		N/A
Annex DVB (1)	Additional requirements apply for equipment used for entertainment purposes intended for installation in general patient care areas of health care facilities.		N/A
Annex DVC (1)	Additional requirements apply for equipment intended for mounting under kitchen cabinets.		N/A
Annex DVE (4.1.1)	Some equipment, components, sub-assemblies and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (U.S. and Canadian) component or material requirements. Components required to comply include: appliance couplers, attachment plugs, battery back-up systems, battery packs, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), power supply cords, direct plug-in equipment, electrochemical capacitor modules (energy storage modules with ultra-capacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), ground-fault current interrupters, interconnecting cables, data storage equipment, printed wiring, protectors for communications circuits, receptacles, surge protective devices, vehicle battery adapters, wire connectors, and wire and cables.	UL approved components used. Refer to table 4.1.2 of IEC 62368-1 test report for details.	P

Clause	Requirement + Test	Result - Remark	Verdict
Annex DVH	Equipment for permanent connection to the mains supply is subjected to additional requirements.		N/A
Annex DVH (DVH.1)	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains are in accordance with the NEC/CEC.		N/A
Annex DVH (DVH.3.2)	Terminals for permanent wiring, including protective earthing terminals, are suitable for U.S./Canadian wire gauge sizes, rated 125 percent of the equipment rating, and are specially marked when specified.		N/A
Annex DVH (DVH.3.2)	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm^2).		N/A
Annex DVH (DVH.4)	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.		N/A
Annex DVH (DVH 5.5)	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, complies with special earthing, wiring, marking and installation instruction requirements.		N/A
Annex DVI (6.7)	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses.		N/A
Annex DVJ (10.6.1)	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

Product: POWER SUPPLY

Type Designation: 1) PMC-12V050W1XX, 2) PMC-12V060W1NX (X = 0-9, A-Z or blank)

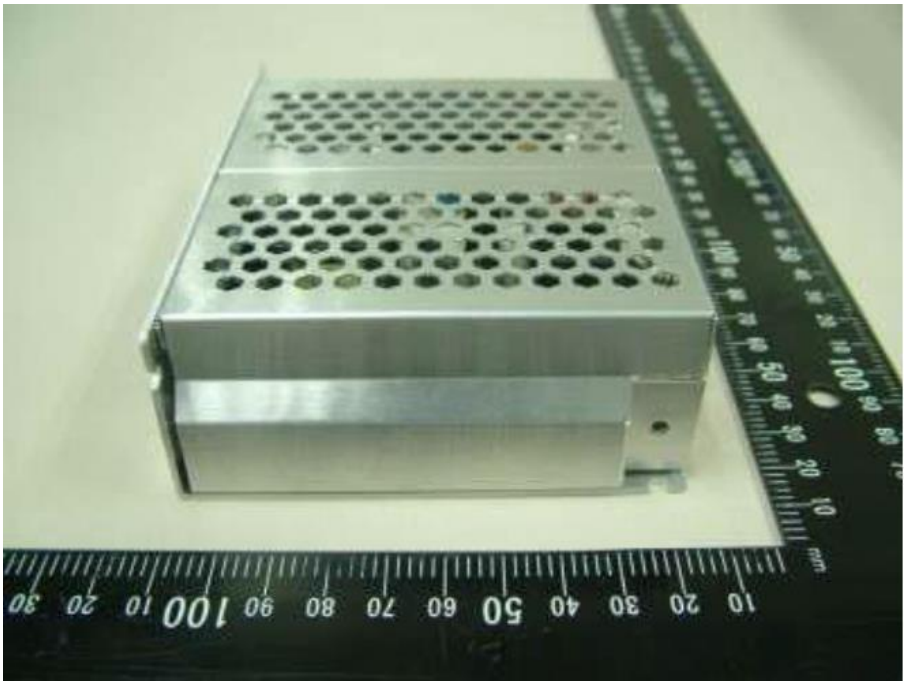


Overall view

Front side

Product: POWER SUPPLY

Type Designation: 1) PMC-12V050W1XX, 2) PMC-12V060W1NX (X = 0-9, A-Z or blank)

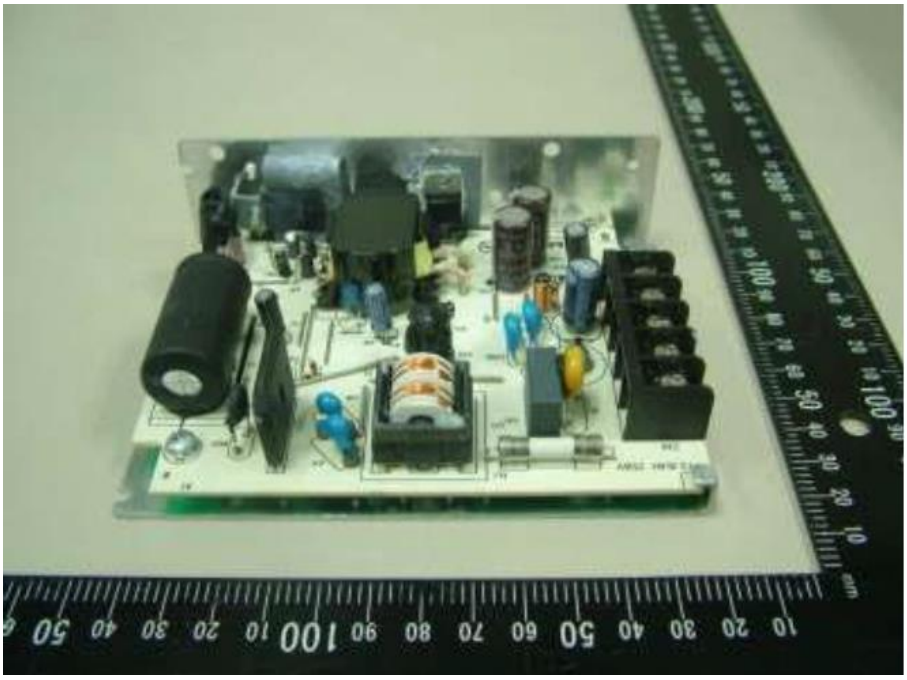


Rear side

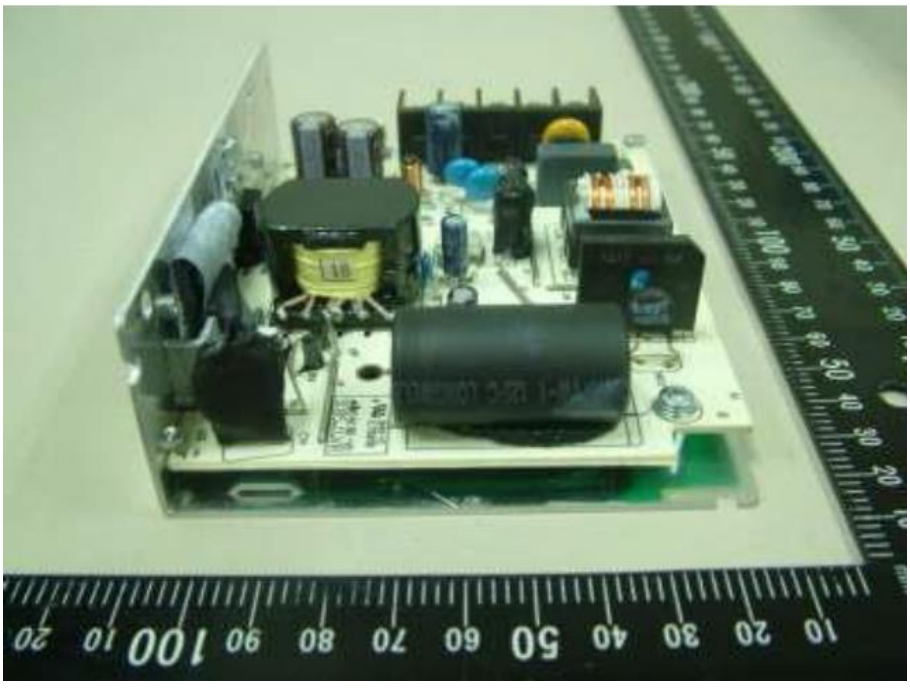
Label side

Product: POWER SUPPLY

Type Designation: 1) PMC-12V050W1XX, 2) PMC-12V060W1NX (X = 0-9, A-Z or blank)



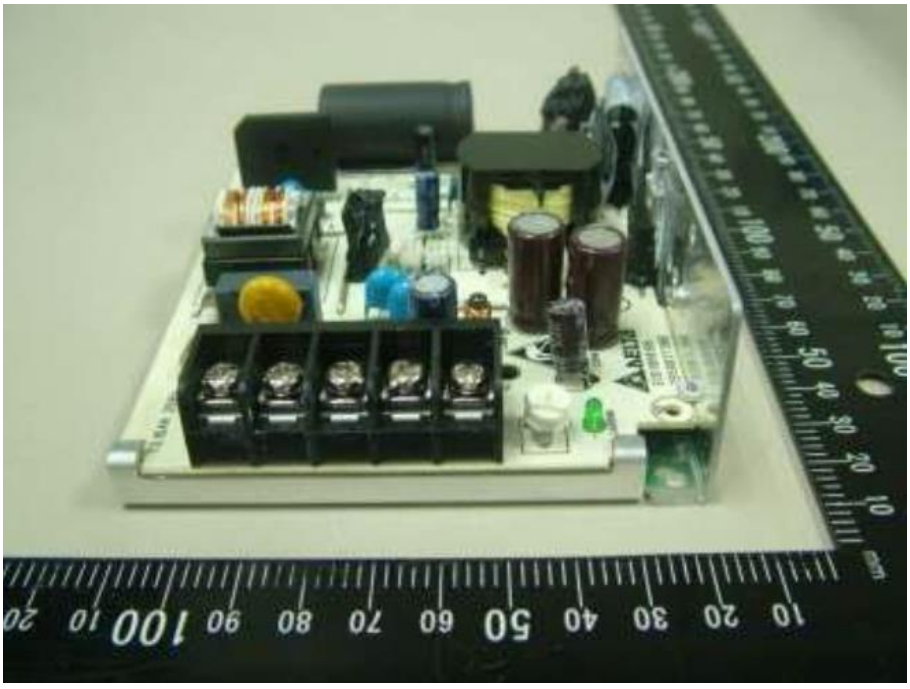
Open case 1



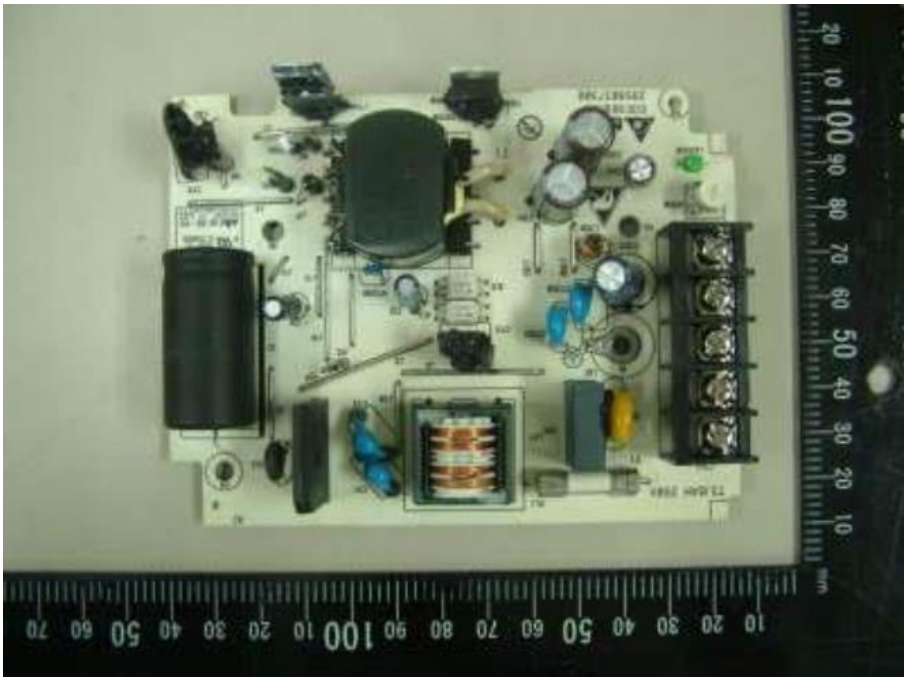
Open case 2

Product: POWER SUPPLY

Type Designation: 1) PMC-12V050W1XX, 2) PMC-12V060W1NX (X = 0-9, A-Z or blank)



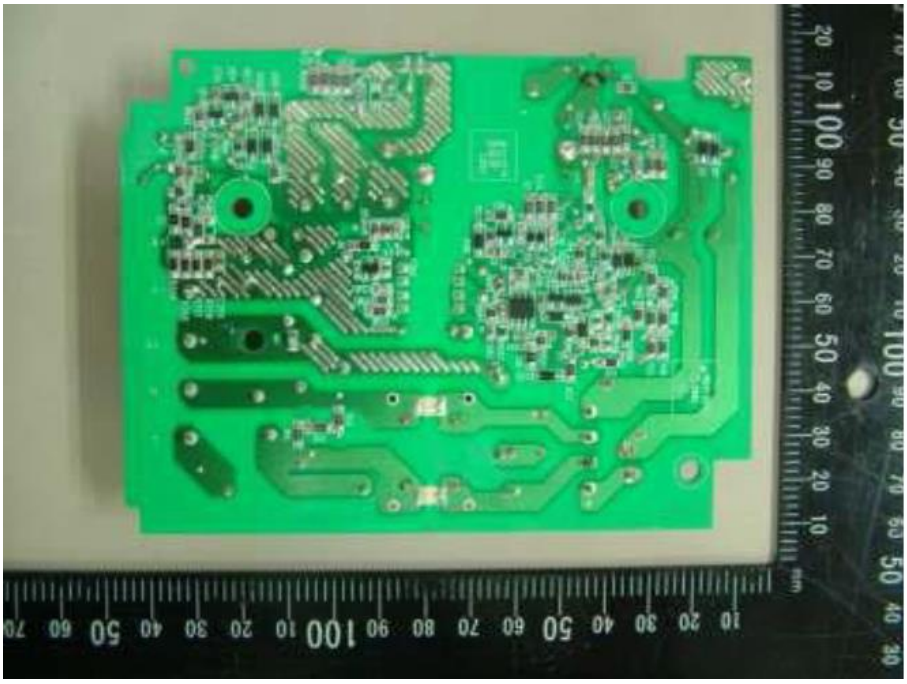
Open case 3



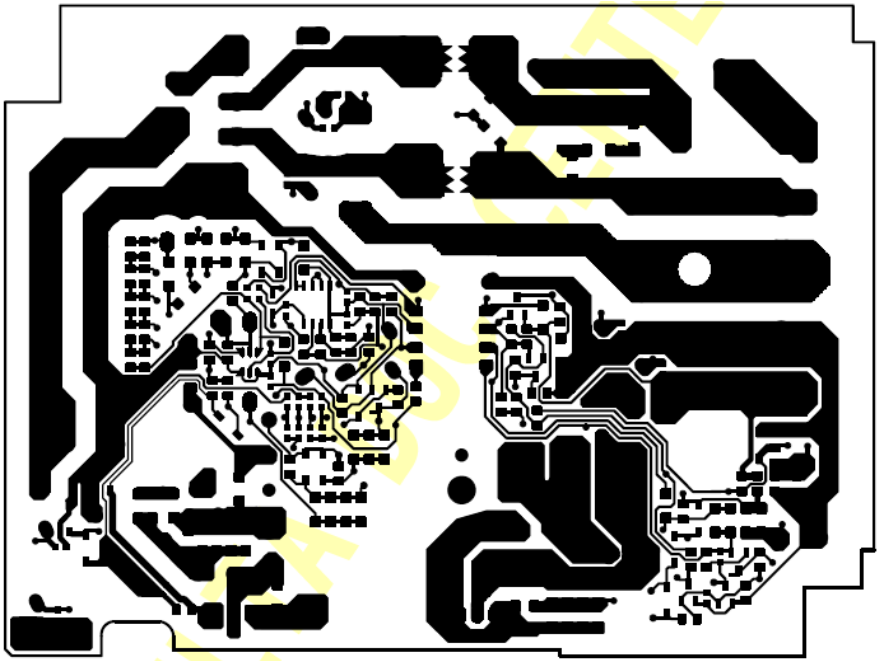
Main board (Component side)

Product: POWER SUPPLY

Type Designation: 1) PMC-12V050W1XX, 2) PMC-12V060W1NX (X = 0-9, A-Z or blank)



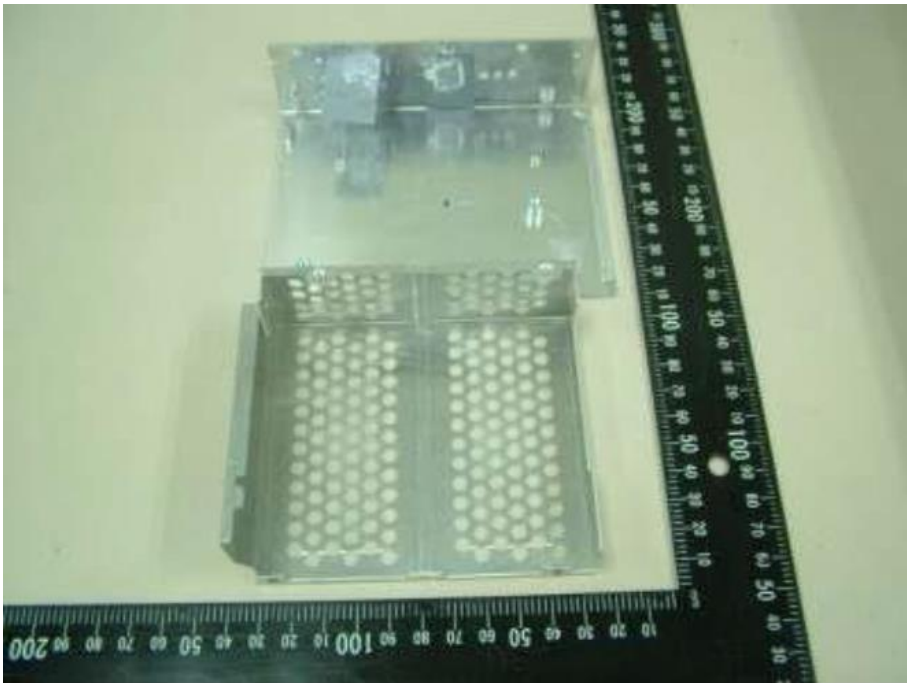
Main board (solder side)



Main board (PCB trace)

Product: POWER SUPPLY

Type Designation: 1) PMC-12V050W1XX, 2) PMC-12V060W1NX (X = 0-9, A-Z or blank)



Case cover and case chassis

	Ref. Certif. No.
IEC IECEE CB SCHEME	JPTUV-070343

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	POWER SUPPLY
Name and address of the applicant Nom et adresse du demandeur	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
Name and address of the manufacturer Nom et adresse du fabricant	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
Name and address of the factory Nom et adresse de l'usine	See additional page(s)
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	Input: AC 100-240V, 50-60Hz / DC 125-250V, 1) 1.3A Max., 2) 1.65A Max.; Class I Output: 1) DC 12V/4.17A; 50W Max. (Adjustable between DC 11V to 14V); 2) DC 12V/5.0A; 60W Max., LPS (Adjustable between DC 12V to 14V)
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	CTF Stage 1
Model / Type Ref. Ref. de type	1) PMC-12V050W1XX 2) PMC-12V060W1NX (X = 0-9, A-Z or blank)
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire, peuvent être indiqués sur la 2ème page)	For model differences, refer to the test report.
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 60950-1:2005+A1+A2 National differences see test report
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	50039714 001

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

TÜVRheinland®

TÜV Rheinland Japan Ltd.
Global Technology Assessment Center
4-25-2 Kita-Yamata, Tsuzuki-ku
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Mail: info@jpn.tuv.com
Web: www.tuv.com

Date: 17.03.2016

Signature: Somrit Junsawat

1. Delta Electronics (Jiangsu) Ltd.
   No. 1688, Jiangxing East Road
   Wujiang Economic Development Zone
   Wujiang City, Jiangsu Province 215200
   P.R. China

2. 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

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

Report Ref. No.: 50039714 001

Date: 17.03.2016

Signature: Somrit Junsawat

Test Report issued under the responsibility of:

TÜVRheinland®

TEST REPORT

IEC 60950-1

Information technology equipment – Safety – Part 1: General requirements

Report Number. .....:	50039714 001
Date of issue .....:	26.02.2016
Total number of pages.....:	92
Applicant's name.....:	Delta Electronics (Thailand) Public Co., Ltd.
Address .....:	909 Soi 9, Moo 4, Bangpoo Industrial Estate (E.P.Z.), Pattana 1 Rd., Tambol Phraksa, Amphur Muang, Samutprakarn 10280, Thailand
Test specification:	
Standard .....:	IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013
Test procedure.....:	CB Scheme
Non-standard test method.....:	N/A
Test Report Form No.....:	IEC60950_1F
Test Report Form(s) Originator.....:	SGS Fimko Ltd
Master TRF.....:	Dated 2014-02

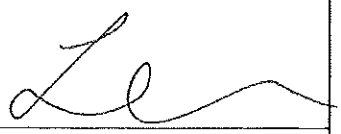
If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

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.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description..... :	POWER SUPPLY
Trade Mark ..... :	DELTA ELECTRONICS, INC.
Manufacturer..... :	Same as applicant.
Model/Type reference..... :	1. PMC-12V050W1XX 2. PMC-12V060W1NX (X = 0-9, A-Z or blank)
Ratings..... :	I/P: AC 100 - 240V, 50-60Hz / 125-250Vdc, 1. 1.3A Max. 2. 1.65A Max. O/P: 1. DC 12V / 4.17A, 50W Max. (Adjustable between DC 11 to 14V) 2. DC 12V / 5.0A, 60W Max., LPS (Adjustable between DC 12 to 14V)

Testing procedure and testing location:			
☒	**CB Testing Laboratory:**	TÜV Rheinland Thailand Ltd.	
Testing location/ address .....:		TMP procedure used. For address of testing location see "Testing Procedure: TMP/CTF Stage 1" below.	
☐	**Associated CB Testing Laboratory:**		
Testing location/ address .....:			
Tested by (name + signature).....:			
Approved by (name + signature).....:			
☒	**Testing procedure: TMP/CTF Stage 1:**	Delta Electronics (Thailand) Public Co., Ltd.	
Testing location/ address .....:		909 Soi 9, Moo 4, Bangpoo Industrial Estate (E.P.Z.), Pattana 1 Rd., Tambol Phraksa, Amphur Muang, Samutprakarn 10280, Thailand	
Tested by (name + signature).....:		Pasiwat Phonsawang	
Approved by (name + signature).....:		Leo Wu	
☐	**Testing procedure: WMT/CTF Stage 2:**		
Testing location/ address .....:			
Tested by (name + signature).....:			
Witnessed by (name + signature).....:			

Approved by (name + signature)..... :		
☐	**Testing procedure:** **SMT/CTF Stage 3 or 4:**	
Testing location/ address ..... :		
Tested by (name + signature)..... :		
Witnessed by (name + signature) ..... :		
Approved by (name + signature)..... :		
Supervised by (name + signature)..... :		

List of Attachments (including a total number of pages in each attachment):

- Photo documentation (6 pages)
- National Differences (60 pages)

Summary of testing:

Tests performed (name of test and test clause):

All applicable tests as described in Test Case and Measurement Sections were performed.

- The equipment has been evaluated for maximum operation temperature of +50°C.
- Maximum operating altitude operated up to 3000m above sea level as declared by manufacturer. Clearances have been evaluated according to IEC 60664-1:1992 table A.2 with a multiplication factor of 1.14 throughout this report.
- Abnormal operation tests have been performed with an external standard breaker trip, rated 16A.
- Testing performed on samples, Serial number:

  Model: PMC-12V050W1XX
  P120501AAS0L09150001 to
  P120501AAS0L09150008

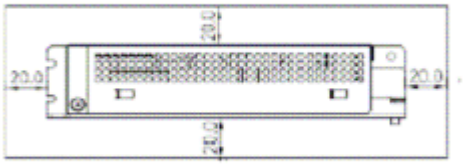
  Model: PMC-12V060W1NX
  P120601NAS0L13060026 to
  P120601NAS0L13060033
- The following mounting positions were used during testing:

Mounting direction:

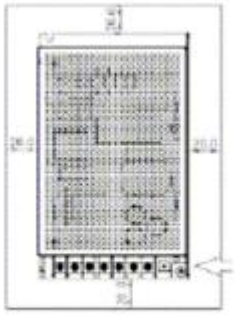
Mounting location 1

Testing location:

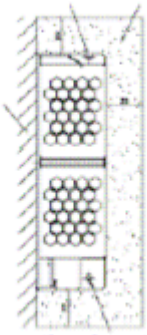
All tests as described in Test Case and Measurement Sections were performed at the laboratory described on page 2.



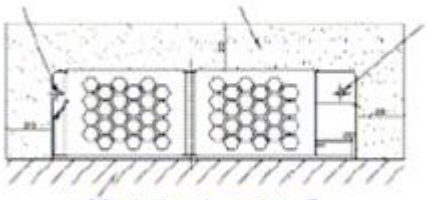
Mounting location 2



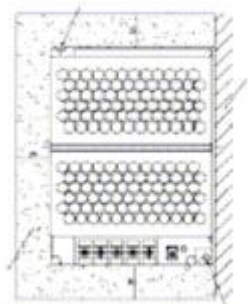
Mounting location 3



Mounting location 4



Mounting location 5


Mounting location 6

- The following load conditions were used during testing:

- Load condition A: 12V/4.17A for model PMC-12V050W1XX
- Load condition A: 12V/5A for model PMC-12V060W1NX

Summary of compliance with National Differences

Summary of compliance with National Differences to IEC 60950-1:2005 (2nd Edition)+Am 1:2009+Am 2:2013.
List of countries addressed:

EU Group Differences, EU Special National Conditions, US, CA

Summary of compliance with National Differences to IEC 60950-1:2005 (2nd Edition)+Am 1:2009.
List of countries addressed:

CN, DE, DK, FI, GB, IL, KR, SE, SI

Summary of compliance with National Differences to IEC 60950-1:2005 (2nd Edition).
List of countries addressed:
AU, CH, CN, ES, IE, NO

Summary of compliance with National Differences to IEC 60950-1:2001 (1st Edition).
List of countries addressed:

BY, JP

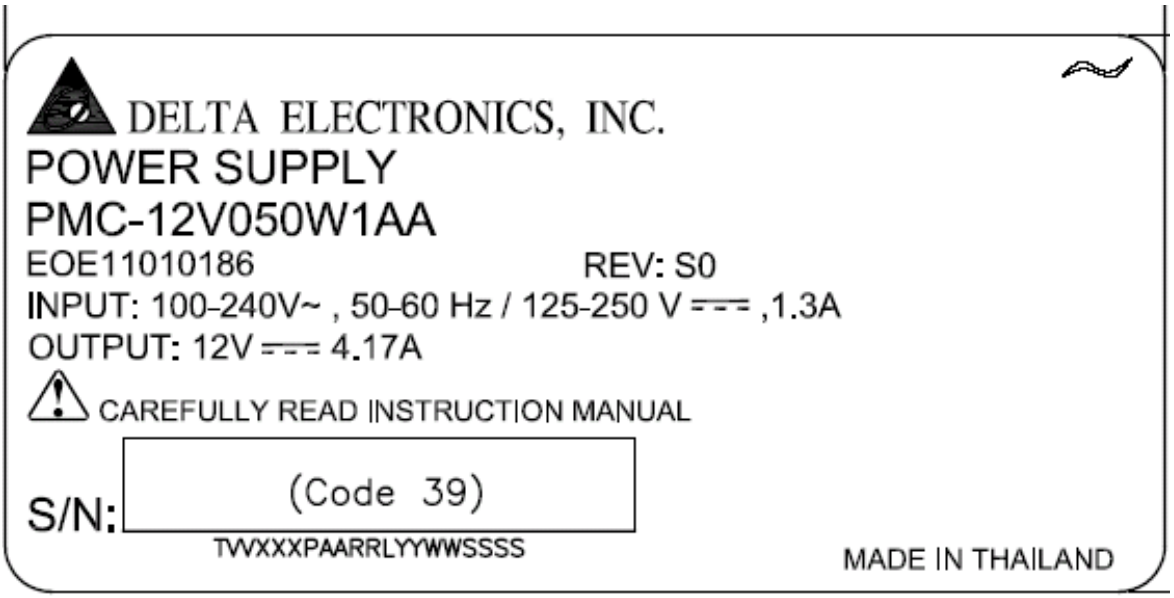
Explanation of used codes: AU=Australia, BY=Belarus, CA=Canada, CN=China, CH=Switzerland, DE=Germany, DK=Denmark, ES=Spain, FI=Finland, GB=United Kingdom, IE=Ireland, IL=Israel, JP=Japan, KR=Republic of Korea, NO=Norway, SE=Sweden, SI=Slovenia, US=United States of America

☒ **The product fulfils the requirements of EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013**

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.

(Additional requirements for markings. See 1.7 NOTE)



Test item particulars.....:	
Equipment mobility.....:	[] movable [] hand-held [] transportable [] stationary [X] for building-in [] direct plug-in
Connection to the mains.....:	[] pluggable equipment [] type A [] type B [X] permanent connection [] detachable power supply cord [] non-detachable power supply cord [] not directly connected to the mains
Operating condition.....:	[X] continuous [] rated operating / resting time:
Access location .....:	[] operator accessible [] restricted access location
Over voltage category (OVC) .....:	[] OVC I [X] OVC II [] OVC III [] OVC IV [] other:
Mains supply tolerance (%) or absolute mains supply values .....:	AC: ±10% DC: -20/+50%
Tested for IT power systems .....:	[X] Yes [] No
IT testing, phase-phase voltage (V) .....:	230V
Class of equipment .....:	[X] Class I [] Class II [] Class III [] Not classified
Considered current rating of protective device as part of the building installation (A) .....:	16 (13 for UK, 20 North America)
Pollution degree (PD) .....:	[] PD 1 [X] PD 2 [] PD 3
IP protection class .....:	IPX0, IP20 (for input terminal block type C44M)
Altitude during operation (m) .....:	Up to 3000m
Altitude of test laboratory (m) .....:	Not over 2000m
Mass of equipment (kg) .....:	0.3
Possible test case verdicts:	
- test case does not apply to the test object .....:	N/A
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement .....:	F (Fail)
Testing.....:	
Date of receipt of test item.....:	N/A (TMP)
Date(s) of performance of tests .....:	February to March, 2016
General remarks:	
"(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 ☐ comma / ☒ point is used as the decimal separator.**	

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....:

☒ **Yes**

☐ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) ..... :

1. Delta Electronics (Thailand) Public Co., Ltd.
   909 Soi 9, Moo 4, Bangpoo Ind. Estate (E.P.Z.), Pattana 1 Road
   Tambol Phraksa, Amphur Muang,
   Samutprakarn 10280, Thailand
2. Delta Electronics (Jiangsu) Ltd.
   No. 1688 Jiangxing East Road,
   Wujiang Economics Development Zone,
   Song Ling Town, Wujiang City,
   Jiangsu Province, 215200, P.R China

General product information:

The product is a sub-assembly intended for incorporation in information technology equipment, the overall compliance should be investigated in the complete information technology equipment.

Engineering Considerations

- The product was submitted and tested for use at the **maximum ambient temperature (Tma)** permitted by the manufacturer's specification of: 50°C.
- The means of connection to the mains supply is **permanent connection**.
- The product is intended for use on the following **power systems**: TN.
- De-rating output power:
  100% at 50°C, 75% at 60°C, 50% at 70°C.
  Output: +12V/4.17A (Adjustable between 11 to 14Vdc but 50W Max).
- The equipment **disconnect device** is considered to be: Shall be evaluate in the final system.
- The following **transformers** are provided (See subclause 1.5.4):
  - Double/Reinforced insulation: T1
- The following **capacitors** bridging insulation (See subclause 1.5.6):
  - Double/Reinforced insulation: CY3
  - Basic insulation: CY1, CY2, CY4
  - Supplementary insulation: None.
  - Across mains conductors: CX1
- Functional insulation: other than above mentioned.
  The following **resistors** bridging insulation (See subclause 1.5.7):
  - Double/Reinforced insulation: None
  - Basic insulation: None
  - Supplementary insulation: None
  - Across mains conductors: R1A, R1B, R1C.
  - Functional insulation: other than above mentioned.
- The following **VDRs** are bridging insulation (See subclause 1.5.9):
  - Basic insulation: None
  - Functional insulation: Z1.

- The following **solid insulation** are provided (See subclause 2.10.5):
  - Reinforced insulation: min. 2 layers of insulation tape provided in T1.
  - Reinforced insulation: Photo coupler (IC2, IC3)
  - Basic insulation: insulated tubing for Q1
  - Supplementary insulation: None
  - Functional insulation: other than above mentioned.
- The following parts consist of the protective earthing (see subclause 2.6):
  - Protective earthing conductor: Input terminal.
  - Protective bonding conductor: Connections between chassis, and protective earthing terminal.
- The following parts are protective earthing terminals (See subclause 2.6.4): the earthing terminal in the input terminal.

Additional Information

- The Label in Copy of marking plate is a draft of an artwork pending approval by National Certification Bodies and it shall not be affixed to products prior to such an approval.

MARKINGS AND INSTRUCTIONS:

- Fuse Identification marking on PCB near fuse: F1 T3.15AH 250V.

The product also marked with:

- ⏚ (IEC 60417-5019) for the wiring terminal of protective eathing conductor (See subclause 1.7.7.1)

Difference between the models

Model PMC-12V060W1NX is identical to model PMC-12V050W1XX, except the information and component as shown in the table as below;

Model/Item	**PMC-12V050W1XX**	**PMC-12V060W1NX**
Rating	I/P: AC 100 - 240V, 50-60Hz / 125-250Vdc, 1.3A Max. O/P: DC 12V / 4.17A, 50W Max. (Adjustable between DC 11 to 14V)	I/P: AC 100 - 240V, 50-60Hz / 125- 250Vdc, 1.65A Max. O/P: DC 12V / 5.0A, 60W Max., LPS (Adjustable between DC 12 to 14V)
Transformer (T1)	MV-TPT9032	MV-MPT12087
Line filter (FL1)	HFH-TPT9006	LFH-TPT7038
Transistor (Q1)	Min. 800V / 6.2A	Min. 800V / 11A
Inrush limiter (NTC1)	Min. 5ohm / 3A	Min. 3ohm / 5A
Electrolytic capacitor (C1)	120uF, 400V, 105°C min.	150uF, 400V, 105°C min.
PCB name	EOE11010186	PMC-12V060W1NA

Definition of variable(s):

Variable:	Range of variable:	Content:
X	0-9, A-Z or blank	For marketing purpose only.

Abbreviations used in the report:

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

Indicate used abbreviations (if any)

Following abbreviations may be used throughout this test report:

- cl clearance
- dcr creepage distance
- dti distance through insulation
- EUT equipment under test
- ext external distance
- int internal distance
- o-c open-circuit
- o-l overload
- s-c short-circuit
- d-con disconnected
- RA The unit recovers automatically after removing the abnormal condition.
- IP Internal protection operated (list component)
- Immed Unit shut down immediately in less than 1 sec.
- CT Constant temperatures were obtained
- TW Transformer winding opened
- TIW Triple insulating wire
- CD Components damaged (list damaged components)
- NB No indication of dielectric breakdown
- YB Dielectric breakdown (indicate time and location)
- NC Cheesecloth remained intact
- LC Load condition
- YC Cheesecloth charred or flamed
- NT Tissue paper remained intact
- YT Tissue paper charred or flamed

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1	**GENERAL**		P
1.5	**Components**		P
1.5.1	General	See below.	P
	Comply with IEC 60950-1 or relevant component standard	(see appended tables 1.5.1)	P
1.5.2	Evaluation and testing of components	Components certified to IEC/EN standards and/or their harmonized standards, are used within their ratings and are checked for correct application,	P
1.5.3	Thermal controls		N/A
1.5.4	Transformers	Transformers complied with the relevant requirements.	P
1.5.5	Interconnecting cables	Interconnection cables complied with the relevant requirements.	P
1.5.6	Capacitors bridging insulation	Capacitors used in accordance with their rating and complied with subclasses of IEC 60384-14 with at least 21 days damp heat test.	P
1.5.7	Resistors bridging insulation	See below	P
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	See engineering considerations.	P
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		N/A
1.5.8	Components in equipment for IT power systems	(see appended table 1.5.1)	P
1.5.9	Surge suppressors	See below.	P
1.5.9.1	General	See Annex Q.	P
1.5.9.2	Protection of VDRs	A fuse is connected in series with the VDR.	P
1.5.9.3	Bridging of functional insulation by a VDR	Complied.	P
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**		P
1.6.1	AC power distribution systems	Considered	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment		N/A
1.6.4	Neutral conductor	Neutral is insulated from earth and body throughout the eqipment and conponents rated accordingly.	P
1.7	**Marking and instructions**		P
1.7.1	Power rating and identification markings	The power rating marking is in service access area and its location is indicated in the installation instructions.	P
1.7.1.1	Power rating marking	See copy of marking plate	P
	Multiple mains supply connections.....:		N/A
	Rated voltage(s) or voltage range(s) (V) .....:	See copy of marking plate	P
	Symbol for nature of supply, for d.c. only.....:		N/A
	Rated frequency or rated frequency range (Hz) ....:	See copy of marking plate	P
	Rated current (mA or A) .....:	See copy of marking plate	P
1.7.1.2	Identification markings		P
	Manufacturer's name or trade-mark or identification mark .....:	See copy of marking plate	P
	Model identification or type reference .....:	See copy of marking plate	P
	Symbol for Class II equipment only .....:		N/A
	Other markings and symbols .....:		N/A
1.7.1.3	Use of graphical symbols		N/A
1.7.2	Safety instructions and marking	See below:	P
1.7.2.1	General	Instructions are available.	P
1.7.2.2	Disconnect devices	Terminals used. To be evaluated in the final system.	N/A
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT power distribution systems	For Norway compliance has to be evaluated during the national approval.	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
	Methods and means of adjustment; reference to installation instructions .....:		N/A
1.7.5	Power outlets on the equipment .....:		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) ..... :	See General product information – Markings and Instructions	P
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals ..... :	Symbol on terminal used.	P
1.7.7.2	Terminals for a.c. mains supply conductors	Mains terminals with neutral conductor indicated by capital letter N.	P
1.7.7.3	Terminals for d.c. mains supply conductors	Mains terminals with conductor indicated polarity.	P
1.7.8	Controls and indicators	See below.	P
1.7.8.1	Identification, location and marking ..... :	See below	P
1.7.8.2	Colours ..... :	The function of indicators and controls is clearly identified.	P
1.7.8.3	Symbols according to IEC 60417 ..... :	See General product information – Markings and Instructions	P
1.7.8.4	Markings using figures ..... :		N/A
1.7.9	Isolation of multiple power sources ..... :		N/A
1.7.10	Thermostats and other regulating devices ..... :		N/A
1.7.11	Durability	Marking is durable and legible. The marking plate has no curling and is not able to be removed easily.	P
1.7.12	Removable parts		N/A
1.7.13	Replaceable batteries ..... :	No such component used.	N/A
	Language(s) ..... :		—
1.7.14	Equipment for restricted access locations ..... :		N/A

2	**PROTECTION FROM HAZARDS**		P
2.1	**Protection from electric shock and energy hazards**		P
2.1.1	Protection in operator access areas	See below.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.1.1.1	Access to energized parts	The accessibility of hazardous is prevented with in the final system. The inspection with test pin and test finger should be conducted with the approval of the end system. Installation instruction requires that the requirements of the standard must be observed to the installation.	N/A
	Test by inspection .....:	The accessibility of hazardous is prevented with in the final system. The inspection with test pin and test finger should be conducted with the approval of the end system. Installation instruction requires that the requirements of the standard must be observed to the installation.	N/A
	Test with test finger (Figure 2A) .....:	The accessibility of hazardous is prevented with in the final system. The inspection with test pin and test finger should be conducted with the approval of the end system. Installation instruction requires that the requirements of the standard must be observed to the installation.	N/A
	Test with test pin (Figure 2B) .....:	The accessibility of hazardous is prevented with in the final system. The inspection with test pin and test finger should be conducted with the approval of the end system. Installation instruction requires that the requirements of the standard must be observed to the installation.	N/A
	Test with test probe (Figure 2C) .....:	No connection to TNV circuits.	N/A
2.1.1.2	Battery compartments	No battery compartments provided.	N/A
2.1.1.3	Access to ELV wiring	No ELV wiring in operator access area.	N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.1.1.5	Energy hazards .....:	The equipment is for building-in and compliance shall be evaluated for the final system. However, energy did not exceed 240VA between any two points of the output connector. Test results see appended table 2.1.1.5.	P
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment	Voltage decay measurement was conducted with an oscilloscope having an input impedance of 100MΩ.	P
	Measured voltage (V); time-constant (s).....:	Vp= 382V, 37%Vp= 140V after 2 s the voltage decayed to 0V; time constant: 0.5s	—
2.1.1.8	Energy hazards – d.c. mains supply	See below	P
	a) Capacitor connected to the d.c. mains supply ..:	Energy less than 20J	N/A
	b) Internal battery connected to the d.c. mains supply .....:		N/A
2.1.1.9	Audio amplifiers .....:		N/A
2.1.2	Protection in service access areas	Compliance has to be evaluated for the final system.	N/A
2.1.3	Protection in restricted access locations		N/A

2.2	**SELV circuits**		P
2.2.1	General requirements	See below.	P
2.2.2	Voltages under normal conditions (V) .....:	See appended table 2.2	P
2.2.3	Voltages under fault conditions (V) .....:	See appended table 2.2	P
2.2.4	Connection of SELV circuits to other circuits .....:	Complied with 2.2.2 and 2.2.3.	P

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

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed .....:		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed .....:		—
2.3.5	Test for operating voltages generated externally		N/A
2.4	**Limited current circuits**		P
2.4.1	General requirements	The limits for LCC under normal and single fault condition were not exceeded.	P
2.4.2	Limit values	See below.	P
	Frequency (Hz).....:	(refer to appended table)	—
	Measured current (mA) .....:	(refer to appended table)	—
	Measured voltage (V).....:	(refer to appended table)	—
	Measured circuit capacitance (nF or µF) .....:	2200pF	—
2.4.3	Connection of limited current circuits to other circuits	Complies.	P
2.5	**Limited power sources**		P
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition	For model PMC-12V060W1NX: OVP, OCP and OPP circuits provided.	P
	Use of integrated circuit (IC) current limiters		N/A
	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 model PMC-12V060W1NX)	—
	Current rating of overcurrent protective device (A) .:		—
	Use of integrated circuit (IC) current limiters		N/A
2.6	**Provisions for earthing and bonding**		P
2.6.1	Protective earthing	The enclosure is intended to be connected to earth by the enclosure of the final system. However, EUT is for building in, overall compliance shall be evaluated in final system.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.2	Functional earthing		N/A
	Use of symbol for functional earthing .....:		N/A
2.6.3	Protective earthing and protective bonding conductors	See below.	N/A
2.6.3.1	General	See below.	N/A
2.6.3.2	Size of protective earthing conductors	No power cord provided.	N/A
	Rated current (A), cross-sectional area (mm^2), AWG .....:		—
2.6.3.3	Size of protective bonding conductors	Evaluation by test. See sub-clause 2.6.3.4, rated current 16A.	P
	Rated current (A), cross-sectional area (mm^2), AWG .....:	See above.	—
	Protective current rating (A), cross-sectional area (mm^2), AWG.....:	See above.	—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min).....:	PMC-12V050W1XX From inlet PE pin to farthest point of metal enclosure: 4mΩ, 0.01V, 32A, 2min and 6mΩ, 0.15V, 40A, 2min. From inlet PE pin to PCB trace of CY1: 4mΩ, 0.12V, 32A, 2min and 5mΩ, 0.18V, 40A, 2min. PMC-12V060W1NX From input terminal PE pin to farthest point of metal enclosure: 9mΩ, 0.29V, 32A, 2min and 5mΩ, 0.2V, 40A, 2min. From input terminal PE pin to PCB trace of CY1: 15mΩ, 0.48V, 32A, 2min and 5mΩ, 0.2V, 40A, 2min.	P
2.6.3.5	Colour of insulation .....:		N/A
2.6.4	Terminals	See below.	N/A
2.6.4.1	General	See below.	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

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Clause	Requirement + Test	Result - Remark	Verdict
2.6.5	Integrity of protective earthing	See below.	N/A
2.6.5.1	Interconnection of equipment	Building-in equipment, shall be evaluated in the final system assembly.	N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	No switch or overcurrent protective device provided in earthing conductors and protective bonding conductors.	P
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance	No combination above the line in annex J is used.	P
2.6.5.7	Screws for protective bonding	No self-tapping or spaced thread screws used in protective bonding conductor.	P
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A
2.7	**Overcurrent and earth fault protection in primary circuits**		P
2.7.1	Basic requirements	Building-in equipment, shall be evaluated in the final system assembly. Protection against overcurrents and short-circuits is provided as an integral part of the equipment. Protection against earth faults is provided as part of the building installation.	P
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7	Considered.	P
2.7.3	Short-circuit backup protection	The building installation is considered as providing short-circuit backup protection.	P
2.7.4	Number and location of protective devices .....:	Overcurrent protection by one built-in fuses.	P
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel .....:		N/A
2.8	**Safety interlocks**		N/A
2.8.1	General principles		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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**		P
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic materials are not used.	P
2.9.2	Humidity conditioning	Tested for 120 hrs.	P
	Relative humidity (%), temperature (°C) .....:	95%, 40°C	—
2.9.3	Grade of insulation	Basic, supplementary, double insulation, reinforced or functional insulation.	P
2.9.4	Separation from hazardous voltages	See below.	P
	Method(s) used .....:	Method 1.	—
2.10	**Clearances, creepage distances and distances through insulation**		P
2.10.1	General		P
2.10.1.1	Frequency .....:	Complied.	P
2.10.1.2	Pollution degrees .....:	2	P
2.10.1.3	Reduced values for functional insulation	See 5.3.4	P
2.10.1.4	Intervening unconnected conductive parts	Complied.	P
2.10.1.5	Insulation with varying dimensions		N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage	See below	P
2.10.2.1	General	Considered.	P
2.10.2.2	RMS working voltage	See appended table 2.10.2	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.2.3	Peak working voltage	See appended table 2.10.2	P
2.10.3	Clearances	See below	P
2.10.3.1	General	Annex F is considered.	P
2.10.3.2	Mains transient voltages	See below.	P
	a) AC mains supply ..... :	2500 Vpk considered.	P
	b) Earthed d.c. mains supplies ..... :		N/A
	c) Unearthed d.c. mains supplies ..... :		N/A
	d) Battery operation ..... :		N/A
2.10.3.3	Clearances in primary circuits	(see appended table 2.10.3 and 2.10.4)	P
2.10.3.4	Clearances in secondary circuits	Refer to sub-clause 5.3.4	N/A
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply ..... :	1500 Vpk assumed.	P
2.10.3.7	Transients from d.c. mains supply ..... :	See above.	P
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 below.	P
2.10.4.1	General	Considered.	P
2.10.4.2	Material group and comparative tracking index	Material group IIIb assumed.	P
	CTI tests ..... :	See above.	—
2.10.4.3	Minimum creepage distances	(see appened table 2.10.3 and 2.10.4)	P
2.10.5	Solid insulation	Complied with 2.10.5.2 to 2.10.5.14 and 5.2	P
2.10.5.1	General	See below.	P
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	P
2.10.5.3	Insulating compound as solid insulation	Complied with 2.10.5.2 and 2.10.10.	P
2.10.5.4	Semiconductor devices	See 2.10.5.1, 2.10.5.2	P
2.10.5.5.	Cemented joints	(see appended table 2.10.3 and 2.10.4)	P
2.10.5.6	Thin sheet material – General	Considered.	P
2.10.5.7	Separable thin sheet material	Reinforced insulation.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Number of layers (pcs) ..... :	(see appended table C2 and 2.10.3, 2.10.4)	—
2.10.5.8	Non-separable thin sheet material	Tested to 2.10.5.9 Tested to 2.10.5.9 and annex AA.	P
2.10.5.9	Thin sheet material – standard test procedure	Electric strength test applied to the three layers together.	P
	Electric strength test	(see appended table 5.2)	—
2.10.5.10	Thin sheet material – alternative test procedure	Electric strength test applied to each layer.	P
	Electric strength test	(see appended table 5.2)	—
2.10.5.11	Insulation in wound components	See below.	P
2.10.5.12	Wire in wound components	Reinforced insulation.	P
	Working voltage ..... :	See appended table 2.10.2.	P
	a) Basic insulation not under stress ..... :		N/A
	b) Basic, supplementary, reinforced insulation ..... :	See below	P
	c) Compliance with Annex U ..... :	Comlied with annex U, three layers.	P
	Two wires in contact inside wound component; angle between 45° and 90° ..... :	Insulation tape or tubing provided.	P
2.10.5.13	Wire with solvent-based enamel in wound components		N/A
	Electric strength test		—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		N/A
	Working voltage ..... :		N/A
	- Basic insulation not under stress ..... :		N/A
	- Supplementary, reinforced insulation ..... :		N/A
2.10.6	Construction of printed boards		P
2.10.6.1	Uncoated printed boards		P
2.10.6.2	Coated printed boards		N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		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	(see appended table 2.10.3 and 2.10.4)	P

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling	Approved sources of opto-couplers used. For detail see table 1.5.1.	P
2.10.10	Test for Pollution Degree 1 environment and insulating compound	See above.	P
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts	Passed 2.10.10.	N/A
3	**WIRING, CONNECTIONS AND SUPPLY**		P
3.1	**General**		P
3.1.1	Current rating and overcurrent protection	No internal wire	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	The screws are not made of insulating material. They engage at least two complete threads into the metal part.	P
3.1.7	Insulating materials in electrical connections	Sufficient resilience is provided.	P
3.1.8	Self-tapping and spaced thread screws	Spaced thread (self-tapping) screw is not used.	P
3.1.9	Termination of conductors	See below.	P
	10 N pull test	The clearances and creepages are not reduced below required in 2.10	P
3.1.10	Sleeving on wiring		N/A
3.2	**Connection to a mains supply**		P
3.2.1	Means of connection	See below	P

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Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	Connection to an a.c. mains supply	Terminals without application inlet intended use for building-in. Evaluation in final system.	N/A
3.2.1.2	Connection to a d.c. mains supply	See above.	N/A
3.2.2	Multiple supply connections	See above.	N/A
3.2.3	Permanently connected equipment	See above.	P
	Number of conductors, diameter of cable and conduits (mm) .....:	See above.	—
3.2.4	Appliance inlets		N/A
3.2.5	Power supply cords		N/A
3.2.5.1	AC power supply cords	No power supply cord provided.	N/A
	Type .....:		—
	Rated current (A), cross-sectional area (mm^2), AWG .....:		—
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N) .....:		—
	Longitudinal displacement (mm) .....:		—
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards		N/A
	Diameter or minor dimension D (mm); test mass (g) .....:		—
	Radius of curvature of cord (mm) .....:		—
3.2.9	Supply wiring space		N/A

3.3	**Wiring terminals for connection of external conductors**		N/A
3.3.1	Wiring terminals	To be evaluated in the final system.	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, nominal thread diameter (mm) .....:		—
3.3.6	Wiring terminal design		N/A
3.3.7	Grouping of wiring terminals		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.3.8	Stranded wire		N/A
3.4	**Disconnection from the mains supply**		N/A
3.4.1	General requirement	To be evaluated in the final system.	N/A
3.4.2	Disconnect devices	To be evaluated in the final system.	N/A
3.4.3	Permanently connected equipment	To be evaluated in the final system.	N/A
3.4.4	Parts which remain energized	To be evaluated in the final system.	N/A
3.4.5	Switches in flexible cords		N/A
3.4.6	Number of poles - single-phase and d.c. equipment	The disconnect device disconnects both poles simultanrously.	P
3.4.7	Number of poles - three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A
3.5	**Interconnection of equipment**		P
3.5.1	General requirements	See below.	P
3.5.2	Types of interconnection circuits ..... :	Interconnection circuits of SELV via secondary output connector.	P
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection.	P
3.5.4	Data ports for additional equipment		N/A
4	**PHYSICAL REQUIREMENTS**		P
4.1	**Stability**		N/A
	Angle of 10°	This epuipment is for building-in and shall be evaluated in end product.	N/A
	Test force (N) ..... :		N/A
4.2	**Mechanical strength**		P

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Clause	Requirement + Test	Result - Remark	Verdict
4.2.1	General	During steady force tests, the conductive enclosures do not bridge parts with hazardous energy level, and do not contact the bare part at hazardous voltage. After following tests, the sample continues to comply relevant requirements.	P
	Rack-mounted equipment.		N/A
4.2.2	Steady force test, 10 N	Applied to parts other than in 4.2.3 and 4.2.4.	P
4.2.3	Steady force test, 30 N	EUT is for building-in. However, the enclosure was evaluated.	P
4.2.4	Steady force test, 250 N	Equipment is for building-in, shall be evaluated in end product.	N/A
4.2.5	Impact test		N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm) .....:		N/A
4.2.7	Stress relief test	Metal enclosure.	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) .....:	A force of 50N (3 times the equipment weight) was applied for mounting locations 1, 2 and 3.	P

4.3	**Design and construction**		P
4.3.1	Edges and corners	This epuipment is for building-in and shall be evaluated in end product.	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	No connections likely to be exposed to mechanical stress are provided in unit.	P
4.3.5	Connection by plugs and sockets	Mismatching of connectors either not possible or does not result in any hazard.	P

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.6	Direct plug-in equipment		N/A
	Torque ..... :		—
	Compliance with the relevant mains plug standard ..... :		N/A
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries		N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
4.3.9	Oil and grease	Insulation in intended use not considered to be exposed to oil or grease.	N/A
4.3.10	Dust, powders, liquids and gases	Equipment in intended use not considered to be exposed to these.	N/A
4.3.11	Containers for liquids or gases	No container for liquid or gas provided.	N/A
4.3.12	Flammable liquids ..... :	No flammable liquids provided.	N/A
	Quantity of liquid (l) ..... :		N/A
	Flash point (°C) ..... :		N/A
4.3.13	Radiation		P
4.3.13.1	General		P
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	Diffusive type LEDs are used as indicating lights.	P
4.3.13.5.1	Lasers (including laser diodes)	See above.	—
	Laser class ..... :	LED class 1.	—
4.3.13.5.2	Light emitting diodes (LEDs)		—

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.13.6	Other types ..... :		N/A
4.4	**Protection against hazardous moving parts**		N/A
4.4.1	General	Epuipment is for building-in. Compliance shall be evaluated in the final system.	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
4.5	**Thermal requirements**		P
4.5.1	General	No exceeding temperature.	P
4.5.2	Temperature tests	(See appended table 4.5 of attachment)	P
	Normal load condition per Annex L ..... :	(See Annex L)	—
4.5.3	Temperature limits for materials	(see appended table 4.5 of attachment)	P
4.5.4	Touch temperature limits		N/A
4.5.5	Resistance to abnormal heat ..... :	Phenolic material used without further test. For other material, see table 4.5.5 for detail.	P
4.6	**Openings in enclosures**		N/A
4.6.1	Top and side openings	Equipment for building-in. It should be evaluated for the final system.	N/A
	Dimensions (mm) ..... :		—
4.6.2	Bottoms of fire enclosures		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Construction of the bottomm, dimensions (mm) ..:		—
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment		N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm) .....:		—
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C), time (weeks).....:		—
4.7	**Resistance to fire**		P
4.7.1	Reducing the risk of ignition and spread of flame	See below.	P
	Method 1, selection and application of components wiring and materials	Materials with the required flammability classes are used.	P
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure	See below.	P
4.7.2.1	Parts requiring a fire enclosure	Following parts require a fire enclosure: ▪ Components in primary circuits ▪ Components in secondary circuits supplied by power sources that exceed the limits of limited power source. ▪ Insulating wiring. fire enclosure is required. However, the equipment is building-in type, evaluation is to be made during the final system approval.	N/A
4.7.2.2	Parts not requiring a fire enclosure	See above.	N/A
4.7.3	Materials		P
4.7.3.1	General	Equipment is for building-in, compliance shall be evaluated for the final system. See appended table 1.5.1 for PCB material.	P

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Clause	Requirement + Test	Result - Remark	Verdict

4.7.3.2	Materials for fire enclosures	Equipment is for building-in, compliance shall be evaluated for the final system.	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	The material is made of V-2 material or better.	P
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		P
5.1	**Touch current and protective conductor current**		P
5.1.1	General	See appended table 5.1. See sub-clauses 5.1.2 to 5.1.7	P
5.1.2	Configuration of equipment under test (EUT)	See below.	P
5.1.2.1	Single connection to an a.c. mains supply	Each piece of equipment tested separately.	P
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit	Test circuit in Figure 5A used.	P
5.1.4	Application of measuring instrument	Measuring instruments as in annex D used.	P
5.1.5	Test procedure	Applied.	P
5.1.6	Test measurements	See appended table 5.1	P
	Supply voltage (V) ..... :	+10% of the rated voltage.	—
	Measured touch current (mA) ..... :	See appended table 5.1	—
	Max. allowed touch current (mA) ..... :	See appended table 5.1	—
	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

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Clause	Requirement + Test	Result - Remark	Verdict
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N/A
	Supply voltage (V) .....:		—
	Measured touch current (mA) .....:		—
	Max. allowed touch current (mA) .....:		—
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports .....:		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A
5.2	**Electric strength**		P
5.2.1	General	(see appended table 5.2)	P
5.2.2	Test procedure	Table 5B used.	P
5.3	**Abnormal operating and fault conditions**		P
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P
5.3.2	Motors		N/A
5.3.3	Transformers	(see appended Annex C)	P
5.3.4	Functional insulation.....:	Functional insulation complied with the requirements c).	P
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE .....:		N/A
5.3.7	Simulation of faults	Complied.	P
5.3.8	Unattended equipment		N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	(see appended table)	P
5.3.9.1	During the tests	Neither fire burns the equipment nor molten metal.	P
5.3.9.2	After the tests	Electric strength test made.	P
6	**CONNECTION TO TELECOMMUNICATION NETWORKS**		N/A
6.1	**Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment**		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Supply voltage (V) ..... :		—
	Current in the test circuit (mA) ..... :		—
6.1.2.2	Exclusions ..... :		N/A
6.2	**Protection of equipment users from overvoltages on telecommunication networks**		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A
6.3	**Protection of the telecommunication wiring system from overheating**		N/A
	Max. output current (A) ..... :		—
	Current limiting method ..... :		—
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
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

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Clause	Requirement + Test	Result - Remark	Verdict
	Flame A, B, C or D ..... :		—
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s)..... :		—
	Sample 2 burning time (s)..... :		—
	Sample 3 burning time (s)..... :		—
A.2	**Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)**		N/A
A.2.1	Samples, material ..... :		—
	Wall thickness (mm) ..... :		—
A.2.2	Conditioning of samples; temperature (°C) ..... :		N/A
A.2.3	Mounting of samples ..... :		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C ..... :		—
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s)..... :		—
	Sample 2 burning time (s)..... :		—
	Sample 3 burning time (s)..... :		—
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A
	Sample 1 burning time (s)..... :		—
	Sample 2 burning time (s)..... :		—
	Sample 3 burning time (s)..... :		—
A.3	**Hot flaming oil test (see 4.6.2)**		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

B	**ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)**		N/A
B.1	**General requirements**		N/A
	Position ..... :		—
	Manufacturer ..... :		—
	Type ..... :		—
	Rated values ..... :		—
B.2	**Test conditions**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
B.3	**Maximum temperatures**		N/A
B.4	**Running overload test**		N/A
B.5	**Locked-rotor overload test**		N/A
	Test duration (days) ..... :		—
	Electric strength test: test voltage (V) ..... :		—
B.6	**Running overload test for d.c. motors in secondary circuits**		N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V) ..... :		N/A
B.7	**Locked-rotor overload test for d.c. motors in secondary circuits**		N/A
B.7.1	General		N/A
B.7.2	Test procedure		N/A
B.7.3	Alternative test procedure		N/A
B.7.4	Electric strength test; test voltage (V) ..... :		N/A
B.8	**Test for motors with capacitors**		N/A
B.9	**Test for three-phase motors**		N/A
B.10	**Test for series motors**		N/A
	Operating voltage (V) ..... :		—

C	**ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)**		P
	Position ..... :	Refer to appended table 1.5.1	—
	Manufacturer ..... :	See above.	—
	Type ..... :	See above.	—
	Rated values ..... :	See above.	—
	Method of protection ..... :	Overcurrent protection.	—
C.1	**Overload test**	(see appended table 5.3)	P
C.2	**Insulation**	(see appended table 5.2)	P
	Protection from displacement of windings ..... :	See appended table C.2.	P

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

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Clause	Requirement + Test	Result - Remark	Verdict
E	**ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)**		N/A
F	**ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)**		P
G	**ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES**		N/A
G.1	**Clearances**		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	**Determination of mains transient voltage (V)**		N/A
G.2.1	AC mains supply .....:		N/A
G.2.2	Earthed d.c. mains supplies .....:		N/A
G.2.3	Unearthed d.c. mains supplies .....:		N/A
G.2.4	Battery operation .....:		N/A
G.3	**Determination of telecommunication network transient voltage (V) .....:**		N/A
G.4	**Determination of required withstand voltage (V)**		N/A
G.4.1	Mains transients and internal repetitive peaks .....:		N/A
G.4.2	Transients from telecommunication networks .....:		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	**Measurement of transient voltages (V)**		N/A
	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)**		P
	Metal(s) used .....:	Metals which the combination electrochemical potential is less than 0.6V	—
K	**ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V) .....:		N/A
K.3	Thermostat endurance test; operating voltage (V) .....:		N/A
K.4	Temperature limiter endurance; operating voltage (V) .....:		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A
L	**ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)**		P
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment	The equipment is operated according to the most unfavorable way of operation given in the operating instructions.	P
M	**ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)**		N/A
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	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

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Clause	Requirement + Test	Result - Remark	Verdict
N	**ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)**		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A
P	**ANNEX P, NORMATIVE REFERENCES**		—
Q	**ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)**		P
	- Preferred climatic categories .....:	Certified sources used. See table 1.5.1 for detail.	P
	- Maximum continuous voltage .....:	Certified sources used. See table 1.5.1 for detail.	P
	- Combination pulse current .....:	Certified sources used. See table 1.5.1 for detail.	P
	Body of the VDR Test according to IEC60695-11-5.....:		N/A
	Body of the VDR. Flammability class of material (min V-1).....:		P
R	**ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES**		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	**ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)**		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	**ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)**		N/A
			—
U	**ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		P
		Approved sources used. See table 1.5.1.	—
V	**ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)**		P

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Clause	Requirement + Test	Result - Remark	Verdict
V.1	Introduction		P
V.2	TN power distribution systems		P
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
Y	**ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)**		N/A
Y.1	Test apparatus .....:		N/A
Y.2	Mounting of test samples .....:		N/A
Y.3	Carbon-arc light-exposure apparatus .....:		N/A
Y.4	Xenon-arc light exposure apparatus .....:		N/A
Z	**ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)**		P
AA	**ANNEX AA, MANDREL TEST (see 2.10.5.8)**		P
BB	**ANNEX BB, CHANGES IN THE SECOND EDITION**		—
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
CC.4	Test program 3.....:		N/A
CC.5	Compliance.....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

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, 250N, including end stops……:		N/A
DD.4	Compliance……..:		N/A

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				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
Input terminal block (CN1)	Dinkle	DT-49 series	10A, 300Vac	UL1015	UL
Alternate - Input terminal block (CN1)	Switchlab	T24 / T44 / C44M	Min. 10A, 300V	UL1015	UL
Input connector (CN1)	JST	VH series	Min. 10A, 250V	UL1015	UL
Alternate - Input connector (CN1)	JWT	A3963 series	Min. 10A, 250V	UL1015	UL
Fuse (F1)	Littelfuse Inc.	215 series	T3.15AH, AC 250V	VDE0820 / IEC/EN60127-2	VDE
	Bel Fuse Ltd.	5HT/ 5HTP series	T3.15AH, AC 250V	VDE0820 / IEC/EN60127-2	VDE
	Schurter.	SPT series	T3.15AH, AC 250V	VDE0820 / IEC/EN60127-2	VDE
Varistor (Z1)	Thinking	TVR14471K	AC 300V Min.	UL1449 (SPD type 3)	UL
	Epcos	S14K300E2K1	AC 300V Min.	UL1449 (SPD type 3)	UL
Bleeder resistor (R1A, R1B, R1C)	Interchangeable	Interchangeable	Max. 680KΩ, Min. 1/4 W	---	---
X-Capacitors (CX1)	Hua Jung	MKP	Max.0.22μF, AC 275V, T100°C min, Subclass X1 or X2	VDE0565 / IEC/EN60384-14: 2005	VDE
	Interchangeable	Interchangeable	Max.0.22μF, AC 275V, T100°C min, Subclass X1 or X2	VDE0565 / IEC/EN60384-14: 2005	VDE
Line Filter (FL1) (For PMC-12V050W1XX)	Delta Electronics Inc.	HFH-TPT9006	130°C	---	Tested in the unit.
Line Filter (FL1) - Base	Chang Chun Plastic	T375J	Phenolic, V-0, 150°C	---	UL
Line Filter (FL1) - Bobbin	Nan Ya Plastics	1403G6	PBT, V-0, 130°C	---	UL
Line Filter (FL1) (For PMC-12V060W1NX)	Delta Electronics Inc.	LFH-TPT7038	130°C	---	Tested in the unit.

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Clause	Requirement + Test	Result - Remark	Verdict

Line Filter (FL1) - Base	Chang Chun Plastic	T375J	Phenolic, V-0, 150°C	---	UL
Line Filter (FL1) - Bobbin	Nan Ya Plastics	1403G6	PBT, V-0, 130°C	---	UL
Insulator tape (FL1)	3M	1350F-1	130°C	UL 94	UL
	Symbio Inc	35660Y	130°C	UL 94	UL
	Jingjing Yahua Pressure	CT	130°C	UL 94	UL
Y-Capacitors (CY1, CY2)	Murata	KX/KH	Max. 100pF, AC 250V, T125°C, Subclass Y2 Min.	VDE0565 / IEC/EN60384-14: 2005	VDE, FI
	Matsushita	NS-A/TS	Max. 100pF, AC 250V, T125°C, Subclass Y2 Min.	VDE0565 / IEC/EN60384-14: 2005	VDE, FI
	TDK	CD/CS	Max. 100pF, AC 250V, T125°C, Subclass Y2 Min.	VDE0565 / IEC/EN60384-14: 2005	VDE, FI
Inrush limiter (NTC1) (For PMC-12V050W1XX)	Interchangeable	Interchangeable	Min 5Ohm.	UL1434	UL
Inrush limiter (NTC1) (For PMC-12V060W1NX)	Interchangeable	Interchangeable	Min 3Ohm.	UL1434	UL
Bridge Diode (BD1)	Interchangeable	Interchangeable	Min 600V, 4A	---	---
Y-Capacitors (CY4)	Murata	KX/KH	Max. 4700pF, AC 250V, T125°C, Subclass Y2 Min.	VDE0565 / IEC/EN60384-14: 2005	VDE, FI
	Matsushita	NS-A/TS	Max. 4700pF, AC 250V, T125°C, Subclass Y2 Min.	VDE0565 / IEC/EN60384-14: 2005	VDE, FI
	TDK	CD/CS	Max. 4700pF, AC 250V, T125°C, Subclass Y2 Min.	VDE0565 / IEC/EN60384-14: 2005	VDE, FI

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Clause	Requirement + Test	Result - Remark	Verdict

Electrolytic Capacitor (C1) (For PMC-12V050W1XX)	Interchangeable	Interchangeable	120uF, 400V, 105°C min.	---	---
Electrolytic Capacitor (C1) (For PMC-12V060W1NX)	Interchangeable	Interchangeable	150uF, 400V, 105°C min.	---	---
Transformer (T1) (For PMC-12V050W1XX)	Delta Electronics, Inc.	MV-TPT9032	Class B	---	Tested in the unit.
Bobbin (T1)	Sumitomo Bakelite	PM-9820/ PM-9630	Phenolic, V-0, 150°C	UL94	UL
Triple insulated wire (T1)	Furukawa	TEX-E	130°C	---	TUV, VDE
	Totoku	TIW-2 / TIW-3	130°C Min.	---	TUV, VDE
Transformer (T1) (For PMC-12V060W1NX)	Delta Electronics, Inc.	MV-MPT12087	Class B	---	Tested in the unit.
Bobbin (T1)	Sumitomo Bakelite	PM-9820 / PM-9630	Phenolic, V-0, 150°C	UL94	UL
Insulator tape (T1)	3M	1350F-1 / 1350F-2 / 1350T-3 / 92	130°C min.	UL 94	UL
	Symbio Inc	35660Y	130°C	UL 94	UL
	Jingjing Yahua Pressure	CT	130°C	UL 94	UL
	P Leo & Co (B C) Ltd	1K7170	220°C	UL 94	UL
	Teraoka Seisakusho Co., Ltd	560S #3 / 560S #5	200°C	UL 94	UL
Triple insulated wire (T1)	Furukawa Electric Co Ltd	TEX-E / TEX-ELZ / TEX-ECEW3	130°C	UL 746A, UL2353	UL
	Totoku Electric Co., Ltd	TIW-2 / TIW-2X / TIW-2LZ / TIW-2LZX / TIW-2SX / TIW-2S / TIW-3 / TIW-3X / TIW-3LZ / TIW-3LZX	130°C min.	UL 746A, UL2353	UL

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Clause	Requirement + Test	Result - Remark	Verdict

Transistor (Q1) (For PMC-12V050W1XX)	Interchangeable	Interchangeable	Min 800V, 6.2A	---	Tested in the unit.
Transistor (Q1) (For PMC-12V060W1NX)	Interchangeable	Interchangeable	Min 700V, 11A	---	Tested in the unit.
Bridging capacitors (CY3)	Murata	KX	Max. 2200pF, AC 250V, T125°C, Subclass Y1.	VDE0565 / IEC/EN60384-14: 2005	VDE, FI
	Matsushita	NS-A	Max. 2200pF, AC 250V, T125°C, Subclass Y1.	VDE0565 / IEC/EN60384-14: 2005	VDE, FI
	Walsin	AH	Max. 2200pF, AC 250V, T125°C, Subclass Y1.	VDE0565 / IEC/EN60384-14: 2005	VDE, FI
	TDK	CD	Max. 2200pF, AC 250V, T125°C, Subclass Y1.	VDE0565 / IEC/EN60384-14: 2005	VDE, FI
Optocoupler (IC2, IC3) (For PMC-12V050W1XX	NEC Corp	PS2561BL1-1	Dti. > 0.4mm, Ext.cr. >7mm, Int.cr.> 4mm. Isolation 3000Vac T110°C.	IEC/EN60950-1	VDE, FI
	Toshiba Corp	TLP781F	Dti. ≥ 0.4mm, Ext.cr. ≥ 8mm, Int.cr. ≥ 8mm. Isolation 3000Vac min., 100°C min.	IEC/EN 60950-1	VDE, BSI
	Vishay Semiconductor GMBH	TCET1113G	Dti.= 0.7mm, Ext.cr.=8.1mm, Int.cr.= 4.3mm. Isolation 3000Vac min., 100°C min.	IEC/EN 60950-1	VDE, FI
	Vishay Semiconductor GMBH	SFH617A (System H or J)	Dti.= 0.5mm, Ext.cr.=8.2mm, Int.cr.= 4.9mm. Isolation 3000Vac min., 100°C min.	IEC/EN 60950-1	VDE, FI

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Clause	Requirement + Test	Result - Remark	Verdict

	Sharp Corp Electronic Component Group	PC123Y Series	Dti. > 0.4mm, Ext.cr. > 8mm, Int.cr.> 4mm. T110°C.	IEC/EN60950-1	VDE, FI
	Vishay Semiconductor GMBH	TCET1103(G)D	Dti.= 0.7mm, Ext.cr.= 8.1mm, Int.cr.= 4.3mm. Isolation 3000Vac min., 100°C min.	IEC/EN 60950-1	VDE, FI
	Everlight Electronics Co Ltd	EL816 series	Dti => 0.4mm, ext. cr. => 8.0mm, Isolation 3000Vac, Min., 100°C min., Thermal cycling test	IEC/EN 60590-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Everlight Electronics Co., Ltd	EL101 series	Dti => 0.4mm, ext.cr. => 7.6mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	EN 60950-1, EN60335-1, EN 60065, DIN EN 60747-5-2, UL 1577	VDE, FI, UL, CQC
	Everlight Electronics Co., Ltd	EL357N series	Dti.≥0.4mm, Ext.cr. ≥5mm, Thermal cycling test, Isolation 3000Vac min., 100°C min.	IEC/EN 60950-1, UL1577, EN 60747-5-2	N, D, VDE, UL
	Renesas Electronics Corporation	PS2381-1	Dti = 0.54mm, ext.cr. > 7.87mm, Thermal cycling tested, Isolation 3000Vac min.,100°C min.	EN 60950-1, EN 60065, DIN EN 60747-5-2, UL 1577	VDE, FI, UL, CQC
	Cosmo Electronics Corp	KPC357NT series	Dti => 0.4mm, Ext. cr >7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC

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Clause	Requirement + Test	Result - Remark	Verdict

	Everlight Electronics Co Ltd	EL817 series	Dti => 0.4mm, ext. cr => 8.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics	PS2561BL1-1 / PS2561DL1-1	Dti > 0.4mm, Ext creepage > 7.0mm, Isolation 3000Vac min. 100°C min., Thermal cyclin test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics Corporation	PS2561L-1 series	Dti > 0.4mm, Ext creepage > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics Corporation	PS2561L2-1 series	Dti > 0.4mm, Ext creepage > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics Corporation	PS2561AL2-1 series	Dti > 0.4mm, Ext creepage > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics Corporation	PS2561AL-1 series	Dti > 0.4mm, Ext creepage > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60590-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC

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Clause	Requirement + Test	Result - Remark	Verdict

	Renesas Electronics Corporation	PS2761B-1 series	Dti > 0.4mm, Ext creepage > 5.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, BSI, CQC
	Renesas Electronics Corporation	PS2861B-1 series	Dti > 0.4mm, Ext creepage > 5.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	SEMKO, VDE, CQC
	Cosmo Electronics Corp	K1010 series	Dti =>0.4mm, Ext creepage > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
Optocoupler (IC2, IC3) (For PMC-12V060W1NX)	Everlight Electronics Co Ltd	EL816 series	Dti => 0.4mm, ext. cr. => 8.0mm, Isolation 3000Vac, Min., 100°C min., Thermal cycling test	IEC/EN 60590-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Everlight Electronics Co., Ltd	EL101 series	Dti => 0.4mm, ext.cr. => 7.6mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	EN 60950-1, EN60335-1, EN 60065, DIN EN 60747-5-2, UL 1577	VDE, FI, UL, CQC
	Everlight Electronics Co., Ltd	EL357N series	Dti.≥0.4mm, Ext.cr. ≥5mm, Thermal cycling test, Isolation 3000Vac min., 100°C min.	IEC/EN 60950-1, UL1577, EN 60747-5-2	N, D, VDE, UL

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

	Renesas Electronics Corporation	PS2381-1	Dti = 0.54mm, ext.cr. > 7.87mm, Thermal cycling tested, Isolation 3000Vac min.,100°C min.	EN 60950-1, EN 60065, DIN EN 60747-5-2, UL 1577	VDE, FI, UL, CQC
	Cosmo Electronics Corp	KPC357NT series	Dti => 0.4mm, Ext. cr >7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Everlight Electronics Co Ltd	EL817 series	Dti => 0.4mm, ext. cr => 8.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics	PS2561BL1-1 / PS2561DL1-1	Dti > 0.4mm, Ext creepage > 7.0mm, Isolation 3000Vac min. 100°C min., Thermal cyclin test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics Corporation	PS2561L-1 series	Dti > 0.4mm, Ext creepage > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics Corporation	PS2561L2-1 series	Dti > 0.4mm, Ext creepage > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC

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

	Renesas Electronics Corporation	PS2561AL2-1 series	Dti > 0.4mm, Ext creepage > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics Corporation	PS2561AL-1 series	Dti > 0.4mm, Ext creepage > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60590-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC
	Renesas Electronics Corporation	PS2761B-1 series	Dti > 0.4mm, Ext creepage > 5.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, BSI, CQC
	Renesas Electronics Corporation	PS2861B-1 series	Dti > 0.4mm, Ext creepage > 5.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	SEMKO, VDE, CQC
	Cosmo Electronics Corp	K1010 series	Dti =>0.4mm, Ext creepage > 7.0mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	FIMKO, VDE, CQC

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

	Sharp Corp Electronic Components And Devices Group	PC123 series	Dti = 0.9mm, Ext creepage = 8.3mm, Isolation 3000Vac min., 100°C min., Thermal cycling test	IEC/EN 60950-1: 2005, VDE 0884 GB4943.1-2011	SEMKO, VDE, CQC
Thermistor (NTC601)	Uppermost	TDC05D410	100KΩ	---	UL
	Thinking	TTC-104	100KΩ	---	UL
Insulator sheet between Q1 and chassis.	Bergquist	SIL- PAD K-4	VTM-0, 130°C Min.	UL94	UL
Tube for basic insulation	Interchangeable	Interchangeable	VW-1, T105°C min.	UL94	UL
PCB	Interchangeable	Interchangeable	Minimum Flammability V-0, 130°C	UL94, UL796	UL
Supplementary information: [1)] Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

1.5.1	TABLE: Opto Electronic Devices	P
Manufacturer ..... :	See above.	
Type..... :	See above.	
Separately tested..... :	See above.	
Bridging insulation ..... :	Reinforced.	
External creepage distance..... :	See above.	
Internal creepage distance ..... :	See above.	
Distance through insulation ..... :	See above.	
Tested under the following conditions ..... :	RI.	
Input..... :	See above.	
Output..... :	See above.	
supplementary information		

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

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V)/ Freq (Hz)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
Model: PMC-12V050W1XX						
264/50	0.51	-	59.3	F1	0.51	Load condition:12Vdc/4.17A
240/50	0.54	1.3	59.0	F1	0.54	Load condition:12Vdc/4.17A
100/50	1.03	1.3	60.9	F1	1.03	Load condition:12Vdc/4.17A
90/50	1.12	-	61.5	F1	1.12	Load condition:12Vdc/4.17A
264/60	0.51	-	59.3	F1	0.51	Load condition:12Vdc/4.17A
240/60	0.54	1.3	59.2	F1	0.54	Load condition:12Vdc/4.17A
100/60	1.04	1.3	60.9	F1	1.04	Load condition:12Vdc/4.17A
90/60	1.13	-	61.6	F1	1.13	Load condition:12Vdc/4.17A
264/50	0.51	-	59.1	F1	0.51	Load condition:14Vdc/3.572A
240/50	0.54	1.3	58.7	F1	0.54	Load condition:14Vdc/3.572A
100/50	1.02	1.3	60.5	F1	1.02	Load condition:14Vdc/3.572A
90/50	1.11	-	61.1	F1	1.11	Load condition:14Vdc/3.572A
264/60	0.51	-	59.1	F1	0.51	Load condition:14Vdc/3.572A
240/60	0.54	1.3	58.8	F1	0.54	Load condition:14Vdc/3.572A
100/60	1.04	1.3	60.4	F1	1.04	Load condition:14Vdc/3.572A
90/60	1.12	-	61.1	F1	1.12	Load condition:14Vdc/3.572A
375	0.16	-	58.1	F1	0.16	Load condition:12Vdc/4.17A at DC input
250	0.23	1.3	57.0	F1	0.23	Load condition:12Vdc/4.17A at DC input
125	0.48	1.3	59.9	F1	0.48	Load condition:12Vdc/4.17A at DC input
100	0.6	-	59.6	F1	0.6	Load condition:12Vdc/4.17A at DC input
375	0.15	-	57.7	F1	0.15	Load condition:14Vdc/3.572A at DC input
250	0.22	1.3	56.0	F1	0.22	Load condition:14Vdc/3.572A at DC input
125	0.47	1.3	58.7	F1	0.47	Load condition:14Vdc/3.572A at DC input
100	0.59	-	58.9	F1	0.59	Load condition:14Vdc/3.572A at DC input

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

Model: PMC-12V060W1NX						
264/50	0.65	-	69.8	F1	0.65	Load condition:12Vdc/5A
240/50	0.69	1.65	69.9	F1	0.69	Load condition:12Vdc/5A
100/50	1.25	1.65	71.0	F1	1.25	Load condition:12Vdc/5A
90/50	1.36	-	72.1	F1	1.36	Load condition:12Vdc/5A
264/60	0.66	-	70.0	F1	0.66	Load condition:12Vdc/5A
240/60	0.70	1.65	70.0	F1	0.70	Load condition:12Vdc/5A
100/60	1.28	1.65	71.4	F1	1.28	Load condition:12Vdc/5A
90/60	1.39	-	72.1	F1	1.39	Load condition:12Vdc/5A
264/50	0.65	-	69.7	F1	0.65	Load condition:14Vdc/3.75A
240/50	0.69	1.65	69.7	F1	0.69	Load condition:14Vdc/3.75A
100/50	1.24	1.65	71.0	F1	1.24	Load condition:14Vdc/3.75A
90/50	1.35	-	71.6	F1	1.35	Load condition:14Vdc/3.75A
264/60	0.66	-	70.0	F1	0.66	Load condition:14Vdc/3.75A
240/60	0.71	1.65	70.0	F1	0.71	Load condition:14Vdc/3.75A
100/60	1.28	1.65	70.9	F1	1.28	Load condition:14Vdc/3.75A
90/60	1.38	-	71.6	F1	1.38	Load condition:14Vdc/3.75A
375	0.19	-	69.75	F1	0.19	Load condition:12Vdc/5A at DC input
250	0.28	1.65	69.25	F1	0.28	Load condition:12Vdc/5A at DC input
125	0.56	1.65	70.38	F1	0.56	Load condition:12Vdc/5A at DC input
106.25	0.72	-	71.7	F1	0.72	Load condition:12Vdc/5A at DC input
375	0.19	-	69.75	F1	0.19	Load condition:14Vdc/3.75A at DC input
250	0.28	1.65	68.75	F1	0.28	Load condition:14Vdc/3.75A at DC input
125	0.56	1.65	69.63	F1	0.56	Load condition:14Vdc/3.75A at DC input
106.25	0.66	-	70.13	F1	0.66	Load condition:14Vdc/3.75A at DC input

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

Supplementary information:						

2.1.1.5 c) 1)	**TABLE: max. V, A, VA test**	P

Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)
Model: PMC-12V050W1XX, Test voltage 264V, 50Hz				
11V[1.)]	--	11.2	6.55	73.2
12V	4.17	12.3	6.32	77.1
14V[1.)]	--	14.5	5.52	80.0
Model: PMC-12V060W1NX, Test voltage 264V, 60Hz				
12V	5	12.26	6.80	82.9
14V	-	14.57	6.42	87.89
supplementary information:				
1.) Tested on customer request				

2.1.1.5 c) 2)	**TABLE: stored energy**	P

Capacitance C (µF)	Voltage U (V)	Energy E (J)
5400.47	7.5	0.16
supplementary information:		
C350, C351 = 2200µF, C353 = 1000µFand C355 = 0.47µF.		

2.2	**TABLE: evaluation of voltage limiting components in SELV circuits**	P

Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components
	V peak	V d.c.	
Model: PMC-12V050W1XX			
T1: Pin X1 to GND	62.4	-	-
: after D350 to GND	15.5	-	D350

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

Model: PMC-12V060W1NX			
T1: Pin X1 to SGND	75.2	-	-
: after D350 to GND	-	12.9	D350
T1[1)]: Pin X1 to SGND	59.6	-	-
: after D350 to GND	-	12.5	D350

Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)
Model: PMC-12V050W1XX	
D350 s-c	14.8V at output +12V to com.
Model: PMC-12V060W1NX	
D350 s-c.	12.5V at Output +12V to com.
supplementary information:	
Input voltage 264V, 50Hz, loading A, 1) Tested with no load.	

2.5	**TABLE: Limited power sources**	P

Circuit output tested: 12V

Note: Measured Uoc (V) with all load circuits disconnected: 12.07V

Components	Sample No.	Uoc (V)	I_{sc} (A)		VA	
			Meas.	Limit	Meas.	Limit
R6 s-c	P120601NAS 0L13060027	12.05	7.06	≤ 8	82.66	≤100
R25 s-c	P120601NAS 0L13060027	12.05	3.0	≤ 8	14.0	≤100
R4A s-c	P120601NAS 0L13060027	12.05	7.4	≤ 8	86.51	≤100
R3 s-c	P120601NAS 0L13060027	--[1.)]	-	-	-	-
R515 s-c	P120601NAS 0L13060027	12.05	6.27	≤ 8	73.84	≤100
IC2 (pin 1-2) s-c	P120601NAS 0L13060027	12.05	2.0	≤ 8	8.2	≤100

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

IC2 (pin 3-4) s-c	P120601NAS 0L13060027	--[1.)]	-	-	-	-
IC3 (pin 1-2) s-c	P120601NAS 0L13060027	12.05	6.29	≤ 8	75.8	≤100
IC3 (pin 3-4) s-c	P120601NAS 0L13060027	12.05	0.08	≤ 8	0.02	≤100
IC510 (A-K) s-c	P120601NAS 0L13060027	12.05	0.7	≤ 8	0.95	≤100
IC510 (A-G) s-c	P120601NAS 0L13060027	12.05	2.9	≤ 8	16.5	≤100
IC510 (G-K) s-c	P120601NAS 0L13060027	12.05	1.4	≤ 8	2.6	≤100
IC2 (pin 1) o-c	P120601NAS 0L13060027	12.07	2.8	≤ 8	5.3	≤100
IC2 (pin 3) o-c	P120601NAS 0L13060027	12.07	2.8	≤ 8	14.0	≤100
IC3 (pin 1) o-c	P120601NAS 0L13060027	12.07	6.27	≤ 8	73.81	≤100
IC3 (pin 3) o-c	P120601NAS 0L13060027	12.07	2.8	≤ 8	15.0	≤100
R6 o-c	P120601NAS 0L13060028	12.07	2.8	≤ 8	16.0	≤100
R25 o-c	P120601NAS 0L13060028	12.07	6.95	≤ 8	81.74	≤100
R4A o-c	P120601NAS 0L13060028	--[1.)]	-	-	-	-
R3 o-c	P120601NAS 0L13060028	--[1.)]	-	-	-	-
R515 o-c	P120601NAS 0L13060028	12.07	6.27	≤ 8	73.81	≤100
IC510 (pin A) o-c	P120601NAS 0L13060028	12.07	2.9	≤ 8	16.0	≤100
IC510 (pin K) o-c	P120601NAS 0L13060028	12.07	2.9	≤ 8	15.0	≤100
IC510 (pin G) o-c	P120601NAS 0L13060028	12.07	2.9	≤ 8	16.0	≤100
[3)] IC2 (pin 1-2) s-c	P120601NAS 0L13060028	14.58	5.87	≤ 8	83.7	≤100
[3)] R6 s-c	P120601NAS 0L13060028	14.58	5.87	≤ 8	83.7	≤100
[3)] R4A s-c	P120601NAS 0L13060028	14.58	5.8	≤ 8	82.5	≤100
[3)] R3 s-c	P120601NAS 0L13060028	--[1.)]	-	-	-	-

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Clause	Requirement + Test	Result - Remark	Verdict

3) IC510 (G-K) s-c	P120601NAS 0L13060028	14.60	1.2	≤ 8	4.1	≤100
3) R515 o-c	P120601NAS 0L13060028	14.60	5.4	≤ 8	76.5	≤100
3) IC3 (pin 1) o-c	P120601NAS 0L13060028	14.60	5.4	≤ 8	76.5	≤100
3) R25 o-c	P120601NAS 0L13060028	14.60	6.04	≤ 8	86.5	≤100

supplementary information:

1.) Unit shutdown

2.) Test voltage 264V, 50Hz

3.) Test at output 14V

2.10.2	**Table: working voltage measurement**	P

Location	RMS voltage (V)	Peak voltage (V)	Comments
Model: PMC-12V050W1XX, Test voltage 240V, 60Hz			
T1 Pin 1 to Pin X1	**288**	**590**	Highest RMS value and peak value
T1 Pin 1 to Pin X2	247	570	
T1 Pin 1 to Pin PE	260	590	
T1 Pin 2 to Pin X1	211	360	
T1 Pin 2 to Pin X2	212	410	
T1 Pin 2 to Pin PE	211	360	
T1 Pin 3 to Pin X1	217	450	
T1 Pin 3 to Pin X2	212	430	
T1 Pin 3 to Pin PE	217	450	
T1 Pin 4 to Pin X1	212	360	
T1 Pin 4 to Pin X2	214	375	
T1 Pin 4 to Pin PE	212	360	
T1 Pin 5 to Pin X1	215	440	
T1 Pin 5 to Pin X2	212	380	
T1 Pin 5 to Pin PE	215	440	
Model: PMC-12V060W1NX, Test voltage 240V, 50Hz			
T1 Pin 1 to Pin X1	264	532	
T1 Pin 1 to Pin X2	280	**552**	Highest peak value

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Clause	Requirement + Test	Result - Remark	Verdict

T1 Pin 1 to PE	280	544	
T1 Pin 2 to Pin X1	223	412	
T1 Pin 2 to Pin X2	220	364	
T1 Pin 2 to PE	222	368	
T1 Pin 3 to Pin X1	222	412	
T1 Pin 3 to Pin X2	226	424	
T1 Pin 3 to PE	227	426	
T1 Pin 4 to Pin X1	226	388	
T1 Pin 4 to Pin X2	224	372	
T1 Pin 4 to PE	225	372	
T1 Pin 5 to Pin X1	223	424	
T1 Pin 5 to Pin X2	226	476	
T1 Pin 5 to PE	228	472	
T1 Pin 1 to Pin X1[1)]	281	448	
T1 Pin 1 to Pin X2[1)]	293	452	
T1 Pin 1 to PE[1)]	**294**	462	Highest RMS value
T1 Pin 2 to Pin X1[1)]	255	314	
T1 Pin 2 to Pin X2[1)]	252	280	
T1 Pin 2 to PE[1)]	253	280	
T1 Pin 3 to Pin X1[1)]	253	318	
T1 Pin 3 to Pin X2[1)]	257	334	
T1 Pin 3 to PE[1)]	256	336	
T1 Pin 4 to Pin X1[1)]	23	67	
T1 Pin 4 to Pin X2[1)]	3	11	
T1 Pin 4 to PE[1)]	3	11	
T1 Pin 5 to Pin X1[1)]	15	68	
T1 Pin 5 to Pin X2[1)]	35	104	
T1 Pin 5 to PE[1)]	35	102	
supplementary information:			
[1)] Test voltage DC 250V, loading A.			

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

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements					P
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Functional:						
Line to neutral (before fuse F1)	420	250	1.8	3.6	2.5	3.6
Under fuse F1	420	250	1.8	4.0	2.5	4.0
Basic / supplementary:						
C1 to enclosure	420	250	2.3	4.9	2.5	4.9
LF1 to enclosure	420	250	2.3	6.8	2.5	6.8
F1 to enclosure	420	250	2.3	2.9	2.5	2.9
CY4 trace to earth trace	420	250	2.3	6.0	2.5	6.0
CY350, CY351 trace to earth trace	420	250	2.3	6.0	2.5	6.0
Neutral trace to earth trace	420	250	2.3	3.4	2.5	3.4
Reinforced:						
Primary C12 to secondary pin of IC2	420	250	4.6	7.5	5.0	7.5
At T1 from primary to secondary near ZD6	590	294	5.3	8.8	5.8	8.8
T1 primary core secondary D350	590	294	5.3	8.1	5.8	8.1
T1 from primary to secondary near ZD6	590	294	5.3	8.1	5.8	8.1
At IC2, IC3	420	250	4.6	7.9	5.0	7.9
At CY3	420	250	4.6	7.7	5.0	7.7

Supplementary information:

1) Functional insulation short circuit tests, see sub-clause 5.3.4 c).
2) Glued components: Z1, CY3, CY4, R3.
3) Tubed components: CY3, CY4, C1.
4) Metal clip to fix Q1 insulated with tubing of 15.0mm
5) The equipment is operated up to 3000m above sea level as declared by manufacturer. Clearances have been evaluated according to IEC 60664-1:1992 table A.2 with a multiplication factor of 1.14.

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Clause	Requirement + Test	Result - Remark	Verdict

2.10.5	TABLE: Distance through insulation measurements					P
Distance through insulation (DTI) at/of:		U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Optocoupler		420	250	3000	0.4	1.)
Tubing		420	250	3000	0.4	1.)
Supplementary information: 1.) see appended 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.	
Max. current during normal condition										
Max. current during fault condition										
Test results:										Verdict
- Chemical leaks										
- Explosion of the battery										
- Emission of flame or expulsion of molten metal										
- Electric strength tests of equipment after completion of tests										
Supplementary information:										

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

4.3.8	TABLE: Batteries	N/A

Battery category..... : (Lithium, NiMh, NiCad, Lithium Ion …)
Manufacturer ..... :
Type / model..... :
Voltage ..... :
Capacity..... : mAh
Tested and Certified by (incl. Ref. No.) ..... :
Circuit protection diagram:

MARKINGS AND INSTRUCTIONS (1.7.13)	
Location of replaceable battery	
Language(s) ……..:	
Close to the battery ……..:	
In the servicing instructions ……..:	
In the operating instructions ……..:	

4.5	TABLE: Thermal requirements					P
	Supply voltage (V) .....:	264V/ 60Hz	90V/ 60Hz	DC375V	DC100V	—
	Ambient T_{min} (°C) .....:	--	--	--	--	—
	Ambient T_{max} (°C) .....:	See below	See below	See below	See below	—
Maximum measured temperature T of part/at.....: **Model: PMC-12V050W1XX** **Mounting location 1** **Loading A.**		T (°C)	T (°C)	T (°C)	T (°C)	Allowed T_{max} (°C)
Ambient		51.0	50.9	51.2	51.2	--
T1 wire (primary)		90.5	87.1	89.7	85.5	110
T1 wire (secondary)		89.3	86.1	88.3	84.3	110
T1 core		86.2	83.3	85.8	81.9	110

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Clause	Requirement + Test	Result - Remark	Verdict

FL1	68.0	85.5	63.0	69.4	120
L350	70.2	70.7	69.7	69.9	120
IC2	72.7	73.8	71.5	71.3	100
IC3	76.0	75.9	74.7	73.6	100
CX1 and FL1	61.8	66.5	60.1	61.2	100
CY1	71.1	81.5	67.1	75.0	125
CY2	71.6	81.6	67.8	75.3	125
CY3	67.7	69.7	65.7	66.5	125
CY4	71.5	74.2	69.0	71.2	125
CY350	65.8	66.7	64.9	65.2	125
CY351	65.7	66.9	64.4	64.8	125
C1	73.3	75.9	70.5	69.9	105
C12 near T1	77.1	76.6	75.4	73.9	105
C350	67.8	68.0	67.6	67.6	105
C351	71.3	71.4	70.7	70.5	105
F1 body	60.4	64.8	58.8	60.2	--
NTC1 near PWB	80.6	92.6	72.6	80.9	130 for PWB
BD1	78.1	94.1	71.6	85.1	130 for PWB
Q1 near PWB	73.4	75.7	72.3	75.1	130 for PWB
D350	72.1	72.7	71.3	71.7	130 for PWB
ZD3	86.0	87.3	84.5	85.2	130 for PWB
CN1 at L terminal	56.9	58.6	56.5	57.0	90
CN1 at +V terminal	64.9	65.4	64.6	64.8	90
External enclosure near Q1	65.0	66.2	63.7	64.7	--[4.)]
External enclosure near D350	63.8	64.7	63.8	64.6	--[4.)]

Supplementary information:

Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)	Insulation class

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

1) The temperatures were measured under worst normal mode defined in 1.2.2.1 and as described in sub-clause 1.6.2 and at voltages as described above.

2) The installation instruction define the Tma at 50°C.

3) Winding components (providing safety isolation):

- Class (B) 130: Tmax = 120°C –10°C =110°C

4) For building-in equipment, to be evaluated in the final system. Data for reference only.

4.5	**TABLE: Thermal requirements**					P
	Supply voltage (V) .....:	264V/ 60Hz	90V/ 60Hz	DC375V	DC100V	—
	Ambient T_{min} (°C) .....:	--	--	--	--	—
	Ambient T_{max} (°C) .....:	See below	See below	See below	See below	—
Maximum measured temperature T of part/at.....: **Model: PMC-12V050W1XX** **Mounting location 2** **Loading A.**		T (°C)	T (°C)	T (°C)	T (°C)	Allowed T_{max} (°C)
Ambient		51.2	50.9	51.4	51.1	--
T1 wire (primary)		94.0	91.9	93.4	90.2	110
T1 wire (secondary)		94.4	91.6	94.0	90.2	110
T1 core		91.8	88.7	91.1	87.8	110
FL1		71.3	90.0	66.5	73.8	120
L350		74.8	75.9	74.5	74.6	120
IC2		76.9	79.1	75.7	76.3	100
IC3		81.3	81.7	80.3	79.4	100
CX1 near FL1		65.1	70.5	64.0	65.5	100
CY1		73.3	84.7	68.7	78.9	125
CY2		74.5	86.2	70.9	80.1	125
CY3		72.4	75.7	71.3	72.4	125
CY4		69.4	72.8	68.9	72.2	125
CY350		70.2	71.6	69.7	70.2	125
CY351		70.4	72.2	69.7	70.4	125
C1		76.2	77.3	71.1	71.9	105
C12 near T1		83.0	83.1	82.0	80.6	105
C350		72.3	72.9	72.0	72.1	105

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Clause	Requirement + Test	Result - Remark	Verdict

C351	76.2	76.8	75.8	75.9	105
F1 body	63.7	68.6	62.6	64.2	--
NTC1 near PWB	78.3	88.6	72.4	80.9	130 for PWB
BD1	77.2	91.5	72.5	85.9	130 for PWB
Q1 near PWB	75.2	77.9	74.9	78.4	130 for PWB
D350	75.1	75.8	74.8	75.4	130 for PWB
ZD3	84.7	87.9	83.9	86.7	130 for PWB
CN1 at L terminal	60.8	62.6	60.4	61.1	90
CN1 at +V terminal	68.8	69.7	68.4	68.8	90
External enclosure near Q1	66.9	68.3	66.5	67.8	--[4.)]
External enclosure near D350	67.0	68.1	66.7	67.6	--[4.)]

Supplementary information:

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:

1) The temperatures were measured under worst normal mode defined in 1.2.2.1 and as described in sub-clause 1.6.2 and at voltages as described above.

2) The installation instruction define the Tma at 50°C.

3) Winding components (providing safety isolation):

- Class (B) 130: Tmax = 120°C –10°C =110°C

4) For building-in equipment, to be evaluated in the final system. Data for reference only.

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Thermal requirements					P
	Supply voltage (V) .....:	264V/ 60Hz	90V/ 60Hz	DC375V	DC100V	—
	Ambient T_{min} (°C) .....:	--	--	--	--	—
	Ambient T_{max} (°C) .....:	See below	See below	See below	See below	—
Maximum measured temperature T of part/at.....: **Model: PMC-12V050W1XX** **Mounting location 3** **Loading A.**		T (°C)	T (°C)	T (°C)	T (°C)	Allowed T_{max} (°C)
Ambient		50.8	51.0	50.9	51.1	--
T1 wire (primary)		87.8	84.1	87.6	83.5	110
T1 wire (secondary)		86.2	82.8	86.1	82.2	110
T1 core		83.8	80.5	83.6	79.9	110
FL1		64.5	82.0	60.3	66.5	120
L350		67.8	68.1	67.6	67.6	120
IC2		69.3	70.2	68.7	68.6	100
IC3		72.9	72.6	72.5	71.3	100
CX1 near FL1		58.8	63.4	58.0	58.9	100
CY1		67.9	78.9	64.9	73.0	125
CY2		68.2	78.5	65.6	73.2	125
CY3		64.5	66.4	63.8	64.5	125
CY4		67.9	70.4	67.6	70.0	125
CY350		62.5	63.3	62.4	62.6	125
CY351		62.2	63.3	62.0	62.3	125
C1		69.2	71.7	68.0	67.2	105
C12 near T1		73.8	73.2	73.4	71.9	105
C350		66.2	66.2	66.1	66.1	105
C351		68.9	68.9	68.8	68.6	105
F1 body		57.6	61.7	56.7	57.9	--
NTC1 near PWB		76.9	89.2	70.1	79.6	130 for PWB
BD1		74.5	90.8	69.2	84.0	130 for PWB
Q1 near PWB		70.4	72.4	70.3	73.1	130 for PWB
D350		69.1	69.5	69.0	69.4	130 for PWB
ZD3		82.4	83.4	82.0	82.8	130 for PWB

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Clause	Requirement + Test	Result - Remark	Verdict

CN1 at L terminal	55.1	56.6	54.9	55.4	90
CN1 at +V terminal	62.5	62.9	62.3	62.6	90
External enclosure near Q1	62.3	63.4	62.1	63.2	--4.)
External enclosure near D350	61.5	62.3	61.3	62.1	--4.)

Supplementary information:

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:

1) The temperatures were measured under worst normal mode defined in 1.2.2.1 and as described in sub-clause 1.6.2 and at voltages as described above.

2) The installation instruction define the Tma at 50°C.

3) Winding components (providing safety isolation):

- Class (B) 130: Tmax = 120°C –10°C =110°C

4) For building-in equipment, to be evaluated in the final system. Data for reference only.

4.5	TABLE: Thermal requirements					P
	Supply voltage (V) .....:	264V/ 60Hz	90V/ 60Hz	DC375V	DC100V	—
	Ambient T_{min} (°C) .....:	--	--	--	--	—
	Ambient T_{max} (°C) .....:	See below	See below	See below	See below	—
Maximum measured temperature T of part/at.....: **Model: PMC-12V050W1XX** **Mounting location 4** **Loading A.**		T (°C)	T (°C)	T (°C)	T (°C)	Allowed T_{max} (°C)
Ambient		50.9	51.1	51.1	51.1	--
T1 wire (primary)		90.2	86.8	89.5	85.5	110
T1 wire (secondary)		89.1	85.8	88.1	84.3	110
T1 core		85.8	82.8	85.6	81.8	110
FL1		67.7	85.1	62.8	69.3	120
L350		70.0	70.6	69.7	69.9	120
IC2		72.4	73.3	71.3	71.1	100
IC3		75.7	75.5	74.5	73.5	100

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Clause	Requirement + Test	Result - Remark	Verdict

CX1 near FL1	61.6	66.1	60.0	61.0	100
CY1	70.8	81.1	66.9	75.0	125
CY2	71.2	81.2	67.6	75.2	125
CY3	67.3	69.3	65.6	66.3	125
CY4	70.9	73.6	68.9	71.2	125
CY350	65.6	66.4	64.8	65.2	125
CY351	65.4	66.5	64.2	64.7	125
C1	72.8	75.4	70.3	68.7	105
C12 near T1	76.7	76.2	75.4	73.9	105
C350	67.7	67.8	67.7	67.6	105
C351	71.1	71.1	70.6	70.5	105
F1 body	60.2	64.4	58.8	60.0	--
NTC1 near PWB	80.2	92.1	72.4	80.7	130 for PWB
BD1	77.8	93.8	71.4	85.1	130 for PWB
Q1 near PWB	72.8	75.0	72.1	74.9	130 for PWB
D350	71.7	72.2	71.0	71.5	130 for PWB
ZD3	85.5	86.7	84.3	85.1	130 for PWB
CN1 at L terminal	57.1	58.4	56.6	57.2	90
CN1 at +V terminal	65.0	65.5	64.6	64.9	90
External enclosure near Q1	64.5	65.6	63.4	64.5	--[4.)]
External enclosure near D350	63.4	64.3	63.5	64.4	--[4.)]

Supplementary information:

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:

1) The temperatures were measured under worst normal mode defined in 1.2.2.1 and as described in sub-clause 1.6.2 and at voltages as described above.

2) The installation instruction define the Tma at 50°C.

3) Winding components (providing safety isolation):

- Class (B) 130: Tmax = 120°C –10°C =110°C

4) For building-in equipment, to be evaluated in the final system. Data for reference only.

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4.5	TABLE: Thermal requirements					P
	Supply voltage (V) .....:	264V/ 60Hz	90V/ 60Hz	DC375V	DC100V	—
	Ambient T_{min} (°C) .....:	--	--	--	--	—
	Ambient T_{max} (°C) .....:	See below	See below	See below	See below	—
Maximum measured temperature T of part/at.....: **Model: PMC-12V050W1XX** **Mounting location 5** **Loading A.**		T (°C)	T (°C)	T (°C)	T (°C)	Allowed T_{max} (°C)
Ambient		51.3	51.3	50.9	51.0	--
T1 wire (primary)		92.6	90.4	89.3	86.2	110
T1 wire (secondary)		93.7	90.8	90.2	86.3	110
T1 core		90.3	87.3	88.3	84.4	110
FL1		70.5	89.4	63.0	70.3	120
L350		74.7	75.7	71.7	71.7	120
IC2		76.4	78.4	72.2	72.7	100
IC3		80.6	80.9	76.7	75.7	100
CX1 near FL1		64.4	70.0	60.6	61.9	100
CY1		72.3	84.0	65.3	73.9	125
CY2		73.5	85.4	67.0	75.9	125
CY3		72.1	75.2	67.3	68.6	125
CY4		67.5	70.5	63.4	65.8	125
CY350		69.7	71.0	66.5	66.9	125
CY351		69.6	71.4	66.1	66.7	125
C1		71.9	75.8	66.6	67.2	105
C12 near T1		82.4	82.4	78.3	77.0	105
C350		72.4	72.9	69.3	69.1	105
C351		76.0	76.3	72.8	72.4	105
F1 body		63.1	68.1	59.6	61.2	--
NTC1 near PWB		77.2	87.7	68.1	76.1	130 for PWB
BD1		76.1	90.7	67.9	80.7	130 for PWB
Q1 near PWB		72.6	74.9	69.6	72.4	130 for PWB
D350		73.9	74.5	71.3	71.5	130 for PWB
ZD3		82.8	85.8	79.1	81.4	130 for PWB

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Clause	Requirement + Test	Result - Remark	Verdict

CN1 at L terminal	60.5	62.7	57.9	58.6	90
CN1 at +V terminal	68.6	69.6	66.1	66.4	90
External enclosure near Q1	64.6	65.8	61.9	62.8	--4.)
External enclosure near D350	65.5	66.6	63.0	63.8	--4.)

Supplementary information:

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:

1) The temperatures were measured under worst normal mode defined in 1.2.2.1 and as described in sub-clause 1.6.2 and at voltages as described above.

2) The installation instruction define the Tma at 50°C.

3) Winding components (providing safety isolation):

- Class (B) 130: Tmax = 120°C –10°C =110°C

4) For building-in equipment, to be evaluated in the final system. Data for reference only.

4.5	**TABLE: Thermal requirements**					P
	Supply voltage (V) .....:	264V/ 60Hz	90V/ 60Hz	DC375V	DC100V	—
	Ambient T_{min} (°C) .....:	--	--	--	--	—
	Ambient T_{max} (°C) .....:	See below	See below	See below	See below	—
Maximum measured temperature T of part/at.....: **Model: PMC-12V050W1XX** **Mounting location 6** **Loading A.**		T (°C)	T (°C)	T (°C)	T (°C)	Allowed T_{max} (°C)
Ambient		50.9	51.0	50.7	51.0	--
T1 wire (primary)		87.8	84.2	87.6	83.5	110
T1 wire (secondary)		86.3	82.8	86.0	82.2	110
T1 core		83.7	80.5	83.5	79.9	110
FL1		64.6	81.6	60.1	66.4	120
L350		68.0	68.4	67.8	67.9	120
IC2		69.4	70.3	68.6	68.6	100
IC3		73.0	72.7	72.4	71.3	100

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Clause	Requirement + Test	Result - Remark	Verdict

CX1 near FL1	58.9	63.4	57.8	58.9	100
CY1	68.0	78.6	64.8	73.0	125
CY2	68.3	78.4	65.5	73.2	125
CY3	64.5	66.4	63.6	64.5	125
CY4	68.0	70.4	67.5	69.9	125
CY350	62.7	63.4	62.3	62.7	125
CY351	62.3	63.3	61.8	62.3	125
C1	69.3	71.7	67.9	67.2	105
C12 near T1	73.9	73.3	73.3	71.9	105
C350	66.3	66.3	66.2	66.3	105
C351	69.0	69.0	68.8	68.7	105
F1 body	57.9	61.8	56.6	57.9	--
NTC1 near PWB	76.9	89.0	70.0	79.6	130 for PWB
BD1	74.6	90.8	69.2	83.9	130 for PWB
Q1 near PWB	70.4	72.3	70.3	72.9	130 for PWB
D350	69.2	69.5	69.0	69.3	130 for PWB
ZD3	82.5	83.4	82.0	82.7	130 for PWB
CN1 at L terminal	55.3	56.7	55.0	55.4	90
CN1 at +V terminal	62.7	63.2	62.7	62.8	90
External enclosure near Q1	62.5	63.4	62.2	63.1	--[4.)]
External enclosure near D350	61.6	62.3	61.4	62.1	--[4.)]

Supplementary information:

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:

1) The temperatures were measured under worst normal mode defined in 1.2.2.1 and as described in sub-clause 1.6.2 and at voltages as described above.

2) The installation instruction define the Tma at 50°C.

3) Winding components (providing safety isolation):

- Class (B) 130: Tmax = 120°C –10°C =110°C

4) For building-in equipment, to be evaluated in the final system. Data for reference only.

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Clause	Requirement + Test	Result - Remark	Verdict

4.5	TABLE: Thermal requirements					P
	Supply voltage (V) .....:	264V/ 60Hz	90V/ 60Hz	264V/ 60Hz	90V/ 60Hz	—
	Ambient T_{min} (°C) .....:	--	--	--	--	—
	Ambient T_{max} (°C) .....:	See below	See below	See below	See below	—
Maximum measured temperature T of part/at.....: **Model: PMC-12V060W1NX** **a), b) (mounting location 4), c), d) (mounting location 5), Loading A.**		T (°C) a)	T (°C) b)	T (°C) c)	T (°C) d)	Allowed T_{max} (°C)
Ambient		50.7	51.2	51.0	50.9	-
T1 wire (primary)		84.4	83.3	88.4	87.5	110
T1 wire (secondary)		89.5	87.3	92.6	91.4	110
T1 core		89.6	86.2	95.3	92.0	110
FL1		62.8	76.8	65.4	84.0	120
L350		73.2	74.2	76.5	78.1	120
IC2		71.6	72.7	75.2	77.3	100
IC3		72.2	72.4	76.0	77.0	100
CX1 near F1		60.1	63.6	62.7	68.1	100
CY1		65.9	76.5	66.0	75.6	125
CY2		67.7	77.2	69.8	81.1	125
CY3		65.8	68.1	69.9	74.2	125
CY4		71.6	79.1	68.1	75.3	125
C1		70.0	75.4	69.3	76.2	105
C352		72.1	72.8	75.6	76.9	105
NTC1 near PWB		74.8	93.5	73.7	94.7	130 for PWB
BD1 near PWB		70.3	84.3	70.7	86.3	130 for PWB
Q1 near PWB		81.4	83.9	82.9	85.5	130 for PWB
D350 near PWB		74.1	74.7	76.7	78.0	130 for PWB
CN1 at L terminal		56.0	57.8	58.7	61.7	85
CN1 at +V terminal		65.1	66.1	67.2	68.5	85
External enclosure near Q1		58.0	58.9	60.2	61.8	--[3.)]

Supplementary information:

Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)	Insulation class

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

1. 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 above.
2. With a specified maximum ambient temperature and test temperature of 50°C, the maximum permitted temperatures are calculated as follows:
   Winding components (providing safety isolation):
   Class B Tmax = 120°C -10°C = 110°C
3. For building-in equipment, to be evaluated in the final system. Data for reference only.

4.5	**TABLE: Thermal requirements**					P
	Supply voltage (V) .....:	264V/ 60Hz	90V/ 60Hz	240V/ 60Hz	100V/ 60Hz	—
	Ambient T_{min} (°C) .....:	--	--	--	--	—
	Ambient T_{max} (°C) .....:	See below	See below	See below	See below	—
Maximum measured temperature T of part/at.....: **Model: PMC-12V060W1NX** **e), f) (mounting location 6),** **g), h) (mounting location 5),** **Loading A.**		T (°C) e)	T (°C) f)	T (°C) g)	T (°C) h)	Allowed T_{max} (°C)
Ambient		51.0	51.1	50.8	50.8	-
T1 wire (primary)		84.0	82.8	87.6	86.0	110
T1 wire (secondary)		89.0	86.5	91.2	89.4	110
T1 core		89.1	85.6	94.0	90.3	110
FL1		61.4	75.4	65.1	76.8	120
L350		72.3	73.3	76.2	77.0	120
IC2		70.3	71.4	74.5	75.5	100
IC3		71.0	71.2	75.7	75.7	100
CX1 near F1		58.6	62.3	61.6	65.0	100
CY1		64.7	75.0	65.6	72.1	125
CY2		66.7	75.9	69.3	77.2	125
CY3		64.6	66.9	69.3	71.7	125
CY4		71.8	78.2	67.5	72.7	125
C1		69.3	73.9	68.8	73.5	105
C352		72.1	73.0	75.1	75.5	105
NTC1 near PWB		73.2	92.1	73.5	88.2	130 for PWB

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Clause	Requirement + Test	Result - Remark	Verdict

BD1 near PWB	69.0	82.9	70.4	81.4	130 for PWB
Q1 near PWB	82.0	84.0	82.1	83.3	130 for PWB
D350 near PWB	74.8	75.8	76.0	76.5	130 for PWB
CN1 at L terminal	54.8	56.9	57.1	58.9	85
CN1 at +V terminal	64.3	65.2	67.0	67.7	85
External enclosure near Q1	59.2	60.7	60.2	61.1	--[3.)]

Supplementary information:

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:

1. 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 above.
2. With a specified maximum ambient temperature and test temperature of 50°C, the maximum permitted temperatures are calculated as follows:
   Winding components (providing safety isolation):
   Class B Tmax = 120°C -10°C = 110°C
3. For building-in equipment, to be evaluated in the final system. Data for reference only.

4.5	**TABLE: Thermal requirements**					P
	Supply voltage (V) .....:	264V/ 60Hz	90V/ 60Hz	264V/ 60Hz	90V/ 60Hz	—
	Ambient T_{min} (°C) .....:	--	--	--	--	—
	Ambient T_{max} (°C) .....:	See below	See below	See below	See below	—
Maximum measured temperature T of part/at.....: **Model: PMC-12V060W1NX** **i), j) (mounting location 5), Loading 12V/3.75A, k), l) (mounting location 5), Loading 12V/2.5A.**		T (°C) i)	T (°C) j)	T (°C) k)	T (°C) l)	Allowed T_{max} (°C)
Ambient		60.7	60.2	70.3	70.5	-
T1 wire (primary)		89.0	85.3	91.8	86.9	110
T1 wire (secondary)		92.5	88.2	95.0	89.1	110
T1 core		94.5	88.7	96.2	89.5	110
FL1		70.4	78.8	78.4	82.0	120
L350		78.2	78.0	83.0	81.6	120

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IC2	79.1	78.3	85.3	82.6	100
IC3	79.9	78.2	85.8	82.6	100
CX1 near F1	68.3	70.1	76.7	76.6	100
CY1	71.8	76.7	79.8	81.6	125
CY2	74.8	80.1	82.2	83.5	125
CY3	74.8	75.5	81.9	80.5	125
CY4	73.0	75.7	80.1	79.9	125
C1	74.7	76.6	82.0	80.7	105
C352	78.6	77.5	83.8	81.5	105
NTC1 near PWB	77.1	89.0	83.8	89.5	130 for PWB
BD1 near PWB	75.2	83.6	82.2	85.8	130 for PWB
Q1 near PWB	85.0	84.0	89.2	86.0	130 for PWB
D350 near PWB	79.2	78.2	83.8	81.5	130 for PWB
CN1 at L terminal	64.5	65.6	73.0	73.0	85
CN1 at +V terminal	72.3	72.4	79.2	78.6	85
External enclosure near Q1	66.8	67.1	74.9	74.1	--[3.)]

Supplementary information:

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:

1. 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 above.
2. With a specified maximum ambient temperature and test temperature of 50°C, the maximum permitted temperatures are calculated as follows:
   Winding components (providing safety isolation):
   Class B Tmax = 120°C -10°C = 110°C
3. For building-in equipment, to be evaluated in the final system. Data for reference only.

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4.5	TABLE: Thermal requirements					P
	Supply voltage (V) .....:	264V/ 60Hz	90V/ 60Hz	375V	106.25V	—
	Ambient T_{min} (°C) .....:	--	--	--	--	—
	Ambient T_{max} (°C) .....:	See below	See below	See below	See below	—
Maximum measured temperature T of part/at.....: **Model: PMC-12V060W1NX** **m), n)(mounting location 5), Loading 14V/4.29A o), p) (mounting location 5), Loading A.**		T (°C) m)	T (°C) n)	T (°C) o)	T (°C) p)	Allowed T_{max} (°C)
Ambient		50.9	51.0	50.7	50.7	-
T1 wire (primary)		89.1	86.6	89.0	87.0	110
T1 wire (secondary)		94.0	91.3	92.7	90.0	110
T1 core		96.8	91.6	95.9	91.1	110
FL1		65.5	80.6	63.0	68.5	120
L350		74.9	75.7	77.1	77.5	120
IC2		76.4	77.5	75.2	75.0	100
IC3		77.2	77.0	76.4	75.4	100
CX1 near F1		62.2	66.4	62.2	63.2	100
CY1		66.5	74.8	64.8	69.9	125
CY2		71.1	81.2	68.4	74.1	125
CY3		70.7	73.9	69.7	70.6	125
CY4		68.4	74.6	67.9	74.0	125
C1		70.3	76.1	68.5	70.4	105
C352		75.3	75.3	76.1	76.7	105
NTC1 near PWB		74.2	92.5	69.3	82.6	130 for PWB
BD1 near PWB		71.6	85.3	68.5	78.6	130 for PWB
Q1 near PWB		84.0	85.2	83.2	85.3	130 for PWB
D350 near PWB		75.8	76.0	77.1	77.8	130 for PWB
CN1 at L terminal		57.4	59.6	57.7	58.6	85
CN1 at +V terminal		67.2	67.9	67.8	68.3	85
External enclosure near Q1		60.3	61.3	60.9	61.9	--[3.)]

Supplementary information:

Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)	Insulation class

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

1. 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 above.
2. With a specified maximum ambient temperature and test temperature of 50°C, the maximum permitted temperatures are calculated as follows:
   Winding components (providing safety isolation):
   Class B Tmax = 120°C -10°C = 110°C
3. For building-in equipment, to be evaluated in the final system. Data for reference only.

4.5	TABLE: Thermal requirements					P
	Supply voltage (V) .....:	375V	106.25V	375V	106.25V	—
	Ambient T_{min} (°C) .....:	--	--	--	--	—
	Ambient T_{max} (°C) .....:	See below	See below	See below	See below	—
Maximum measured temperature T of part/at.....: **Model: PMC-12V060W1NX** **q), r)(mounting location 5), Loading 12V/3.75A** **s), t) (mounting location 5), Loading 12V/2.5A.**		T (°C) q)	T (°C) r)	T (°C) s)	T (°C) t)	Allowed T_{max} (°C)
Ambient		60.4	60.9	70.8	70.2	-
T1 wire (primary)		89.0	84.4	89.8	84.4	110
T1 wire (secondary)		92.6	86.9	93.0	86.4	110
T1 core		94.7	87.6	94.2	86.8	110
FL1		68.8	71.1	75.1	74.7	120
L350		78.1	77.2	80.8	79.1	120
IC2		78.9	76.6	83.1	79.6	100
IC3		79.8	77.0	83.7	79.8	100
CX1 near F1		68.2	67.6	74.7	72.9	100
CY1		70.6	73.3	76.7	77.0	125
CY2		73.6	76.0	79.2	78.6	125
CY3		74.4	73.3	79.6	77.1	125
CY4		72.6	74.8	78.0	77.4	125
C1		73.8	73.0	79.5	76.6	105
C352		78.6	77.0	81.8	79.1	105
NTC1 near PWB		74.1	81.9	79.5	82.1	130 for PWB
BD1 near PWB		73.5	79.3	78.9	80.7	130 for PWB
Q1 near PWB		84.9	83.3	87.3	83.9	130 for PWB

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D350 near PWB	79.1	77.4	81.8	79.3	130 for PWB
CN1 at L terminal	64.1	64.0	71.0	70.3	85
CN1 at +V terminal	72.0	71.6	77.3	76.3	85
External enclosure near Q1	66.7	66.4	72.9	72.0	--[3.)]

Supplementary information:

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:

1. 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 above.
2. With a specified maximum ambient temperature and test temperature of 50°C, the maximum permitted temperatures are calculated as follows:
   Winding components (providing safety isolation):
   Class B Tmax = 120°C -10°C = 110°C
3. For building-in equipment, to be evaluated in the final system. Data for reference only.

4.5.5	**TABLE: Ball pressure test of thermoplastic parts**		P
	Allowed impression diameter (mm) .....:	≤ 2 mm	—

Part	Test temperature (°C)	Impression diameter (mm)
Connector CN1: tested for all types of material in table 1.5.1.	125	1.0
FL1: tested for all types of material in table 1.5.1.	125	1.0

Supplementary information:
Phenolic bobbin, base material used for transformers and chokes accepted without test at test temperatures not exceeding 125°C. (for sources see table 1.5.1).

4.7	**TABLE: Resistance to fire**				N/A
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence

Supplementary information: metal enclosure.

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5.1	TABLE: touch current measurement			P
Measured between:		Measured (mA)	Limit (mA)	Comments/conditions
Model: PMC-12V050W1XX				
Terminal A to metal enclosure, switch ”e” open. Normal.		0.15	3.5	Fuse in
Terminal A to metal enclosure, switch ”e” open. Reverse.		0.15	3.5	Fuse in
Terminal A to output connector, switch ”e” closed. Normal.		0.19	0.25	Fuse in
Terminal A to output connector, switch ”e” closed. Reverse.		0.19	0.25	Fuse in
Model: PMC-12V060W1NX				
Terminal A to metal enclosure, switch ”e” open. Normal.		0.32	3.5	Fuse in
Terminal A to metal enclosure, switch ”e” open. Reverse.		0.32	3.5	Fuse in
Terminal A to output connector, switch ”e” closed. Normal.		0.18	0.25	Fuse in
Terminal A to output connector, switch ”e” closed. Reverse.		0.18	0.25	Fuse in
supplementary information:				
Test voltage: 264V/60Hz (according to customer required) , overall capacity: see table 1.5.1.				

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			P
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Model: PMC-12V050W1XX				
Functional:				
Secondary and protective earthing/bonding conductor		AC	500	No
Basic/supplementary:				
Primary and protective earthing/bonding conductor		AC	1893	No
Reinforced:				
Primary and secondary		AC	3000	No
T1 primary to secondary		AC	3000	No
T1 secondary to core		AC	3000	No

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One layer insulation tape	AC	3000	No
Insulator sheet	AC	3000	No
Heat Shrinkable Tubing	AC	3000	No
Model: PMC-12V060W1NX			
Functional:			
Secondary and protective earthing/bonding conductor	AC	500	No
Basic/supplementary:			
Primary and protective earthing/bonding conductor	AC	1834	No
Reinforced:			
Primary and secondary	AC	3000	No
T1 primary to core	AC	3000	No
T1 core to secondary	AC	3000	No
Insulation tape 1 layer	AC	3000	No
Insulator sheet	AC	3000	No
Supplementary information:			

5.3	**TABLE: Fault condition tests**						P
	Ambient temperature (°C) .....:				25°C if no other specified.		—
	Power source for EUT: Manufacturer, model/type, output rating .....:				--		—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation	
Model: PMC-12V050W1XX							
R1A	s-c	240V ac/ 50Hz	2 hr. 56min.	F1	4.18	Final input: 240V/0.44A/60W Final output: 11.96V/4.18A Comment: Normal operation, NB, NC, NT, CT, NCD. T1= 83 ºC, IC2= 59 ºC, IC3= 61 ºC, CY3= 56 ºC, Ambient=26.8 ºC	

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Clause	Requirement + Test	Result - Remark	Verdict

BD1 (L to +)	s-c	240V ac/ 50Hz	3 hr. 31min.	F1	--	Final input: 240V/0A/0W Final output: 0V/0A Comment: Unit shutdown immediately ,NB, NC, NT, IP(F1) T1= 85 ºC, IC2= 58 ºC, IC3= 60 ºC, CY3= 53 ºC, Ambient=25.8 ºC
T1 (2-3)	s-c	240V ac/ 50Hz	2 hr. 30min.	F1	0.17	Final input: 240V/0.17A/15W Final output: hiccup Comment: Unit hiccup, NB, NC, NT, NCD T1= 82 ºC, IC2= 59 ºC, IC3= 61 ºC, CY3= 56 ºC, Ambient=27.9 ºC
T1 (4-5)	s-c	240V ac/ 50Hz	3 hr. 47min.	F1	0.23	Final input: 240V/0.23A/35W Final output: hiccup Comment: Unit hiccup, NB, NC, NT, NCD T1= 85 ºC, IC2= 58 ºC, IC3= 60 ºC, CY3= 53 ºC, Ambient=24.7 ºC
T1 (X1-X2)	s-c	240V ac/ 50Hz	3 hr. 13min.	F1	0.20	Final input: 240V/0.2A/13W Final output: hiccup Comment: Unit hiccup, NB, NC, NT, NCD T1= 84 ºC, IC2= 60 ºC, IC3= 62 ºC, CY3= 57 ºC, Ambient=27.2 ºC
Q1(D-G)	s-c	240V ac/ 50Hz	2 hr. 46min.	F1	--	Final input: 240V/0A/0W Final output: 0V/0A Comment: Unit shutdown immediately ,NB, NC, NT, CD (Q1, ZD5, D6, D7, D15, R8, R9, IC1), IP(F1) T1= 84 ºC, IC2= 57 ºC, IC3= 59 ºC, CY3= 55 ºC, Ambient=25.7 ºC
Q1(D-S)	s-c	240V ac/ 50Hz	3 hr. 18min.	F1	--	Final input: 240V/0A/0W Final output: 0V/0A Comment: Unit shutdown immediately ,NB, NC, NT, CD (Q1, D6, D7, IC1), IP(F1) T1= 88 ºC, IC2= 64 ºC, IC3= 65 ºC, CY3= 59 ºC, Ambient=24.5 ºC

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Q1(G-S)	s-c	240V ac/ 50Hz	4 hr. 38min.	F1	0.02	Final input: 240V/0.02A/0.5W Final output: 0V/0A Comment: Unit shutdown, NB, NC, NT, NCD T1= 80 ºC, IC2= 54 ºC, IC3= 56 ºC, CY3= 51 ºC, Ambient=25.1 ºC
C1	s-c	240V ac/ 50Hz	3 hr. 41min.	F1	--	Final input: 240V/0A/0W Final output: 0V/0A Comment: Unit shutdown, NB, NC, NT, IP(F1) T1= 83 ºC, IC2= 57 ºC, IC3= 58 ºC, CY3= 51 ºC, Ambient=24.0 ºC
IC1 (1-2)	s-c	240V ac/ 50Hz	2 hr. 2min.	F1	0.02	Final input: 240V/0.02A/0.6W Final output: 0V/0A Comment: Unit shutdown, NB, NC, NT, NCD T1= 82 ºC, IC2= 58 ºC, IC3= 59 ºC, CY3= 53 ºC, Ambient=24.9 ºC
IC1 (1-3)	s-c	240V ac/ 50Hz	3 hr. 8min.	F1	0.02	Final input: 240V/0.02A/0.6W Final output: 0V/0A Comment: Unit shutdown, NB, NC, NT, NCD T1= 82 ºC, IC2= 58 ºC, IC3= 59 ºC, CY3= 54 ºC, Ambient=23.6 ºC
IC1 (2-4)	s-c	240V ac/ 50Hz	3 hr. 11min.	F1	0.02	Final input: 240V/0.02A/0.6W Final output: 0V/0A Comment: Unit shutdown, NB, NC, NT, NCD T1= 83 ºC, IC2= 58 ºC, IC3= 59 ºC, CY3= 53 ºC, Ambient=24.9 ºC
IC2 (1-2)	s-c	240V ac/ 50Hz	2 hr. 21min.	F1	0.20	Final input: 240V/0.2A/18W Final output: hiccup Comment: Unit hiccup, NB, NC, NT, NCD T1= 86 ºC, IC2= 61 ºC, IC3= 62 ºC, CY3= 58 ºC, Ambient=25.3 ºC

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IC2 :IC3 (3-4)	s-c	240V ac/ 50Hz	3 hr. 4min.	F1	0.20	Final input: 240V/0.2A/1W Final output: 0V/0A Comment: Unit shutdown, NB, NC, NT, NCD T1= 86 ºC, IC2= 57 ºC, IC3= 59 ºC, CY3= 55 ºC, Ambient=25.7 ºC
IC3 (1-2)	s-c	240V ac/ 50Hz	4 hr. 13min.	F1	0.45	Final input: 240V/0.45A/60W Final output: 11.96V/4.18A Comment: Normal operation, NB, NC, NT, CT, NCD T1= 87 ºC, IC2= 60 ºC, IC3= 62 ºC, CY3= 59 ºC, Ambient=25.8 ºC
IC2 (1-2) Test at No load	s-c	240V ac/ 50Hz	3 hr. 38min.	F1	0.02	Final input: 240V/0.02A/1.4W Final output: hiccup Comment: Unit hiccup, NB, NC, NT, NCD T1= 34 ºC, IC2= 34 ºC, IC3= 34 ºC, CY3= 34 ºC, Ambient=26.0 ºC
IC510 (R-K)	s-c	240V ac/ 50Hz	3 hr. 28min.	F1	0.07	Final input: 240V/0.07A/2W Final output: hiccup Comment: Unit hiccup, NB, NC, NT, NCD T1= 80 ºC, IC2= 55 ºC, IC3= 56 ºC, CY3= 52 ºC, Ambient=24.9 ºC
D350 (SELV)	s-c	240V ac/ 50Hz	3 hr. 31min.	F1	0.20	Final input: 240V/0.2A/14W Final output: hiccup Comment: Unit hiccup, NB, NC, NT, NCD T1= 83 ºC, IC2= 58 ºC, IC3= 60 ºC, CY3= 55 ºC, Ambient=26.8 ºC
C350	s-c	240V ac/ 50Hz	3 hr. 30min.	F1	0.20	Final input: 240V/0.2A/10W Final output: hiccup Comment: Unit shutdown, NB, NC, NT, NCD T1= 88 ºC, IC2= 61 ºC, IC3= 64 ºC, CY3= 58 ºC, Ambient=25.0 ºC

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R12	o-c	240V ac/ 50Hz	3 hr. 22min.	F1	0.44	Final input: 240V/0.44A/58W Final output: 12.02V/4.2A Comment: Normal operation, NB, NC, NT, NCD T1= 80 ºC, IC2= 56 ºC, IC3= 57 ºC, CY3= 52 ºC, Ambient=25.0 ºC
C5	s-c	240V ac/ 50Hz	3 hr. 9min.	F1	0.02	Final input: 240V/0.02A/0.5W Final output: 0V/0A Comment: Unit shutdown, NB, NC, NT, NCD T1= 86 ºC, IC2= 58 ºC, IC3= 60 ºC, CY3= 56 ºC, Ambient=24.9 ºC
C1 (BEL fuse 5HT series)	s-c	375V dc	3 hr. 42min.	F1	--	Final input: 375V/0A/0W Final output: 0V/0A Comment: Unit shutdown immediately, NB, NC, NT, IP(F1) T1= 87 ºC, IC2= 60 ºC, IC3= 63 ºC, CY3= 57 ºC, Ambient=24.7 ºC
C1 (LITTELFUSE: 215 series)	s-c	375V dc	3 hr. 7min.	F1	--	Final input: 375V/0A/0W Final output: 0V/0A Comment: Unit shutdown immediately, NB, NC, NT, IP(F1) T1= 86 ºC, IC2= 58 ºC, IC3= 61 ºC, CY3= 56 ºC, Ambient=24.7 ºC
C1 (SCHURTER SPT series)	s-c	375V dc	3 hr. 42min.	F1	--	Final input: 375V/0A/0W Final output: 0V/0A Comment: Unit shutdown immediately, NB, NC, NT, IP(F1) T1= 87 ºC, IC2= 60 ºC, IC3= 62 ºC, CY3= 58 ºC, Ambient=24.6 ºC
Unit	Blocked ventilation	240V ac/ 50Hz	3 hr. 1min.	F1	0.45	Final input: 240V/0.45A/60W Final output: 11.9V/4.18A Comment: Normal operation, NB, NC, NT, CT, NCD T1= 96 ºC, IC2= 72 ºC, IC3= 74 ºC, CY3= 70 ºC, Ambient=27.1 ºC

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Clause	Requirement + Test	Result - Remark	Verdict

Unit	misused mounting (location1)	240V ac/ 50Hz	2 hr. 37min.	F1	0.44	Final input: 240V/0.44A/60W Final output: 11.9V/4.18A Comment: Normal operation, NB, NC, NT, CT, NCD T1= 81 ºC, IC2= 60 ºC, IC3= 62 ºC, CY3= 52 ºC, Ambient=29.1 ºC
Unit	misused mounting (location 2)	240V ac/ 50Hz	2 hr. 5min.	F1	0.44	Final input: 240V/0.44A/60W Final output: 11.9V/4.18A Comment: Normal operation, NB, NC, NT, CT, NCD T1= 92 ºC, IC2= 76 ºC, IC3= 78 ºC, CY3= 72 ºC, Ambient=25.7 ºC
Unit	misused mounting (location 3)	240V ac/ 50Hz	1 hr. 46min.	F1	0.44	Final input: 240V/0.44A/60W Final output: 11.9V/4.18A Comment: Normal operation, NB, NC, NT, CT, NCD T1= 78 ºC, IC2= 58 ºC, IC3= 60 ºC, CY3= 53 ºC, Ambient=25.2 ºC
Unit	misused mounting (location 2)	240V ac/ 50Hz	2 hr. 5min.	F1	0.3	Final input: 240V/0.3A/30W Final output: 11.9V/2.1A Comment: Unit hicup, NB, NC, NT, CT, NCD T1= 96 ºC, IC2= 89 ºC, IC3= 90 ºC, CY3= 88 ºC, Ambient=70.5 ºC
T1 (X1 to X2)	o-l	240V ac/ 50Hz	10 hr. 2min.	F1	0.61	Final input: 240V/0.61A/87W Final output: 11.9V/6.1A Comment: when load beyond 6.3A unit hicup, NB, NC, NT, CT, NCD T1= 100 ºC, IC2= 67 ºC, IC3= 68 ºC, CY3= 62 ºC, Ambient=25.3 ºC
Output +11V	s-c	240V ac/ 50Hz	2 hr. 40min.	F1	0.11	Final input: 240V/0.11A/5W Final output: hicup Comment: unit hicup, NB, NC, NT, CT, NCD T1= 76 ºC, IC2= 58 ºC, IC3= 59 ºC, CY3= 61 ºC, Ambient=26.9 ºC

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Clause	Requirement + Test	Result - Remark	Verdict

Output +12V	s-c	240V ac/ 50Hz	3 hr. 15min.	F1	0.1	Final input: 240V/0.12A/5W Final output: hicup Comment: unit hicup, NB, NC, NT, CT, NCD T1= 80 ºC, IC2= 60 ºC, IC3= 61 ºC, CY3= 56 ºC, Ambient=27.7 ºC
Output +14V	s-c	240V ac/ 50Hz	3 hr. 5min.	F1	0.1	Final input: 240V/0.12A/5W Final output: hicup Comment: unit hicup, NB, NC, NT, CT, NCD T1= 79 ºC, IC2= 60 ºC, IC3= 61 ºC, CY3= 66 ºC, Ambient=26.2 ºC
Output +11V	o-l	240V ac/ 50Hz	6 hr. 9min.	F1	0.56	Final input: 240V/0.56A/81W Final output: 10.8V/6.3A Comment: loaded to 6.3A unit hicup when loaded beyond , NB, NC, NT, CT, NCD T1= 100 ºC, IC2= 67 ºC, IC3= 70 ºC, CY3= 64 ºC, Ambient=26.7 ºC
Output +12V	o-l	240V ac/ 50Hz	8 hr. 44min.	F1	0.58	Final input: 240V/0.58A/82W Final output: 11.9V/5.9A Comment: loaded to 5.9A unit hicup when loaded beyond , NB, NC, NT, CT, NCD T1= 100 ºC, IC2= 67 ºC, IC3= 70 ºC, CY3= 64 ºC, Ambient=26.7 ºC
Output +14V	o-l	240V ac/ 50Hz	8 hr. 30min.	F1	0.6	Final input: 240V/0.6A/88W Final output: 14.2V/5.3A Comment: loaded to 5.3A unit hicup when loaded beyond , NB, NC, NT, CT, NCD T1= 111 ºC, IC2= 71 ºC, IC3= 75 ºC, CY3= 68 ºC, Ambient=24.5 ºC
Output +14V	o-l	240V ac/ 50Hz	8 hr. 30min.	F1	0.36	Final input: 240V/0.36A/30W Final output: 14.4V/1.8A Comment: loaded to 1.8A unit hicup when loaded beyond , NB, NC, NT, CT, NCD T1= 100 ºC, IC2= 88 ºC, IC3= 88 ºC, CY3= 86 ºC, Ambient=70.6 ºC

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

Output +14V	o-l	250V dc	7 hr. 14min.	F1	0.23	Final input: 375V/0.23A/86W Final output: 14.3V/5.2A Comment: loaded to 5.2A unit hicup when loaded beyond , NB, NC, NT, CT, NCD T1= 105 ºC, IC2= 68 ºC, IC3= 72 ºC, CY3= 65 ºC, Ambient=27.0 ºC
Model: PMC-12V060W1NX						
R4A	s-c	240Vac/ 50HZ	4Hrs 34mins	F1	0.57	Normal operation. T1 = 91.4°C IC3 = 73.3°C CY3 = 65.5°C AMB = 24.5°C
IC2 (1-2)	s-c	240Vac/ 50HZ	2Hrs 28mins	F1	0.29	Output hiccup. T1 = 93°C IC3 = 73°C CY3 = 65°C AMB = 25.5°C
IC2 (3-4)	s-c	240Vac/ 50HZ	3Hrs 44mins	F1	0.01	Output shutdown. T1 = 94°C IC3 = 74°C CY3 = 66°C AMB = 25.5°C
IC3 (1-2)	s-c	240Vac/ 50HZ	3Hrs 34mins	F1	0.57	Normal operation. T1 = 94°C IC3 = 73°C CY3 = 65°C AMB = 25.2°C
IC3 (3-4)	s-c	240Vac/ 50HZ	2Hrs 40mins	F1	0.02	Output hiccup. T1 = 94°C IC3 = 73°C CY3 = 63°C AMB = 24.6°C
C1	s-c	240Vac/ 50Hz	2Hrs 51mins	F1	-	Unit shutdown immediately. F1 opened. T1 = 92°C IC3 = 75°C CY3 = 66°C AMB = 24.6°C

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Clause	Requirement + Test	Result - Remark	Verdict

Q1(D-S)	s-c	240Vac/ 50Hz	3Hrs 29mins	F1	-	Unit shutdown immediately. F1 opened. Q1, D6, D7, R8, R9, IC1, R3 and D15 damaged. T1 = 89°C IC3 = 73°C CY3 = 65°C AMB = 24.2°C
Q1(D-G)	s-c	240Vac/ 50Hz	4Hrs 13mins	F1	-	Unit shutdown immediately. F1 opened. Q1, D6, D7, R8, R9, Q2, IC1, R3 and D15 damaged. T1 = 92°C IC3 = 76°C CY3 = 66°C AMB = 24.6°C
T1(1-2)	s-c	240Vac/ 50HZ	4Hrs 20mins	F1	0.12	Output shutdown. T1 = 88°C IC3 = 72°C CY3 = 64°C AMB = 25.1°C
T1(4-5)	s-c	240Vac/ 50HZ	5Hrs 5mins	F1	0.23	Output hiccup. T1 = 92°C IC3 = 72°C CY3 = 65°C AMB = 24.4°C
T1(X1-X2)	s-c	240Vac/ 50HZ	5Hrs 30mins	F1	0.14	Output hiccup. T1 = 94°C IC3 = 72°C CY3 = 65°C AMB = 25.6°C
D350	s-c	240Vac/ 50HZ	4Hrs 25mins	F1	0.26	Output shutdown. T1 = 85°C IC3 = 70°C CY3 = 63°C AMB = 24.6°C
Ventilation opening	blocked	240Vac/ 50HZ	3Hrs 36mins	F1	0.56	Normal operation. T1 = 98.7°C IC3 = 82.2°C CY3 = 74.6°C AMB = 25.0°C

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Clause	Requirement + Test	Result - Remark	Verdict

T1 (X1-X2) after D350	o-l	240Vac/ 50HZ	9Hrs 14mins	F1	0.79	Transformer tested current 11.68V/6.87A after that unit hiccup when load was beyond 7.0A. T1 = 116°C IC3 = 90°C CY3 = 80°C AMB = 24.7°C
+12V	s-c	240Vac/ 50HZ	4Hrs 35mins	F1	0.26	Output hiccup. T1 = 86°C IC3 = 77°C CY3 = 68°C AMB = 24.0°C
+12V @ Test with loading A	o-l	240Vac/ 50HZ	7Hrs 57mins	F1	0.8	Load to +11.96V/7.093A, unit hiccup when load was beyond 7.5A. T1 = 112°C IC3 = 88°C CY3 = 76°C AMB = 25.1°C
+14V @ Test with loading A	o-l	240Vac/ 50HZ	6Hrs 14mins	F1	0.67	Load to +14.3V/5.276A, unit turn on and turn off alternately when load was beyond 5.53A, unit hiccup when loaded beyond 5.6A. T1 = 112°C IC3 = 88°C CY3 = 78°C AMB = 24.3°C
+12V @ Test with loading A	o-l	250Vdc	8Hrs 34mins	F1	0.78	Load to +11.95V/7.28A, unit turn on and turn off alternately when load was beyond 7.4A and still can increase current up to 7.5A, unit hiccup when loaded beyond 7.6A. T1 = 118°C IC3 = 94°C CY3 = 82°C AMB = 27.3°C

Supplementary information:

1. For fuse opened conditions, test was repeated 10 times for all type of fuses is table 1.5.1 with the same outcome.

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

C.2	TABLE: transformers						P
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)
T1	Primary (core) to secondary (reinforced)	590	288	3000	5.3	5.8	2 layers, 0.4mm, TIW
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
T1	Primary (core) to secondary (reinforced)			3000	12.5	12.5	2 layers, 0.4mm, TIW
supplementary information:							

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

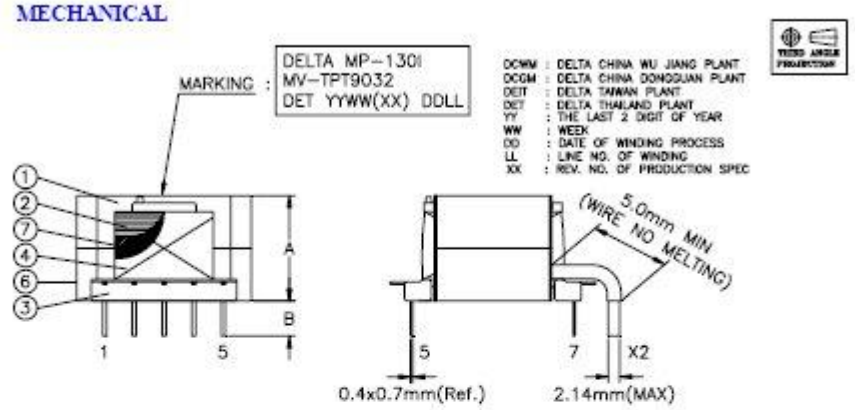
C.2	TABLE: transformers	P

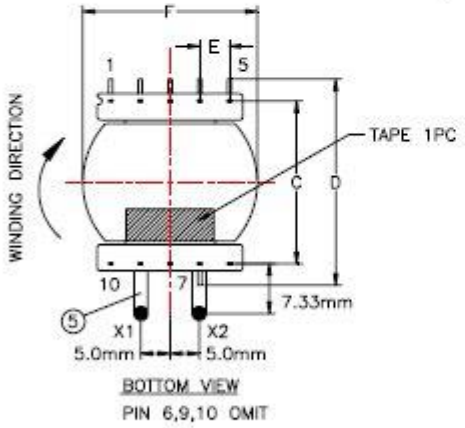
Transformer T1:

CUSTOMER PART NO.		CUSTOMER REV.		DELTA PART NO.	DELTA REV.	ISSUE DATE
2870173100		X04		MV-TPT9032	00	MAR.07,2009
PART NAME :	TRANSFORMER	CIRCUIT CODE:	T1	USED ON : BOE11010186		Page 3/8

SPECIFICATION

MECHANICAL





UNIT : mm

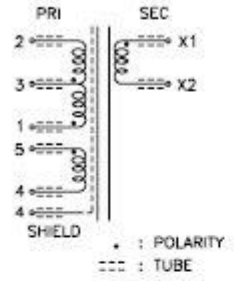
A	B	C	D	E	F
19.5 MAX	3.5±0.5	27.94±0.4	36.0 MAX	5.1±0.2	31.0 MAX

CTQ CRITICAL TO QUALITY

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

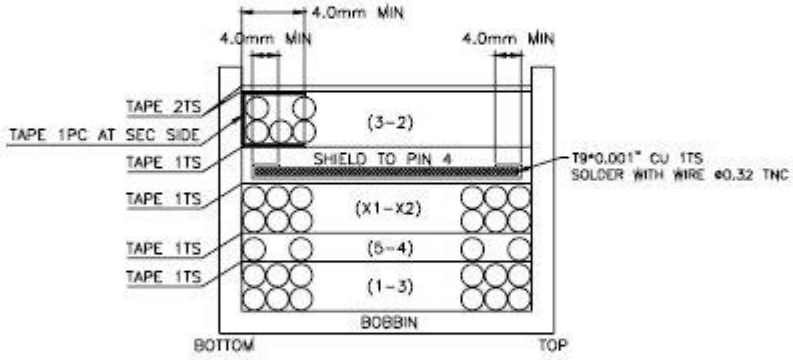
CUSTOMER PART NO.		CUSTOMER REV.		DELTA PART NO.	DELTA REV.	ISSUE DATE
2870173100		X04		MV-TPT9032	00	MAR.07.2009
PART NAME :	TRANSFORMER	CIRCUIT CODE:	T1	USED ON : EOE11010186		Page 4/8

SCHEMATIC



WINDING ORDER

(1-3)	ø0.4*2 2UEWN	22 TS
(5-4)	ø0.2*3 2UEWN	7 TS
(X1-X2)	ø0.7*4 TEX-E	5 TS
SHIELD TO PIN 4	T9*0.001" CU	1 TS
(3-2)	ø0.4*2 2UEWN	10 TS



ELECTRICAL CHARACTERISTICS

L (1-3-2)	LK(1-3-2) SEC SHORTED	HI-POT PRI CORE TO SEC	HI-POT PRI TO CORE
@40kHz,1.0V	@40kHz,1.0V	@50/60 Hz,1mA	@50/60 Hz,1mA
400 µH ±5%	6.5 µH MAX	4000 Vac,1s	500 Vac,1s
HI-POT PRI TO PRI			
@50/60 Hz,1mA			
500 Vac,1s			

CORE GAP : 0.40 mm (Ref.) AT TOP SIDE

TEMPERATURE INSULATION LEVEL : CLASS B

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

MAT'L LIST REPORT

NO.	PART	MANUFACTURE	MANUFACTURE PART NO.	DESCRIPTION	UL FILE NO.
1	CORE	NICERA DMEGC TDG JFE FERROXCUBE	2HM5 DMR44 TP4A MB4 3C94	CORE MN-ZN PJ30 30*19*20.3(Ref.)	N/A
2	MAGNET WIRE	PACIFIC-THAI ELECTRIC WIRE & CABLE CO.,LTD	MW-28C 130°C UEW-NY	POLYURETHANE OVERCOAT POLYAMIDE	E142108
			MW-75C 130°C UEW-U	POLYURETHANE	
		JUNG SHING WIRE CO.,LTD.	MW28-C UEY-2 130°C	POLYURETHANE OVERCOAT POLYAMIDE	E174837
			MW75C UEW-4 130°C	POLYURETHANE	
		FURUKAWA ELECTRIC CO.,LTD	130°C NO.TEX-E	TRIPLE INSULATED WINDING PROVIDING REINFORCED	E206440
		TOTOKU ELECTRIC CO.,LTD	130°C NO.TIW-2 155°C NO.TIW-3	TRIPLE INSULATED WINDING PROVIDING REINFORCED	E166483 VDE(113350/113356) (TUV(9551153)
		HSIEH HO INDUSTRY	TNC WIRE	TINNED CU WIRE	N/A
3	BOBBIN	SUMITOMO BAKELITE CO.,LTD.	150°C 94V-0 PM-9820	PHENOLIC (Thk.0.30mm MIN)	E41429
		SUMITOMO BAKELITE CO.,LTD.	150°C 94V-0 PM-9630	PHENOLIC (Thk.0.30mm MIN)	E41429
4	TAPE	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	130°C CTI II TAPE NO. 1350F-1(YELLOW)	POLYESTER FILM TAPE 0.063mm THICKNESS	E17385
		SYMBIO INC.	130°C CTI II TAPE NO.35660Y	POLYESTER FILM TAPE 0.055mm THICKNESS	E50292
5	SLEEVING	GREAT HOLDING INDUSTRIAL CO.,LTD.	200°C VW-1 TFL 150V 200°C VW-1 TFT 300V	PTFE	E156256
6	VARNISH	KYOCERA CHEMICAL CORP. (TOSHIBA CHEMICAL CO.,LTD)	TVB2180T	POLYESTER	E83702
		JOHN C. DOLPH CO.	BC-346A	POLYESTER	E317427
7	COPPER FOIL	SHANGHAI FU TAI SCIENCE & TECHNOLOGY DEVELOPMENT	COPPER 99.9%	0.0254mm THICKNESS 19mm WIDTH COPPER FOIL	N/A

List of test equipment used:

Instr. Code	Instrument I.D.	Instrument Type	Range Used Or ***	Make and Model **	Calibration Date	
					Last	Due
1	DT324-871	Temperature & Humidity & Time Display	Temperature 10'C~30'C; Humidity 50%RH~80%RH; Timer 1s-24Hrs	SMART/ SM-TH399	2015-02-25	2016-02-24
2	DT318-1655	Smart electronic load	CC mode: DCV 0~60V; DCA 0~50A	CHROMA/ 63030	2015-09-15	2016-09-14
3	DT318-590	Smart electronic load	CC mode: DCV 0~60V; DCA 0~50A	CHROMA/ 63030	2015-04-22	2016-04-21
4	DT318-1192	Smart electronic load	CC mode: DCV 0~60V; DCA 0~50A	CHROMA/ 63030	2015-09-15	2016-09-14
5	DT318-975	Smart electronic load	CC mode: DCV 0~60V; DCA 0~50A	CHROMA/ 63030	2016-01-27	2017-01-26
6	DT318-2247	DC electronic load	CC mode: DCV 0~60V; DCA 0~50A.	CHROMA/ 63201	2015-03-07	2016-03-06
7	DT331-036	Ground bond tester	12V ac, 50/60Hz, 1~60 A.	EXTECH/ 7316	2015-08-31	2016-02-30
8	DT310-149	True RMS voltmeter	ACV,DCV 0~700V	FLUKE/8920A	2015-09-30	2016-09-29
9	DT309-143	Power analyzer	ACV/DCV 6~600V; ACA/DCA, 0.1~20A; Power 0.26VA~1.2KVA, Frequency DC and 45Hz~67Hz	CHROMA/ 6630	2015-05-15	2016-05-14
10	DT307-408	Oscilloscope 200 MHz	DC gain 2mV/div~10V/div, Time/div 200pS~1000S	LECROY	2015-03-27	2016-03-26
11	DT311-1688	AC Power source	ACV 5~300V; 47-63Hz;3KVA	APC AC POWER/ AFC11003	2015-06-27	2016-06-26
12	SPB-43	Passive probe 100:1	100MΩ/ 4pF	TESTEC/ TT-HV150	-	-
13	SPB-42	Passive probe 100:1	100MΩ/ 4pF	TESTEC/ TT-HV150	-	-
14	DT322-463	Digimatic caliper	0~200mm/ 0~8inch	MITUTOYO/ CD-8" CSX	2015-10-21	2016-10-20
15	DT306-108	Stop watch	0 - 24 Hours	Casio / HS-30W	2015-05-26	2016-05-25
16	-	Petroleum spirit	Chemical	-	-	-
17	DT311-1191	AC Power Source	ACV 5-300V; 40-500Hz;10KVA	APC AC POWER/ AFC-11010	2016-01-30	2017-01-29
18	DT324-550	Open chamber	Temperature; 0-70°C.	Takamisawa/ OTC-2D	2016-02-13	2017-02-12
19	DT309-117	Digital power meter	ACV 0~500V, ACA 0~11A, Power 0~5000W	CHROMA / 2100	2015-03-27	2016-03-26
20	DT318-1618	Smart electronic load	CC mode: DCV 0~60V; DCA 0~50A	CHROMA/ 63030	2015-12-16	2016-12-15
21	DT318-1614	Smart electronic load	CC mode: DCV 0~60V; DCA 0~50A	CHROMA/ 63030	2015-12-14	2016-12-13
22	DT318-1616	Smart electronic load	CC mode: DCV 0~60V; DCA 0~50A	CHROMA/ 63030	2015-12-11	2016-12-10
23	DT318-1386	Smart electronic load	CC mode: DCV 0~60V; DCA 0~50A	CHROMA/ 63030	2015-09-15	2016-09-14
24	DT318-1972	DC electronic load	CC mode: DCV 0~60V; DCA 0~50A.	CHROMA/ 63203	2015-03-14	2016-03-13
25	DT324-550	Open chamber	Temperature; 0-70°C.	Takamisawa/ OTC-2D	2015-02-13	2016-02-12
26	DT324-182	Hybrid recorder	Temperature; thermocouple type T 0~200'C	YOKOGAWA/ DR230	2015-11-27	2016-11-26
27	DT321-070	Ball pressure apparatus	Radius 2.5mm, Left side 1kg, Right side 1kg	ED&D/ BDT01	2014-09-11	2016-09-10
28	DT324- 301	Close chamber	Temperature 0~150'C,Humidity 75%RH - 95%RH	ETAC HIFLEX/ FX233PH	2015-03-19	2016-03-18
29	DT312-368	Withstanding voltage tester	ACV/DCV 0~10KV; AC cut off current 55mA; DC cut off current 5.5mA	KIKUSUI/TOS5101	2015-08-31	2016-02-30
30	DT326-230	Leakage current circuit	U2/500	-	2015-09-03	2016-03-02
31	DT321-032	Push-Pull scale	0-50kgf	IMADA/ FB50K	2015-06-11	2016-06-10

Instr. Code	Instrument I.D.	Instrument Type	Range Used Or ***	Make and Model **	Calibration Date	
					Last	Due
32	-	Push tool	30 mm.	-	-	-
33	-	Transformer 3 PHASE	3 PHASE 156-600V 50-60Hz6 0KVA	PERFECT THAI ELECTRIC	-	-
34	DT324-651	Hybrid recorder	Temperature; thermocouple type T 0~200°C	YOKOGAWA/ DR130	2015-11-19	2016-11-18
35	DT309-166	Digital Power Meter	ACV 0-500V; ACA 0-11A; Power 0-5000W; Frequency 45-67Hz	ZENTECH/ 2100	2015-07-25	2016-07-24
36	DT318-906	Smart electronic load	CR mode: DCV 0~60V; DCA 0~50A	CHROMA/ 63030	2016-01-28	2017-01-27
37	DT318-711	Smart electronic load	CR mode: DCV 0~60V; DCA 0~50A	CHROMA/ 63030	2016-01-27	2017-01-26
38	DT318-928	Smart electronic load	CR mode: DCV 0~60V; DCA 0~50A	CHROMA/ 63030	2015-04-23	2016-04-22
39	DT318-1143	Smart electronic load	CR mode: DCV 0~60V; DCA 0~50A	CHROMA/ 63030	2016-01-28	2017-01-27
40	DT318-1970	DC electronic load	CR mode: DCV 0~60V; DCA 0~50A.	CHROMA/ 63203	2015-03-28	2016-03-27
41	DT307-203	Oscilloscope 100 MHz	DC gain 1mV/div~10V/div, Time/div 4nS~10S	TEKTRONIX/ TDS3012	2015-09-03	2016-09-02
42	DT324-245	Hybrid recorder	Temperature; thermocouple type T 0~200°C	YOKOGAWA/ DR130	2015-05-26	2016-05-25
43	DT318-1651	Smart electronic load	CR mode: DCV 0~60V; DCA 0~50A	CHROMA/ 63030	2015-09-14	2016-09-13
44	DT318-1387	Smart electronic load	CR mode: DCV 0~60V; DCA 0~50A	CHROMA/ 63030	2015-09-15	2016-09-14
45	DT318-891	Smart electronic load	CR mode: DCV 0~60V; DCA 0~50A	CHROMA/ 63030	2015-09-18	2016-09-17
46	DT318-2216	DC electronic load	CR mode: DCV 0~60V; DCA 0~50A.	CHROMA/ 63203	2015-09-11	2016-09-10
47	DT321-051	STEEL BALL	500g	-	2014-03-24	2016-03-23
48	DT333-017	Finger test	Radius 2mm, 4mm; Angles 14°, 37°	ED&D/ TFP01	2014-09-11	2016-09-10

Equipment List Revision: 122,123

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....:	EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013
Attachment Form No.....:	EU_GD_IEC60950_1F
Attachment Originator .....:	SGS Fimko Ltd
Master Attachment .....:	Date 2014-02

EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013 – CENELEC COMMON MODIFICATIONS

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Clauses, subclauses, notes, tables and figures which are additional to those in IEC60950-1 and it´s amendmets are prefixed “Z”		P
Contents (A2:2013)	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZD (informative) IEC and CENELEC code designations for flexible cords		P
General	Delete all the “country” notes in the reference document (IEC 60950-1:2005) according to the following list: 1.4.8 Note 2; 1.5.1 Note 2 & 3; 1.5.7.1 Note 1.5.8 Note 2; 1.5.9.4 Note; 1.7.2.1 Note 4, 5 & 6 2.2.3 Note; 2.2.4 Note; 2.3.2 Note 2.3.2.1 Note 2; 2.3.4 Note 2; 2.6.3.3 Note 2 & 3 2.7.1 Note; 2.10.3.2 Note 2; 2.10.5.13 Note 3 3.2.1.1 Note; 3.2.4 Note 3.; 2.5.1 Note 2 4.3.6 Note 1 & 2; 4.7 Note 4; 4.7.2.2 Note 4.7.3.1Note 2; 5.1.7.1 Note 3 & 4; 5.3.7 Note 1 6 Note 2 & 5; 6.1.2.1 Note 2; 6.1.2.2 Note 6.2.2 Note; 6.2.2.1 Note 2; 6.2.2.2 Note 7.1 Note 3; 7.2 Note; 7.3 Note 1 & 2 G.2.1 Note 2; Annex H Note 2		P
General (A1:2010)	Delete all the “country” notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list: 1.5.7.1 Note; 6.1.2.1 Note 2 6.2.2.1 Note 2; EE.3 Note		P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
General (A2:2013)	Delete all the “country” notes in the reference document (IEC 60950-1:2005/A2:2013) according to the following list: 2.7.1 Note * 2.10.3.1 Note 2 6.2.2. Note * Note of secretary: Text of Common Modification remains unchanged.		P
1.1.1 (A1:2010)	**Replace** the text of NOTE 3 by the following. NOTE 3 The requirements of EN 60065 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 EN 60065 applies.		P
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for “one package equipment”, and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.	Added	N/A
(A12:2011)	In EN 60950-1:2006/A12:2011 Delete the addition of 1.3.Z1 / EN 60950-1:2006 Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010	Added.	P
1.5.1 (Added info*)	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC. New Directive 2011/65/11 *	Added.	P
1.7.2.1 (A1:2010)	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.	Replaced.	P
1.7.2.1 (A12.2011)	In EN 60950-1:2006/A12:2011 Delete NOTE Z1 and the addition for Portable Sound System. Add the following clause and annex to the existing standard and amendments.	Deleted.	P

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	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: – 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.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	– 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 intended for use by young children, the limits of EN 71-1 apply.		N/A
	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 $L_{Aeq,T}$ 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 $L_{Aeq,T}$ 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		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	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. 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 $L_{Aeq,T}$) 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 $L_{Aeq,T}$) 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.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	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 with a minimum height of 5 mm; and – the following wording, or similar: "To prevent possible hearing damage, do not listen at high volume levels for long periods."  **Figure 1 – Warning label (IEC 60417-6044)** 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.		N/A
	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 $L_{Aeq,T}$, 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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	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 $L_{Aeq,T}$ 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 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 $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. NOTE An example of a wireless listening device is a Bluetooth headphone.		N/A
	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

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
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 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;		N/A
	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.		N/A
2.7.2	This subclause has been declared ‘void’.		P
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.	Deleted.	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-F2”. 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 to Table 3B, delete the second sentence.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.5.1 (A2:2013)	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD		N/A
3.3.4	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 4 | Delete the fifth line: conductor sizes for 13 to 16 A		N/A
4.3.13.6 (A1:2010)	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 (artifical optical radiation).		N/A
	Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A
Annex 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
Bibliography	Additional EN standards.		—

ZA	**NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS**	—

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
1.2.4.1	In **Denmark**, certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.		N/A
1.2.13.14 (A11:2009)	In **Norway** and **Sweden**, for requirements see 1.7.2.1 and 7.3 of this annex.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.7.1 (A11:2009)	In **Finland, Norway** and **Sweden**, resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.8	In **Norway**, due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).		P
1.5.9.4	In **Finland**, **Norway** and **Sweden**, the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A
1.7.2.1	In **Finland**, **Norway** and **Sweden**, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In **Finland**: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In **Norway**: “Apparatet må tilkoples jordet stikkontakt” In **Sweden**: “Apparaten skall anslutas till jordat uttag”		N/A
1.7.2.1 (A11:2009)	In **Norway** and **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 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.		

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Clause	Requirement + Test	Result - Remark	Verdict
	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." 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."		N/A
1.7.2.1 (A2:2013)	In **Denmark**, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in **Denmark** shall be as follows: In **Denmark**: "Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord."		N/A
1.7.5 1.7.5 (A11:2009)	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. For **CLASS II EQUIPMENT** the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5 (A2:2013)	In **Denmark**, socket-outlets for providing power to other equipment shall be in accordance with the DS 60884-2-D1:2011. For class I equipment the following Standard Sheets are applicable: DK 1-3a, DK 1-1c, DK 1-1d, DK 1-5a or DK 1-7a, with the exception for STATIONARY EQUIPMENT where the socket-outlets shall be in accordance with Standard Sheet DK 1-1b, DK 1-1c, DK 1-1d or DK 1-5a. Socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance with DS 60884-2-D1 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with by DS 60884-2-D1 Standard Sheet DKA 1-3a or DKA 1-3b. Justification the Heavy Current Regulations, 6c		N/A
2.2.4	In **Norway**, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.2	In **Finland**, **Norway** and **Sweden** there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.3.4	In **Norway**, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.6.3.3	In the **United Kingdom**, the current rating of the circuit shall be taken as 13 A, not 16 A.		N/A
2.7.1	In the **United Kingdom**, to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.		N/A
2.10.5.13	In **Finland**, **Norway** and **Sweden**, there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A
3.2.1.1	In **Switzerland**, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets: SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998: SEV 5932-2.1998: Plug Type 25 , 3L+N+PE 230/400 V, 16 A SEV 5933-2.1998:Plug Type 21, L+N, 250 V, 16A SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V, 16 A		
3.2.1.1	In **Denmark**, supply cords of single-phase equipment having a rated current not exceeding13 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 contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. 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.		N/A
3.2.1.1 (A2:2013)	In **Denmark**, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Justification the Heavy Current Regulations, 6c		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In **Spain**, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994. Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994. 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
3.2.1.1	In the **United Kingdom**, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
3.2.1.1	In **Ireland**, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.		N/A
3.2.4	In **Switzerland**, for requirements see 3.2.1.1 of this annex.		N/A
3.2.5.1	In the **United Kingdom**, a power supply cord with conductor of 1,25 mm2 is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A
3.3.4	In the **United Kingdom**, the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm^2 to 1,5 mm^2 nominal cross-sectional area.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.6	In the **United Kingdom**, the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		N/A
4.3.6	In **Ireland**, DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.		N/A
5.1.7.1	In **Finland**, **Norway** and **Sweden** TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.		N/A
6.1.2.1 (A1:2010)	In **Finland**, **Norway** and **Sweden**, 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 requirements for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	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 60384-14:2005, subclass Y2. A capacitor classified Y3 according to 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 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 60384-14: - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		P
6.1.2.2	In **Finland**, **Norway** and **Sweden**, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N/A
7.2	In **Finland**, **Norway** and **Sweden**, for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A
7.3 (A11:2009)	In **Norway** and **Sweden**, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Annex ZD
(informative)

IEC and CENELEC code designations for flexible cords

Type of flexible cord	Code designations	
	IEC	CENELEC
PVC insulated cords		
Flat twin tinsel cord	60227 IEC 41	H03VH-Y
Light polyvinyl chloride sheathed flexible cord	60227 IEC 52	H03VV-F H03VVH2-F
Ordinary polyvinyl chloride sheathed flexible cord	60277 IEC 53	H05VV-F H05VVH2-F
Rubber insulated cords		
Braided cord	60245 IEC 51	H03RT-F
Ordinary tough rubber sheathed flexible cord	60245 IEC 53	H05RR-F
Ordinary polychloroprene sheathed flexible cord	60245 IEC 57	H05RN-F
Heavy polychloroprene sheathed flexible cord	60245 IEC 66	H07RN-F
Cords having high flexibility		
Rubber insulated and sheathed cord	60245 IEC 86	H03RR-H
Rubber insulated, crosslinked PVC sheathed cord	60245 IEC 87	H03RV4-H
Crosslinked PVC insulated and sheathed cord	60245 IEC 88	H03V4V4-H

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 with A1: 2009 and A2:2013
U.S.A. NATIONAL DIFFERENCES
Information technology equipment – Safety – Part 1: General requirements

Differences according to ..... :	UL 60950-1-07(Second Edition) + A1: 2011 + A2: 2014
Attachment Form No. ..... :	US_ND_IEC60950_1F
Attachment Originator ..... :	UL
Master Attachment ..... :	Date 2014-07

	Special national conditions		
1.1.1	All equipment is designed as to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and if applicable, the National Electrical Safety Code, IEEE C2	Unit was evaluated according to IEC 60950-1. The requirements have to be checked during national approval.	N/A
	Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75		N/A
1.1.2	Baby monitors are required to additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A		P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the /NEC	Equipment is for building-in, shall be evaluated in end product.	N/A
	For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC are required to have special construction features and identification markings		N/A
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings	Single-phase equipment.	N/A
	A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and		N/A
	- if it is part of a range that extends into the Table 2 "Normal Operating Conditions"		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Likewise, a voltage rating is not to be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions"		N/A
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with NEC or CEC Part 1 or NEC are marked with the voltage rating and “Class 2” or equivalent	No such fuse.	N/A
	- Marking is located adjacent to the terminals		N/A
	- Marking is visible during wiring		N/A
2.5	Fuse providing Class 2, Limited Power Source, or TNV current limiting is not operator-accessible unless it is not interchangeable	No such fuse.	N/A
2.6	Equipment with isolated ground (earthing) receptacles is in compliance with NEC 250.146(D) and CEC 10-112 and 10-906(8)		N/A
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is provided for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable.	No such components provided.	N/A
	Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, provided with special transformer overcurrent protection		N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains is in accordance with the NEC/CEC	Overall acceptance has to be evaluated during the national approval process.	N/A
3.2.1	Attachment plugs of power supply cords are rated not less than 125 percent of the rated current of the equipment	No power supply cords provided.	N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment comply with special earthing, wiring, marking and installation instruction requirements		N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs	Not permanent connection equipment.	N/A
3.2.5	Power supply cords are no longer than 4.5 m in length	No power supply cord provided.	N/A
	Minimum cord length is 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement		N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	Flexible power supply cords are compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC		N/A
3.2.9	Permanently connected equipment has a suitable wiring compartment and wire bending space	Not permanent connection equipment.	N/A
3.3	Wiring terminals and associated spacings for field wiring connections comply with CSA C22.2 No. 0	No wiring terminals.	N/A
3.3.3	Wire binding screws are not attached with conductors larger than 10 AWG (5.3 mm^2)	No binding screws.	N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are suitable for Canadian/US wire gauge sizes, are	No wiring terminals.	N/A
	- rated 125 per cent of the equipment rating, and		N/A
	- are specially marked when specified (1.7.7)		N/A
3.3.5	Revise first column of Table 3E to “Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration”		N/A
3.4.2	Motor control devices are provided for cord-connected equipment with a motor if the equipment is rated more than 12 A,	Equipment is not such a device.	N/A
	- or if the motor has a nominal voltage rating greater than 120 V		N/A
	- or is rated more than 1/3 hp (locked rotor current over 43 A)		N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers have the "on" position indicated by the handle in the up position	No such device incorporated.	N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes have a battery disconnect means that may be connected to the computer room remote power-off circuit	Not such application.	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment complies with NFPA 30	No liquids provided.	N/A
4.3.13.5.1	Equipment with lasers meets the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No laser provided.	N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m^3 (27 cu ft) have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge	Not automated information storage systems.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9m^2 (10 sq ft) or a single dimension greater than 1.8 m (6 ft) have a flame spread rating of 50 or less	No such enclosure.	N/A
	For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less		N/A
4.7.3.1	Non-metallic enclosures of equipment for use in spaces used for environmental air (plenums) are required to comply with UL 2043		N/A
Annex H	Equipment that produces ionizing radiation complies with U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370)	No ionizing radiation.	N/A
	Other National Differences		
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements. These components include: attachment plugs, battery backup systems, battery packs, cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, electrochemical capacitor modules (energy storage modules with ultracapacitors), enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cut-offs, thermostats, (multi-layer) transformer winding wire, surge protective devices, tubing, vehicle battery adapters, wire connectors, and wire and cables	UL approved components used. (see appended table 1.5.1 of IEC 60950-1 test report for details)	P
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply		P
	This maximum operating voltage includes consideration of the battery charging “float voltage” associated with the intended supply system, regardless of the marked power rating of the equipment	No TNV circuits.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 V_{peak} or 60 Vd.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions	No TNV circuits.	N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts	No TNV circuits.	N/A
2.6.2	Equipment with functional earthing marked with the functional earthing symbol (IEC 60417-6092)	Overall acceptance has to be evaluated during the national approval process.	N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified	Overall acceptance has to be evaluated during the national approval process.	N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more reduce the risk of injury due to the implosion of the CRT	No CRT.	N/A
4.3.2	Equipment with handles complies with special loading tests		N/A
4.3.8	Battery packs for both portable and stationary applications comply with special component requirements	No battery.	N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals comply with a special touch current measurement tests	No TNV circuits.	N/A
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are overloaded	Compliance checked. (see appended table 5.3 of IEC 60950-1 test report for details)	P
	During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test is repeated twice (three tests total) using new components as necessary	See above	P
6.4	Equipment intended for connection to telecommunication network outside plant cable is protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC	No TNV circuits.	N/A
Annex EE	Articulated accessibility probe (Fig EE.3) is used for assessing accessibility to document/media shredders instead of the Figure 2A test finger		N/A
Annex M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions	No TNV circuits.	N/A

IEC60950_1F - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Annex NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear comply with special acoustic pressure requirements	No TNV circuits.	N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 with A1:2009 and A2:2013
CANADA NATIONAL DIFFERENCES
Information technology equipment – Safety – Part 1: General requirements

Differences according to.....:	CAN/CSA-C22.2 No. 60950-1-07, Amd 1:2011, Amd 2:2014
Attachment Form No.....:	CA_ND_IEC60950_1F
Attachment Originator .....:	CSA
Master Attachment.....:	Date (2015-05)

1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	Unit was evaluated according to IEC 60950-1. The requirements have to be checked during national approval.	N/A
1.1.2	Baby monitors are required to additionally comply with ASTM F2951, Consumer Safety Specification for Baby Monitors.		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A:		P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g., DP, CL2) specified in the CEC/NEC. For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the CEC/NEC are required to have special construction features and identification markings.	Equipment is for building-in, shall be evaluated in end product.	N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings. A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and if it is part of a range that extends into the Table 2 "Normal Operating Conditions." Likewise, a voltage rating shall not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."	Single phase.	N/A
1.7.7	Wiring terminals intended to supply Class 2 outputs in accordance with CEC Part 1 or NEC shall be marked with the voltage rating and “Class 2” or equivalent. Marking shall be located adjacent to the terminals and shall be visible during wiring.	Not applied for.	N/A
2.5	Where a fuse is used to provide Class 2, Limited Power Source, or TNV current limiting, it shall not be operator-accessible unless it is not interchangeable.	No such fuse.	N/A
2.6	Equipment with isolated ground (earthing) receptacles are required to comply with NEC 250.146(D) and CEC 10-112 and 10-906(8).		N/A
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets and receptacles (such as supplied in power distribution units) if the supply branch circuit protection is not suitable. Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require special transformer overcurrent protection.	No such components provided.	N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains shall be in accordance with the NEC/CEC.	Overall acceptance has to be evaluated during the national approval process.	N/A
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.	No power supply cords provided.	N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instruction requirements.		N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.	Not permanent connection equipment.	N/A
3.2.5	Power supply cords are required to be no longer than 4.5 m in length. 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.	No power supply cord provided.	N/A
3.2.9	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.	Not permanent connection equipment.	N/A
3.3	Wiring terminals and associated spacings for field wiring connections shall comply with CSA C22.2 No. 0	No wiring terminals.	N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm^2).	No binding screws.	N/A
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for US/Canadian wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).	No such wiring.	N/A
3.3.5	First column of Table 3E revised to require “Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration.”		N/A
3.4.2	Motor control devices are required for cord-connected equipment with a motor if the equipment is rated more than 12 A, or if the motor has a nominal voltage rating greater than 120 V, or is rated more than 1/3 hp (locked rotor current over 43 A).	Equipment is not such a device.	N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position.	No such device incorporated.	N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the computer room remote power-off circuit.	Not such application.	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.	No liquids provided.	N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.13.5.1	Equipment with lasers is required to meet the U.S. Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No laser provided.	N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 0.76 m^3 (27 cu ft) are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.	Not automated information storage systems.	N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m^2 (10 sq ft) or a single dimension greater than 1.8 m (6 ft) are required to have a flame spread rating of 50 or less. For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.	No such enclosure.	N/A
	Non-metallic enclosures of equipment for use in spaces used for environmental air (plenums) are required to comply with UL 2043.		N/A
Annex H	Equipment that produces ionizing radiation is required to comply with the U.S. Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No ionizing radiation.	N/A
OTHER DIFFERENCES The following key national differences are based on requirements other than national regulatory requirements.			
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (Canadian and/or U.S.) component or material standard requirements. These components include: attachment plugs, battery packs (rechargeable type, used with transportable equipment), cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits,	UL approved components used. (see appended table 1.5.1 of IEC 60950-1 test report for details)	P

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
	receptacles, solid state controls, supplementary protectors, switches (including interlock switches), thermal cutoffs, thermostats, (multi-layer) transformer winding wire, transient voltage surge suppressors, tubing, wire connectors, and wire and cables.		
1.6.1.2	A circuit for connection to the DC Mains Supply is classified as either a SELV Circuit, TNV-2 Circuit or Hazardous Voltage Circuit depending on the maximum operating voltage of the supply. This maximum operating voltage shall include consideration of the battery charging “float voltage” associated with the intended supply system, regardless of the marked power rating of the equipment.		N/A
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vpeak or 60 Vd.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.	No TNV circuits.	N/A
2.3.2.1	In the event of a single fault between TNV and SELV circuits, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.	No TNV circuits.	N/A
2.6.2	Equipment with functional earthing is required to be marked with the functional earthing symbol (IEC 60417-6092).		N/A
2.6.3.4	Protective bonding conductors of non-standard protective bonding constructions (e.g., printed circuit traces) may be subjected to the additional limited short circuit test conditions specified.	Overall acceptance has to be evaluated during the national approval process.	N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more are required to reduce the risk of injury due to the implosion of the CRT.	No CRT.	N/A
4.3.2	Equipment with handles is required to comply with special loading tests.		N/A
4.3.8	Battery packs for both portable and stationary applications are required to comply with special component requirements.		N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.	No TNV circuits.	N/A
5.3.7	Internal (e.g., card cage) SELV circuit connectors and printed wiring board connectors that are accessible to the operator and that deliver power are to be overloaded.	Compliance checked. (see appended table 5.3 of IEC 60950-1 test report for details)	P

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
	During abnormal operating testing, if a circuit is interrupted by the opening of a component, the test shall be repeated twice (three tests total) using new components as necessary.		
6.4	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.	No TNV circuits.	N/A
Annex EE	UL articulated accessibility probe (Fig EE.3) required for assessing accessibility to document/media shredders instead of the Figure 2A test finger.		N/A
M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.	No TNV circuits.	N/A
Annex 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.	No TNV circuits.	N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
FINLAND NATIONAL DIFFERENCES
Information technology equipment – Safety –
Part 1: General requirements

Differences according to.....: EN 60950-1:2006/A11:2009/A1:2010

Attachment Form No.....: FI_ND_IEC60950_1C
Attachment Originator .....: SGS Fimko Ltd
Master Attachment.....: Date (2010-04)

	National Differences		P
General	See also Group Differences (EN 60950-1:2006/A11/A1)		P
1.5.7.1	In **Finland** 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	In **Finland,** the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A
1.7.2.1	In **Finland**,CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in in Finland shall be as follows: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"		N/A
2.3.2	In **Finland,** there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.10.5.13	In **Finland,** there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	In **Finland,** TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that - is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and - has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and - is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.		N/A
6.1.2.1 (A1:2010)	In **Finland,** 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.		P

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + 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 60384-14:2005, subclass Y2. A capacitor classified Y3 according to 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 60384-14:2005 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 60384-14:2005; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14:2005, in the sequence of tests as described in EN 60384-14:2005.		
6.1.2.2	In **Finland,** the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N/A
7.2	In **Finland,** for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
GERMANY NATIONAL DIFFERENCES
Information technology equipment – Safety –
Part 1: General requirements

Differences according to.....: VDE 0805-1:2011-01

Annex ZC, 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

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
ISRAEL NATIONAL DIFFERENCES
Information technology equipment – Safety –
Part 1: General requirements

Differences according to.....: SI 60950 Part 1

1.1.1	Replace the the text of Note 3 as follows: The requirements of Israel Standard SI 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment.	Overall acceptance has to be evaluated during the national approval process.	N/A
1.6	The clause is applicable with the following addition:		N/A
1.6.1	Add following note: In Israel, this clause is applicable subject to the Electricity Law, 1954, its regulations and revisions.		N/A
1.7	The clause is applicable with the following additions: Subclause 1.7.201 shall be added at the beginning of the clause as follows:		N/A
1.7.201	Marking in the Hebrew language The marking in the Hebrew language shall be in accordance with the Consumer Protection Order (Marking of goods), 1983. In addition to 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 it 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 manufacture.		N/A
1.7.2.1	The following shall be added to the clause: All the instructions and warnings related to safety shall also be written in the Hebrew language.		N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
2	The clause is applicable with the following additions:		N/A
2.9.4	The following shall be added at the beginning of the clause: In Israel, according to the Electricity Law, 1954, and the Electricity Regulations (Earthing and means of protection against electricity of voltages up to 1,000V) 1991, seven means of protection against electrocution are permitted, as follows: 1) TN-S - Network system earthing; TN-C-S - Network system earthing; 2) TT - Network system earthing; 3) IT - Network Insulation Terre; 4) Isolated transformer; 5) Safety extra low voltage (SELV or ELV); 6) Residual current circuit breaker (30 mA = IΔ); 7) Reinforced insulation; Double insulation (class II)		N/A
2.201	Prevention of electromagnetic interference - 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 in 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	The clause is applicable with the following additions:		N/A
3.2.1.1	Connection to an a.c. mains supply After the note, the following note shall be added: Note: In Israel, the feed plug shall comply with the requirements of Israel Standard SI 32 Part 1.1.		N/A
3.2.1.2	Connection to a d.c. mains supply At the end of the first paragraph, the following note shall be added: Note: At the time of issue of this Standard, there is no Israel Standard for connection accessories to d.c.		N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
Annex P	Normative references (List of relevant Israel Standards that have been inserted in place of some of the International Standards)		N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
KOREA NATIONAL DIFFERENCES
Information technology equipment – Safety –
Part 1: General requirements

Differences according to.....: K 60950-1

1.5.101	Plugs for the connection of the apparatus to the supply mains shall comply with the Korean requirement (KSC 8305)		N/A
8	EMC The apparatus shall comply with the relevant CISPR standards.	Should be provided during national approval.	N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
AUSTRALIA and NEW ZEALAND NATIONAL DIFFERENCES
Information technology equipment – Safety –
Part 1: General requirements

Differences according to.....: AS/NZS 60950.1:2011

1.2	Insert the following between 'person, service' and 'range, rated frequency': POTENTIAL IGNITION SOURCE 1.2.12	Inserted.	N/A
1.2.12.201	Insert a new Clause 1.2.12.201 after Clause 1.2.12.15 as follows: **1.2.12.201** **POTENTIAL IGNITION SOURCE** Possible fault which can start a fire if the open-circuit voltage measured across an interruption or faulty contact exceeds a value of 50 V (peak) a.c. or d.c. and the product of the peak value of this voltage and the measured r.m.s. current under normal operating conditions exceeds 15 VA. Such a faulty contact or interruption in an electrical connection includes those which may occur in CONDUCTIVE PATTERNS on PRINTED BOARDS. NOTE 201 An electronic protection circuit may be used to prevent such a fault from becoming a POTENTIAL IGNITION SOURCE. NOTE 202 This definition is from AS/NZS 60065:2003.	Inserted.	N/A
1.5.1	1. Add the following to the end of the first paragraph: 'or the relevant Australian/New Zealand Standard.' 2. In NOTE 1, add the following after the word 'standard': 'or an Australian/New Zealand Standard'	Added.	N/A
1.5.2	Add the following to the end of the first and third dash items: 'or the relevant Australian/New Zealand Standard'	Added.	N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict

3.2.5.1	Modify Table 3B as follows: 1. Delete the first four rows and replace with the following: <table><tr><td rowspan="2">RATED CURRENT of equipment A</td><td colspan="2">Minimum conductor sizes</td></tr><tr><td>Nominal cross-sectional area mm^2</td><td>AWG or kcmil [cross-sectional area in mm^2] see Note 2</td></tr><tr><td>Over 0.2 up to and including 3 Over 3 up to and including 7.5 Over 7.5 up to and including 10 Over 10 up to and including 16</td><td>0,5 [a] 0,75 (0,75) [b] 1,00 (1,0) [c] 1,5</td><td>18 [0,8] 16 [1,3] 16 [1,3] 14 [2]</td></tr></table> 2. Delete NOTE 1. 3. Delete Footnote [a] and replace with the following: [a] This nominal cross-sectional area is only allowed for Class II appliances if the length of the power supply cord, measured between the point where the cord, or cord guard, enters the appliance, and the entry to the plug does not exceed 2 m (0,5 mm^2 three-core supply flexible cords are not permitted; see AS/NZS 3191).	Modified.	N/A
4.1.201	Insert a new Clause 4.1.201 after Clause 4.1 as follows: **4.1.201 Display devices used for television purposes** Display devices which may be used for television purposes, with a mass of 7 kg or more, shall comply with the requirements for stability and mechanical hazards, including the additional stability requirements for television receivers, specified in AS/NZS 60065.	Inserted.	N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.6	Delete the third paragraph and replace with the following: Equipment with a plug portion, suitable for insertion into a 10 A 3-pin flatpin socket-outlet complying with AS/NZS 3112 shall comply with the requirements in AS/NZS 3112 for equipment with integral pins for insertion into socket-outlets.	Deleted.	N/A
4.3.16.5	Add the following to the end of the first paragraph: 'or AS/NZS 2211.1'	Added.	N/A
4.7	Add the following new paragraph to the end of the clause: 'For alternate tests refer to Clause 4.7.201.'	Added.	N/A
4.7.201	Insert a new Clause 4.7.201 after Clause 4.7.3.6 as follows: **4.7.201 Resistance to fire – Alternative tests**	Inserted.	N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.201.1	**4.7.201.1 General** Parts of non-metallic material shall be resistant to ignition and spread of fire. This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames from inside the apparatus, or the following: (a) Components that are contained in an enclosure having a flammability category of V-0 according to AS/NZS 60695.11.10 and having openings only for the connecting wires filling the openings completely, and for ventilation not exceeding 1mm in width regardless of length. (b) The following parts which would contribute negligible fuel to a fire: - small mechanical parts, the mass of which does not exceed 4g, such as mounting parts, gears, cams, belts and bearings; - small electrical components, such as capacitors with a volume not exceeding 1,750 mm^3, integrated circuits, transistors and optocoupler packages, if these components are mounted on material of flammability category V-1, or better, according to AS/NZS 60695.11.10. NOTE In considering how to minimize propagation of fire and what 'small parts' are, account should be taken of the cumulative effect of small parts adjacent to each other for the possible effect of propagating the fire from one part to another. Compliance shall be checked by the tests of 4.7.201.2, 4.7.201.3, 4.7.201.4 and 4.7.201.5. For the base material of printed boards, compliance shall be checked by the test of 4.7.201.5. The tests shall be carried out on parts of non-metallic material which have been removed from the apparatus. When the glow-wire test is carried out, the parts shall be placed in the same orientation as they would be in normal use. These tests are not carried out on internal wiring.	Equipment under test and materials used materials and components in compliance with requirements of IEC 60950-1.	N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict

4.7.201.2	**4.7.201.2 Testing of non-metallic materials** Parts of non-metallic material shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 550 °C. Parts for which the glow-wire test cannot be carried out, such as those made of soft or foamy material, shall meet the requirements specified in ISO 9772 for category FH-3 material. The glow-wire test shall be not carried out on parts of material classified at least FH-3 according to ISO 9772 provided that the sample tested was not thicker than the relevant part.		N/A
4.7.201.3	**4.7.201.3 Testing of insulating materials** Parts of insulating material supporting POTENTIAL IGNITION SOURCES shall be subject to the glow-wire test of AS/NZS 60695.2.11 which shall be carried out at 750 °C. The test shall be also carried out on other parts of insulating material which are within a distance of 3 mm of the connection. NOTE Contacts in components such as switch contacts are considered to be connections. For parts which withstand the glow-wire test but produce a flame, other parts above the connection within the envelope of a vertical cylinder having a diameter of 20 mm and a height of 50 mm shall be subjected to the needle-flame test. However, parts shielded by a barrier which meets the needle-flame test shall not be tested. The needle-flame test shall be made in accordance with AS/NZS 60695.11.5 with the following modifications:		N/A

Clause of AS/NZS 60695.11.5	Change
9 Test procedure	
9.2 Application of needleflame	Replace the first paragraph with: The specimen shall be arranged so that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1. If possible the flame shall be applied at least 10

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict

		mm from a corner Replace the second paragraph with: The duration of application of the test flame shall be 30 s ±1 s.		
		9.3 Number of test specimens	Replace with: The test shall be made on one specimen. If the specimen does not withstand the test, the test may be repeated on two further specimens, both of which shall withstand the test.	
		11 Evaluation of test results	Replace with: The duration of burning (t_b) shall not exceed 30 s. However, for printed circuit boards, it shall not exceed 15 s.	
	The needle-flame test shall not be carried out on parts of material classified as V-0 or V-1 according to AS/NZS 60695.11.10, provided that the sample tested was not thicker than the relevant part.			

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.201.4	**4.7.201.4 Testing in the event of non-extinguishing material** If parts, other than enclosures, do not withstand the glow wire tests of 4.7.201.3, by failure to extinguish within 30 s after the removal of the glowwire tip, the needle-flame test detailed in 4.7.201.3 shall be made on all parts of non-metallic material which are within a distance of 50 mm or which are likely to be impinged upon by flame during the tests of 4.7.201.3. Parts shielded by a separate barrier which meets the needle-flame test need not be tested. NOTE 1 If the enclosure does not withstand the glow-wire test the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing. NOTE 2 If other parts do not withstand the glow-wire test due to ignition of the tissue paper and if this indicates that burning or glowing particles can fall onto an external surface underneath the equipment, the equipment is considered to have failed to meet the requirements of Clause 4.7.201 without the need for consequential testing. NOTE 3 Parts likely to be impinged upon by the flame are considered to be those within the envelope of a vertical cylinder having a radius of 10 mm and a height equal to the height of the flame, positioned above the point of the material supporting, in contact with, or in close proximity to, connections.		N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
4.7.201.5	**4.7.201.5 Testing of printed boards** The base material of printed boards shall be subjected to the needle-flame test of Clause 4.7.201.3. The flame shall be applied to the edge of the board where the heat sink effect is lowest when the board is positioned as in normal use. The flame shall not be applied to an edge, consisting of broken perforations, unless the edge is less than 3 mm from a POTENTIAL IGNITION SOURCE. The test is not carried out if the — - Printed board does not carry any POTENTIAL IGNITION SOURCE; - Base material of printed boards, on which the available apparent power at a connection exceeds 15 VA operating at a voltage exceeding 50 V and equal or less than 400 V (peak) a.c. or d.c. under normal operating conditions, is of flammability category V-1 or better according to AS/NZS 60695.11.10, or the printed boards are protected by an enclosure meeting the flammability category V-0 according to AS/NZS 60695.11.10, or made of metal, having openings only for connecting wires which fill the openings completely; or - Base material of printed boards, on which the available apparatus power at a connection exceeds 15 VA operating at a voltage exceeding 400 V (peak) a.c. or d.c. under normal operating conditions, and base material of printed boards supporting spark gaps which provides protection against overvoltages, is of flammability category V-0 according to AS/NZS 60695.11.10 or the printed boards are contained in a metal enclosure, having openings only for connecting wires which fill the openings completely. Compliance shall be determined using the smallest thickness of the material. NOTE Available apparent power is the maximum apparent power which can be drawn from the supplying circuit through a resistive load whose value is chosen to maximise the apparent power for more than 2 min when the circuit supplied is disconnected.		N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
6.2.2	For Australia only, delete the first paragraph and Note, and replace with the following: In Australia only, compliance with 6.2.2 shall be checked by the tests of both 6.2.2.1 and 6.2.2.2.	Considered.	N/A
6.2.2.1	For Australia only, delete the first paragraph including the Notes, and replace with the following: In Australia only, the electrical separation is subjected to 10 impulses of alternating polarity, using the impulse test generator reference 1 of Table N.1. The interval between successive impulses is 60 s and the initial voltage, Uc, is: (i) for 6.2.1 a): 7.0 kV for hand-held telephones and for headsets and 2.5 kV for other equipment; and (ii) for 6.2.1 b) and 6.2.1 c): 1.5 kV. NOTE 201 The 7 kV impulse simulates lightning surges on typical rural and semi-rural network lines. NOTE 202 The value of 2.5 kV for 6.2.1 a) was chosen to ensure the adequacy of the insulation concerned and does not necessarily simulate likely overvoltages.	No TNV circuit.	N/A
6.2.2.2	For Australia only, delete the second paragraph including the Note, and replace with the following: In Australia only, the a.c. test voltage is: (i) for 6.2.1 a): 3 kV; and (ii) for 6.2.1 b) and 6.2.1 c): 1.5 kV. NOTE 201 Where there are capacitors across the insulation under test, it is recommended that d.c. test voltages are used. NOTE 202 The 3 kV and 1.5 kV values have been determined considering the low frequency induced voltages from the power supply distribution system.	No TNV circuit.	N/A
7.3	Add the following before the first paragraph: Equipment providing functions that fall only within the scope of AS/NZS 60065 and that incorporate a PSTN interface, are not required to comply with this Clause where the only ports provided on the equipment, in addition to a coaxial cable connection and a PSTN interface, are audio or video ports and analogue or data ports not intended to be used for telecommunications purposes.	Added.	N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
Annex P	Normative references (List of relevant Australia/New Zealand Standards that have been inserted in place of some of the International Standards)	Considered.	P

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict

J 60950-1 (H22) : 2010 TEST REPORT (Deviations from IEC 60950-1:2001, first edition) Special National conditions, National deviation and other information according to MITI Ordinance No. 85. *Japanese unique deviations* in J60950-1(H22):2010(=JIS C 6950-1:2009)			
1.2.4.1	Add the following new notes. Note: Even if the equipment is designed as Class I, the equipment is regarded as Class 0I equipment when 2-pin adaptor with earthing lead wire or cord set having 2-pin plug with earthing lead wire is provided or recommended.	Added. The equipment is “Class I”.	N/A
1.2.4.3A	Add the following new clause. 1.2.4.3A CLASS 0I EQUIPMENT Equipment having attachment plug without earthing blade, where protection against electric shock is achieved by: - using BASIC INSULATION, and - providing externally an earth terminal or a lead wire for earthing in order to connect those conductive parts that might assume a HAZARDOUS VOLTAGES in the event of BASIC INSULATION fault to the PROTECTIVE EARTHING CONDUCTOR in the building wiring. NOTE – Class 0I equipment may have a part constructed with Double Insulation or Reinforced Insulation circuit.	Added. The equipment is “Class I”.	N/A
1.3.2	Add the following notes after first paragraph: Note 1 Transportable or similar equipment that are relocated frequently for intended usage should not be designed as Class I or Class 0I equipment unless it is intended to be installed by service personnel. Note 2 Considering wiring circumstance in Japan, equipment intended to be installed where the provision for earthing connection is unlikely should not be designed as Class I or Class 0I equipment unless it is intended to be installed by service personnel.	Added.	N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.1	Replace the first paragraph with the follows: Where safety is involved, components shall comply either with the requirements of this standard, with the safety aspects of the relevant JIS component standard, or IEC component standards in case there is no applicable JIS component standard is available. However, a component that falls within the scope of METI Ministerial ordinance No. 85 is properly used in accordance with its marked ratings, requirements of 1.5.4, 2.8.7 and 3.2.5 apply, and in addition, a cord connector of power supply cord set mating with appliance inlet complying with the standard sheet of IEC 60320-1, shall comply with relevant standard sheet of IEC 60320-1. Replace Note 1 with the following: Note 1 A JIS or an IEC component standard is considered relevant only if the component in question clearly falls within its scope.	Replaced.	P
1.5.2	Replace first sentence in the first dashed paragraph with the following: - a component that has been demonstrated to comply with a JIS component standard harmonized with the relevant IEC component standard, or where such JIS component standard is not available, a component that has been demonstrated to comply with the relevant IEC component standard shall be checked for correct application and use in accordance with its rating. Add a note after the first dashed paragraph as follows: Note 1 See 1.7.5A when Type C.14 appliance coupler rated 10 A per IEC 60320-1 is used with an equipment rated not more than 125 V and rated more than 10 A. Replace first sentence in the third dashed paragraph as follows: - where no relevant IEC component standard or JIS component standard harmonized with the relevant IEC component standard exists, or where components are used in circuits not in accordance with their specified rating, the components shall be tested under the conditions occurring in the equipment.	Replaced.	N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.1	Replace fifth dashed parapgaph with the following: - manufacturer's or responsible company's name or trade-mark or identification mark;	Replaced.	P
1.7.5A	Add the following new clause. after 1.7.5 1.7.5A Appliance Coupler If appliance coupler according to IEC60320-1, C.14(rated current: 10A)is used in equipment whose rated voltage is less than 125V and rated current is over 10A, the following instruction or equivalent shall be described in the user instruction. " Use only designated cord set attached in this equipment"	Equipment is for building-in, shall be evaluated in end product.	N/A
1.7.12	Replace first sentence with the following: Instructions and equipment marking related to safety shall be in Japanese.	Overall acceptance has to be evaluated during the national approval process.	N/A
1.7.17A	Add the following new clause. after 1.7.17 1.7.17A Marking for CLASS 0I EQUIPMENT For CLASS 0I EQUIPMENT, the following instruction shall be marked on the visible place of the mains plug or the main body: "Provide an earthing connection" Moreover, for CLASS 0I EQUIPMENT, the following or equivalent instruction shall be indicated on the visible place of the main body or written in the operating instructions: "Provide an earthing connection before the mains plug is connected to the mains. And, when disconnecting the earthing connection, be sure to disconnect after pulling out the mains plug from the mains."	The equipment is "Class I".	N/A
2.6.3.2	Add the following after 1st paragraph. This also applies to the conductor of lead wire for protective earthing of CLASS 0I EQUIPMENT.	The equipment is "Class I".	N/A
2.6.4.2	Replace 1st paragraph with the following. Equipment required to have protective earthing shall have a main protective earthing terminal. For equipment with a DETACHABLE POWER SUPPLY CORD, the earthing terminal in the appliance nlet is regarded as the main protective earthing terminal except for CLASS 0I EQUIPMENT providing separate main protective earthing terminal other than appliance inlet.	No power supply cord provided.	N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.5.4	Replace 1st sentence with the following. Protective earthing connections of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the following:	Replaced.	P
2.6.5.8A	Add the following new clause. after 2.6.5.8A 2.6.5.8A Earthing of CLASS 0I EQUIPMENT Plugs with a lead wire for earthing shall not be used for equipment having a rated voltage exceeding 150V. For plugs with a lead wire for earthing, the lead wire shall not be earthed by a clip. CLASS 0I EQUIPMENT shall be provided with an earthing terminal or lead wire for earthing in the external location where easily visible.	The equipment is “Class I”	N/A
3.2.3	Add the following after Table 3A: Table 3A applies when cables complying JIS C 3662 or JIS C 3663 are used. In case of other cables, cable entries shall be so designed that a conduit suitable for the cable used can be fitted.	Added.	N/A
3.2.5.1	Add the following to the last of first dashed paragraph. Or mains cords shall be of the sheathed type complying with Appendix 1 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance. Add the following to the last of second dashed paragraph. Or mains cords shall be of the sheathed type complying with Appendix 1 of Article 1 of the Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance.. Delete 1) in Table 3B.	No power supply cord provided.	N/A
3.3.4	Add the following note to Table 3D: Note For cables other than those complying with JIS C 3662 or JIS C 3663, terminals shall be suitable for the size of the intended cables.	Added.	N/A
3.3.7	Add the following after the first sentence: This requirement is not applicable to the external earting terminal of Class 0I equipment.	Added.	N/A
4.3.4	Add the following after the first sentence: This requirement also applies to those connections in Class 0I equipment, where CLEARANCE or CREEPAGE DISTANCES over BASIC INSULATION would be reduced to less than the values specified in 2.10.	Added.	N/A

Japanese Deviations for J60950-1 (H22):2010 (MITI Ordinance Clause 2)

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict

5.1.3	Add a note after the first paragraph as follows: Note – Attention should be drawn to that majority of three-phase power system in Japan is of delta connection, and therefore, in that case, test is conducted using the test circuit from IEC 60990, figure 13.	Added. .	N/A
5.1.6	Replace Table 5A. as follows	Replaced.	N/A

Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. 1)	Maximum PROTECTIVE CONDUCTOR CURRENT
ALL equipment	ALL equipment Accessible parts and circuits not connected to protective earth	0,25	-
HAND-HELD	Equipment main protective earthing terminal (if any) CLASS I EQUIPMENT	0,75	-
MOVABLE (other than HAND_HELD, but including TRANSPORTABLE EQUIPMENT		3,5	-
STATIONARY, PLUGGABLE TYPE A		3,5	-
ALL other STATIONARY EQUIPMENT - not subject to the conditions of 5.1.7 - subject to the conditions of 5.1.7		3.5 -	- 5 % of input current
HAND-HELD	Equipment main protective earthing terminal (if any) CLASS 0I EQUIPMENT	0,5	-
Others		1.0	-
1) If peak values of TOUCH-CURRENT are measured, the maximum values obtained by multiplying the r.m.s. values by 1,414.			

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
7.2	Add the following after the paragraph: However, the separation requirements and tests of 6.2.1 a), b) and c) do not apply to a CABLE DISTRIBUTION SYSTEM if all of the following apply: − the circuit under consideration is a TNV-1 CIRCUIT; and – the common or earthed side of the circuit is connected to the screen of the coaxial cable and to all accessible parts and circuits (SELV, accessible metal parts and LIMITED CURRENT CIRCUITS, if any); and – the screen of the coaxial cable is intended to be connected to earth in the building installation	Added.	N/A
W.1	Replace second and third sentence in the first paragraph with the following: This distinction between earthed and unearthed (floating) circuit is not the same as between CLASS I EQUIMENT, CLASS 0I EQUIPMENT and CLASS II EQUIPMENT. Floating circuits can exist in CLASS I EQUIPMENT or CLASS 0I EQUIPMENT and earthed circuits in CLASS II EQUIPMENT.	Replaced.	P

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1
CHINA NATIONAL DIFFERENCES
Information technology equipment – Safety –
Part 1: General requirements

Differences according to.....: GB4943.1-2011

1.1.2	GB 4943.1-2011 applies to equipment for use at altitudes not exceeding 5000m above sea level, primarily in regions with moderate or tropical climates. Amend the third dashed paragraph of 1.1.2 as: — — equipment intended to be used in vehicles, on board ships or aircraft, at altitudes greater than 5000m;	Amended. Considered.	P
1.4.5	After the third paragraph, add a paragraph: If the equipment is intended for direct connection to an AC mains supply, the tolerances on RATED VOLTAGE shall be taken as +10%,-10% unless a wider tolerance is declared by the manufacturer. The first dash paragraph "-the RATED VOLTAGE is 230V single -phase or 400V three-phase, in which case the tolerance shall be taken as +10% and -10%" of IEC 60950-1:2005 is deleted in GB 4943.1-2011	Added. Considered.	P
1.4.12.1	Tma in clause 1.4.12.1 amended as: Tma: is the maximum ambient temperature permitted by the manufacturer's specification, or 35 °C, whichever is greater. Add note 1: For equipment not to be operated at tropical climatic conditions, Tma: is the maximum ambient temperature permitted by the manufacturer's specification, or 25 °C, whichever is greater. Add note 2: For equipment is to be operated at 2000m-5000m above sea leave, its temperature test conditions and temperature limits are under consideration.	Amended. Considered.	P
1.5.2	Add a note behind the first break off section in Clause 1.5.2: A component used shall comply with related requirements corresponding altitude of 5000m.	Added.	P

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
1.7	Add one paragraph before the last paragraph: The required marking and instruction should be given in normative Chinese unless otherwise specified.	Added. The cautions either by symbol or appropriate Chinese wording will be provided during national approval.	P
1.7.1	Based on the AC mains supply of China, the RATED VOLTAGE should be 220V (single phase) or 380V (three-phases) for single rated voltage, for RATED VOLTAGE RANGE, it should cover 220V or 380V (three-phases), for multiple RATED VOLTAGES, one of them should be 220V or 380V (three-phases) and set on 220V or 380V (three-phases) when manufactured. And the RATED FREQUENCY or RATED FREQUENCY RANGE should be 50Hz or include 50Hz.	Considered. See section “copy of marking plate” in IEC 60950-1 test report.	P
1.7.2.1	Add requirements of warning for equipment intended to be used at altitudes not exceeding 2000m or at non-tropical climate regions: For equipment intended to be used at altitude not exceeding 2000m, a warning label containing the following or a similar appropriate wording, or a symbol as in annex DD shall fixed to the equipment at readily visible place. "Only used at altitude not exceeding 2000m."  For equipment intended to be used in not-tropical climate regions, a warning label containing the following or a similar appropriate wording, or a symbol as in annex DD shall fixed to the equipment at readily visible place. "Only used in not-tropical climate regions."  If only the symbol used, the explanation of the symbol shall be contained in the instruction manual. The above statements shall be given in a language acceptable to the regions where the apparatus is intended to be used.	Added.	N/A

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	Amended the first paragraph as: Protection in PRIMARY CIRCUITS against overcurrent short-circuits and earth faults shall be provided as an integral part of the equipment except special provisions. And the protective device shall meet the requirement of Clause 5.3. Delete note of Clause 2.7.1.	Amended and deleted. Compliance checked.	P
2.9.2	First section of Clause 2.9.2 amended as two sections: Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 120 h in a cabinet or room containing air with ambient temperature 40±2 °C and a relative humidity of (93±3)%. During this conditioning the component or subassembly is not energized. For equipment not to be operated at tropical climatic conditions, Where required by 2.9.1, 2.10.8.3, 2.10.10 or 2.10.11, humidity conditioning is conducted for 48 h in a cabinet or room containing air with a relative humidity of (93±3) %. The temperature of the air, at all places where samples can be located, is maintained within 2 °C of any convenient value between 20 °C and 30 °C such that condensation does not occur. Due to pretreatment of equipment operated at high altitude area is humidity conditioning withstand hot shock, specific requirements are to be considered. Add note: For equipment to be operated at 2000 m - 5000m above sea level, assessment and requirement of humidity conditioning for Insulation material properties are considered.	Amended and added. Considered.	P

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.1	Amend the third paragraph of Clause 2.10.3.1 to be: These requirements apply for equipment to be operated up to 2000 m above sea level. For equipment to be operated at more than 2000 m above sea level and up to 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of IEC 60664-1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment.	Amended and considered.	P
2.10.3.3& 2.10.3.4	Add "(applicable for altitude up to 2000m)" in header of Table 2K、2L and 2M.	Added.	N/A
2.10.3.4	Add a new section above Table 2K and in Clause 2.10.3.4: Minimum CLEARANCES determined by above rules apply for equipment to be operated up to 2000m above sea level. For equipment to be operated at 2000 m - 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of GB/T16935.1 (IEC 60664-1). For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of GB/T16935.1.	Added and considered	P
3.2.1.1	Add a paragraph before the last paragraph: Plugs connected to AC mains supply shall comply with GB 1002 or GB 1003 or GB/T 11918 as applicable.	Added. No power supply cord provided.	N/A
4.2.8	Clause 4.2.8 cathode ray tubes quoted Clause 18 of GB8898-2011. Delete note of Clause 4.2.8.	No CRT.	N/A

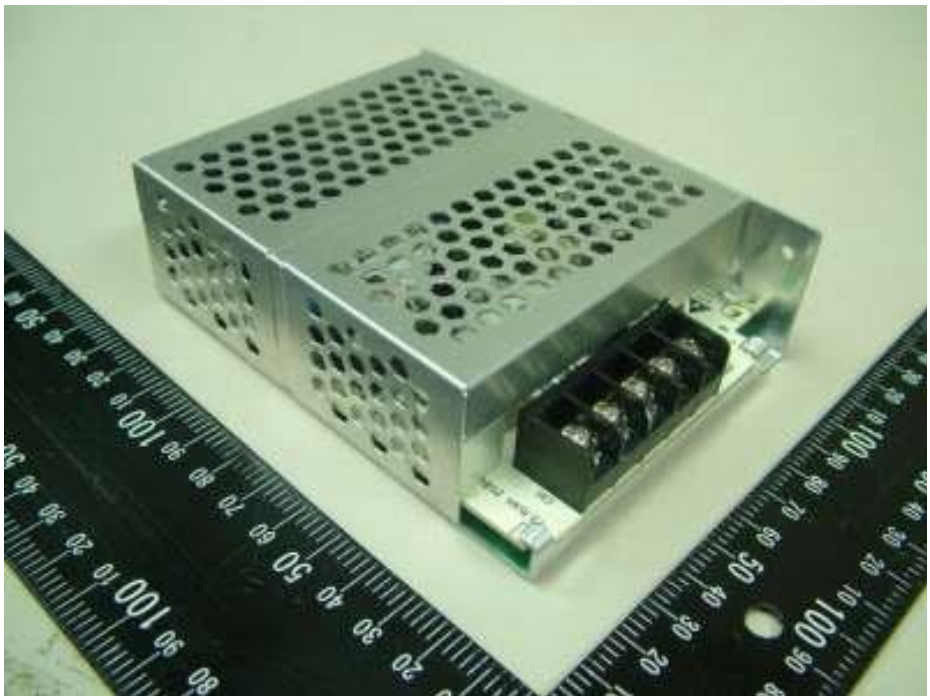
National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
Annex E	Last section of Annex E amended as: For comparison of winding temperatures determined by the resistance method of this annex with the temperature limits of Table 4B, 35 °C shall be added to the calculated temperature rise. And add note: for equipment not to be operated at tropical climatic conditions, 25 °C shall be added to the calculated temperature rise to compare with the temperature of Table 4B.	Amended. Thermocouple method used.	N/A
Annex G.6	Change the second section of Clause G.6 to be: For equipment to be operated at 2000 m - 5000m above sea level, the minimum CLEARANCE shall be multiplied by the factor 1.48 corresponding altitude of 5000m given in Table A.2 of GB/T16935.1. For equipment to be operated at more than 5000 m above sea level, the minimum CLEARANCE shall be multiplied by the factor given in Table A.2 of IEC 60664-1. Linear interpolation is permitted between the nearest two points in Table A.2. The calculated minimum CLEARANCE using this multiplication factor shall be rounded up to the next higher 0,1 mm increment.	Changed. The alternative method was not considered.	N/A
Annex BB (informative)	Amended as : The differences between Chinese national standards GB 4943.1-2011 and GB 4943-2001.	Amended.	P

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
Annex DD (normative)	Added annex DD: Instructions for the new safety warning labels. DD.1 Altitude warning label  Meaning of the label: Evaluation for apparatus only based on altitude not exceeding 2000m, therefor it's the only operating condition applied for the equipment .There may be some potential safety hazard if the equipment is used at altitude above 2000m . DD.2 Climate warning label  Meaning of the label: Evaluation for apparatus only based on temperate climate condition, therefor it's the only operating condition applied for the equipment .There may be some potential safety hazard if the equipment is used in tropical climate region.	Added.	N/A
Annex EE (informative)	Added annex EE: Illustration relative to safety explanation in normative Chinese, Tibetan, Mongolian, Zhuang Language and Uighu.	Added. See above.	P
Other amend-ments	In accordance with the relevant CTL decisions and the amendments of IEC 60950-1, the specific requirements or mistakes in IEC standard are corrected or editorially modified in this part, Including clause 1.7, 2.1.1.7, 2.9.2, Table 2H, Figure 2H, F.8, F.9, M.3 and Annex U.	Modified.	P
Quoting standards and reference documents	The principles of quoting and referring to other standards in Annex P and reference documents of IEC 60950-1 are as follows: If the date of the reference document is given, only that edition applies, excluding any subsequent corrigenda and amendments. However, parties to agreements based on this part are encouraged to investigate the possibility of applying the most recent editions of the reference documents. For undated references, the latest edition of the referenced document	Considered.	P

National Differences to IEC 60950-1:2005 + A2:2013			
Clause	Requirement + Test	Result - Remark	Verdict
	applies, including any corrigenda and amendments. For the usage of international standards in Chinese national standards and industry standards is various, in the aim of achieving easy operation and based on the requirements of GB/T 1.1 and GB/T 20000.2, when quoting an entire international standard in the normative quoting files and reference documents of Annex P of this part, the principles of quotation are as follows: - If there is no national standard or industry standard corresponding to the international standard, then the international standard is quoted; - If there is national standard or industry standard corresponding to the international standard, then either the national or industry standard is quoted; - If the date of the national standard or industry standard is not given, the latest edition of the standard applies; - The national standard or industry standard number, corresponding international standard number and the consistency level code should be identified in parentheses behind the listed national standard or industry standard. When quoting several chapters or clauses of the international standard, the principles of quotation are as follows: - If there is no national standard or industry standard corresponding to the international standard, then the international standard is quoted; - If there is national standard or industry standard corresponding to the international standard, then either the national or industry standard is quoted. Meanwhile, in order to retain the relevant information on international standards, informative annex CC is increased, which gives the table about the comparison of the normative quoting files and reference documents in IEC 60950-1: 2005 and GB 4943.1-2011.		

Product: POWER SUPPLY

Type Designation: 1. PMC-12V050W1XX, 2. PMC-12V060W1NX (X = 0-9, A-Z or blank)

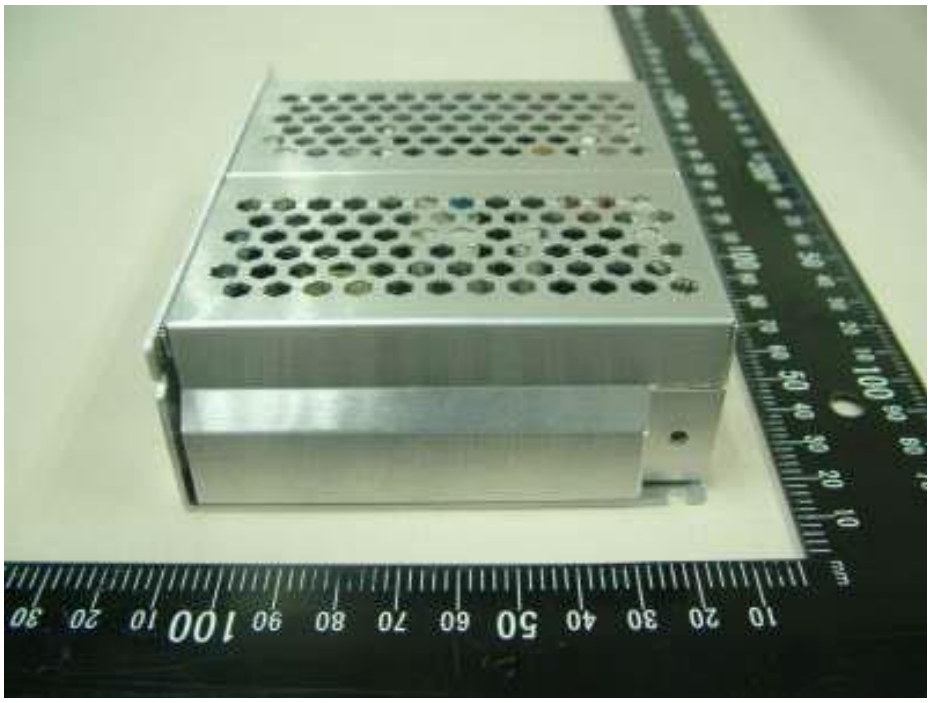


Overall view

Front view

Product: POWER SUPPLY

Type Designation: 1. PMC-12V050W1XX, 2. PMC-12V060W1NX (X = 0-9, A-Z or blank)

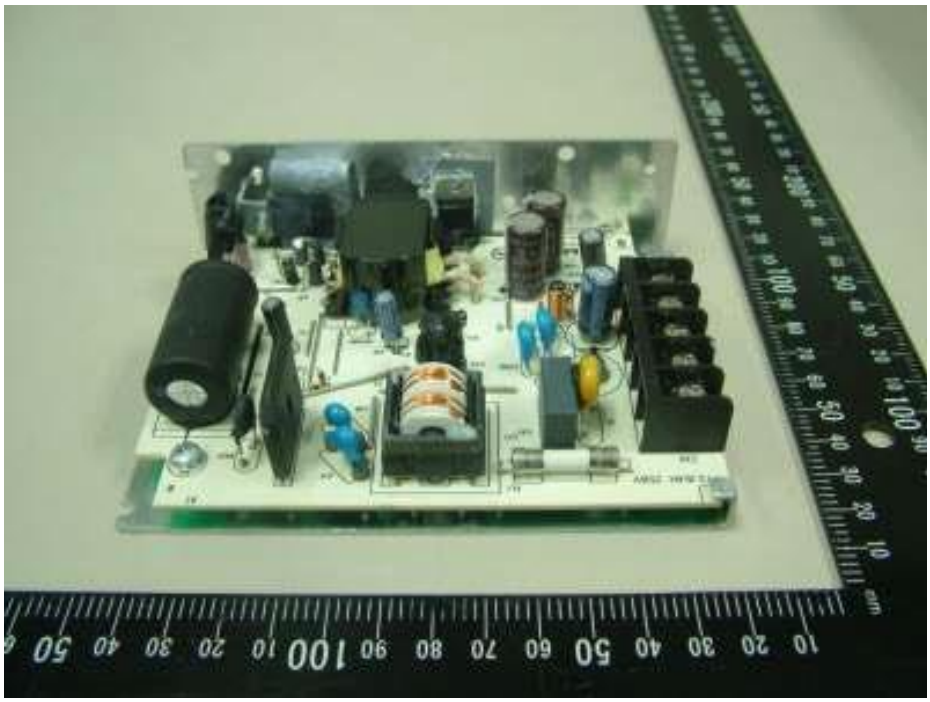


Rear view

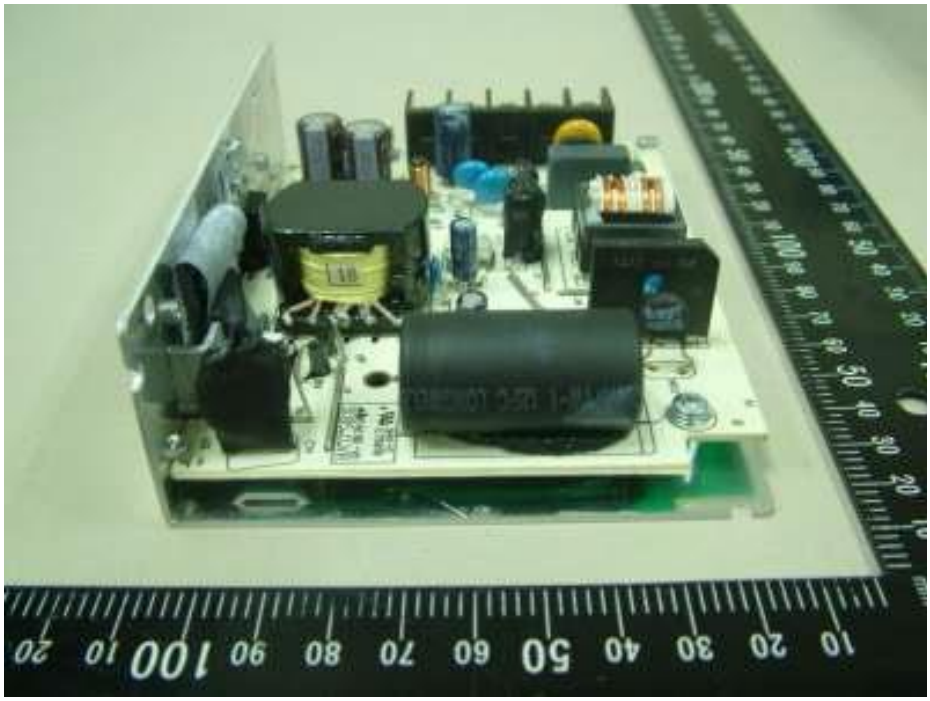
Label side

Product: POWER SUPPLY

Type Designation: 1. PMC-12V050W1XX, 2. PMC-12V060W1NX (X = 0-9, A-Z or blank)



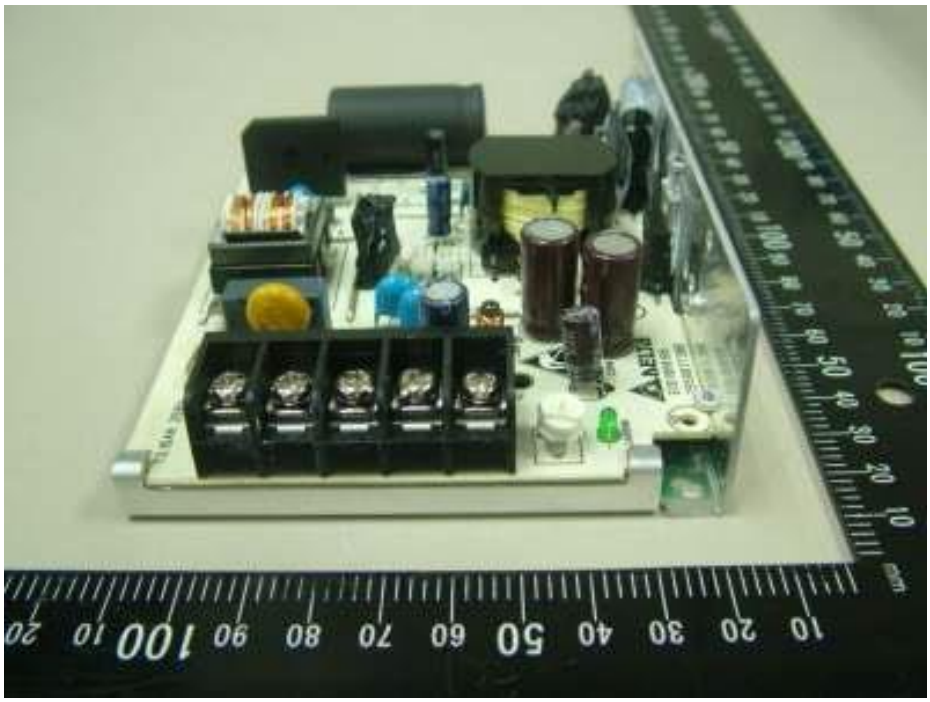
Open case 1



Open case 2

Product: POWER SUPPLY

Type Designation: 1. PMC-12V050W1XX, 2. PMC-12V060W1NX (X = 0-9, A-Z or blank)

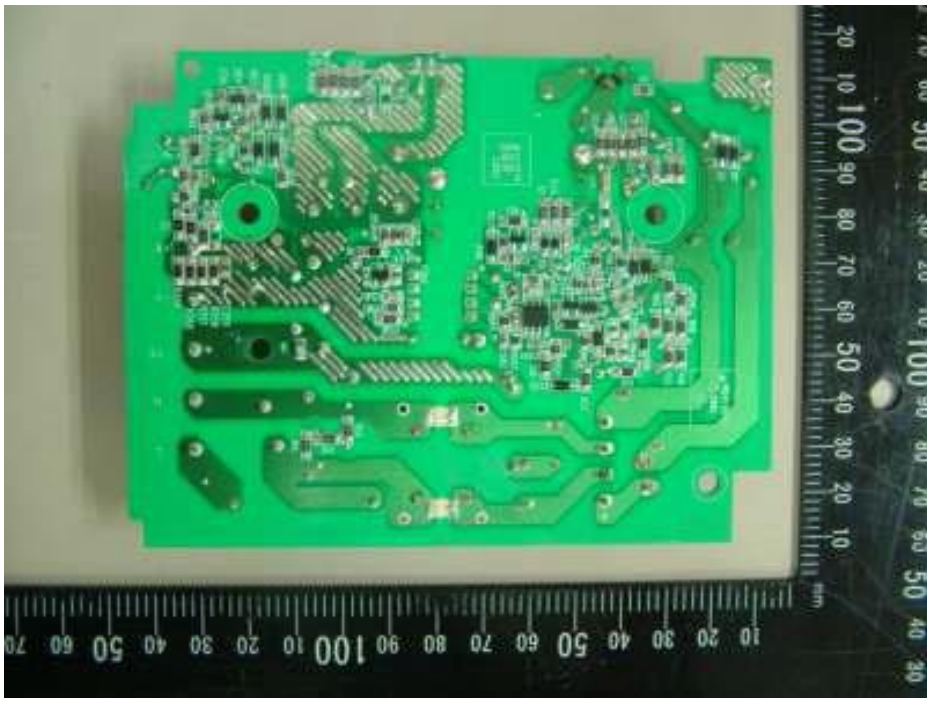


Open case 3

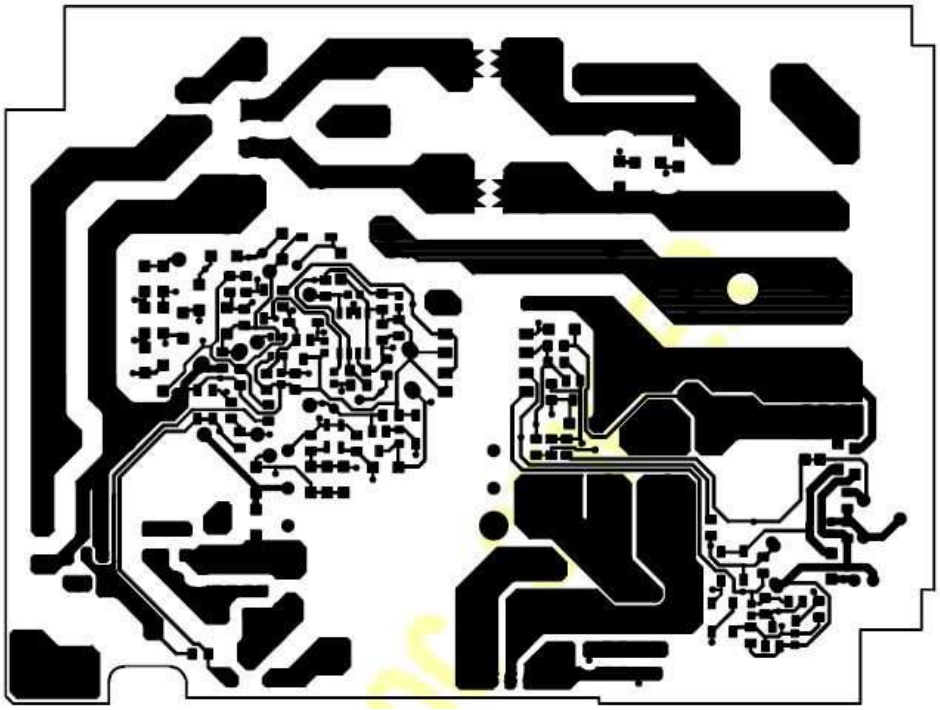
Main board (component side)

Product: POWER SUPPLY

Type Designation: 1. PMC-12V050W1XX, 2. PMC-12V060W1NX (X = 0-9, A-Z or blank)



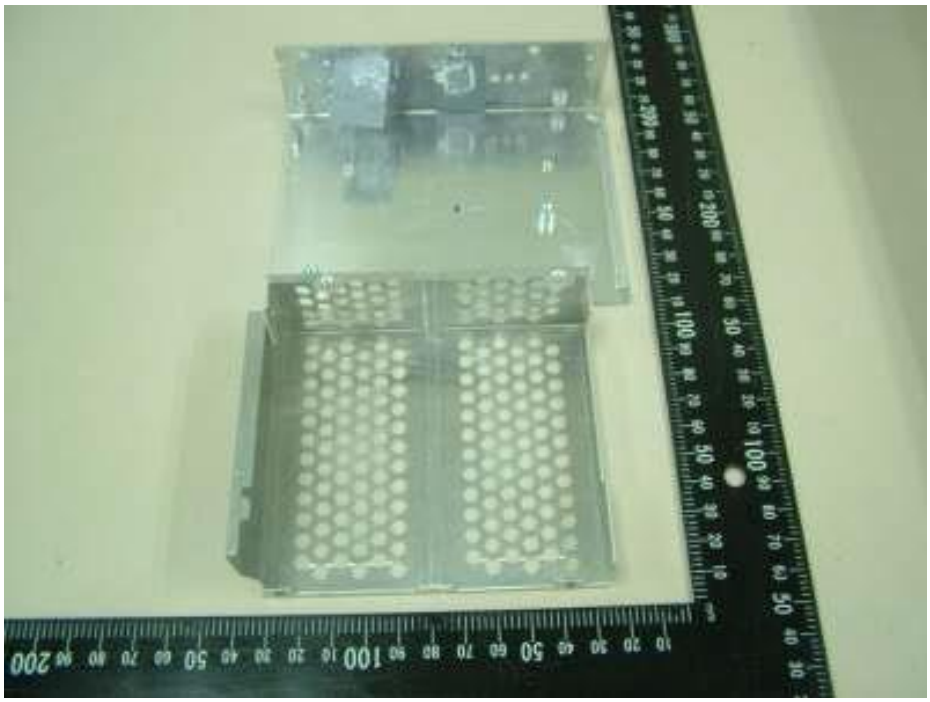
Main board (solder side)



Main board (PCB trace)

Product: POWER SUPPLY

Type Designation: 1. PMC-12V050W1XX, 2. PMC-12V060W1NX (X = 0-9, A-Z or blank)



Case cover and case chassis