	Ref. Certif. No.
IEC IECEE CB SCHEME	JPTUV-055681

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	Open frame LCD monitor with touch screen
Name and address of the applicant Nom et adresse du demandeur	KeeTouch Co., Ltd. 1/F, 3/F, 4/F of Building 9 Luck-King Science & Industry Park Gongyedong Road, Longhua, Baoan, Shenzhen, P.R. China
Name and address of the manufacturer Nom et adresse du fabricant	KeeTouch Co., Ltd. 1/F, 3/F, 4/F of Building 9 Luck-King Science & Industry Park Gongyedong Road, Longhua, Baoan, Shenzhen, P.R. China
Name and address of the factory Nom et adresse de l'usine	KeeTouch Co., Ltd. 1/F, 3/F, 4/F of Building 9 Luck-King Science & Industry Park Gongyedong Road, Longhua, Baoan, Shenzhen, P.R. China
Ratings and principal characteristics Valeurs nominales et charactéristiques principales	DC 12V; 4.16A; Class III
Trademark (if any) Marque de fabrique (si elle existe)	KeeTouch
Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur	N/A
Model / Type Ref. Ref. de type	KXT-ABCY-ZZZ X = D or O ; A, B, C = 0-9; Y = G, C, or W; ZZZ = 001-999
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire, peuvent être indiqués sur la 2ème page)	
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 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	17036459 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®

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Global Technology Assessment Center
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Date: 18.04.2014

Signature: Ing. M. Eichenseder

Test Report issued under the responsibility of:

TÜVRheinland®

TEST REPORT

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

Report Number.....:	17036459 001
Date of issue.....:	16 April, 2014
Total number of pages.....	37 pages
CB Testing Laboratory.....:	TÜV Rheinland (Shenzhen) Co., Ltd.
Address.....:	3 & 4 F, Cybio Technology Building No. 1, Langshan No. 2 Road South, 5th Industrial Area, High-Tech Industry Park North, Nanshan District, 518057, Shenzhen, P.R. China
Applicant's name.....:	KeeTouch Co., Ltd.
Address.....:	1/F, 3/F, 4/F of Building 9 Luck-King Science & Industry Park Gongyedong Road, Longhua, Baoan Shenzhen P.R. China
Manufacturer's name.....:	Same as applicant
Address.....:	Same as applicant
Test specification:	
Standard .....:	IEC 60950-1:2005 (Second Edition); Am 1:2009
Test procedure.....:	CB Scheme
Non-standard test method.....:	N/A
Test Report Form No......:	IEC60950_1C
Test Report Form(s) Originator .....:	SGS Fimko Ltd
Master TRF.....:	Dated 2012-08

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.

Test item description..... :	Open frame LCD monitor with touch screen
Trade Mark .....:	KeeTouch®
Manufacturer.....:	KeeTouch Co., Ltd.
Model/Type reference.....:	KXT-ABCY-ZZZ (for the variable X, A, B, C, Y and Z refer to page 6)
Ratings.....:	I/P:12Vdc, 4.16A

Testing procedure and testing location:		
☒	**CB Testing Laboratory:**	TÜV Rheinland (Shenzhen) Co., Ltd.
Testing location/ address..... :		3 & 4 F, Cybio Technology Building No. 1, Langshan No. 2 Road South, 5th Industrial Area, High-Tech Industry Park North, Nanshan District, 518057, Shenzhen, P.R. China
☐	**Associated CB Laboratory:**	
Testing location/ address..... :		
Tested by (name + signature).....:		Jet Luo
Approved by (name + signature) .....:		C.D. Reeves
☐	Testing procedure: **TMP**	
Testing location/ address..... :		
Tested by (name + signature).....:		
Approved by (name + signature) .....:		
☐	Testing procedure: **WMT**	
Testing location/ address..... :		
Tested by (name + signature).....:		
Witnessed by (name + signature).....:		
Approved by (name + signature) .....:		
☐	Testing procedure: **SMT**	
Testing location/ address..... :		
Tested by (name + signature).....:		
Approved by (name + signature) .....:		
Supervised by (name + signature)....:		
☐	Testing procedure: **RMT**	
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):

- Attachment 1: National differences (46 pages)
- Attachment 2: Photo documentation (8 pages)

Summary of testing:

Tests performed (name of test and test clause):

The tests were carried out under the most unfavorable combination within the manufacturer's operating specifications of the following parameters:

-supplied by approved switching adapter (see appended table 1.5.1 for details);
-operating temperature, Max. ambient temperature 40℃ declared by the client;
-operating mode: continuous;
-operating load: normal load;
-according to the client request, the open frame EUT is sealed in a plastic bag during heating test, to simulate the most un-favourable condition of the final equipment.

The critical tests were performed for this equipment included clauses:

name of test	test clause number
Input Current Test	1.6.2
Durability of Marking Test	1.7.11
Limited Circuit Current	2.4.2
Working voltage measurement	2.10.2
Maximum Temperature Test	4.5.2
Fault Condition Test	5.3

The EUT passed the test.

Testing location:

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

Summary of compliance with National Differences

List of countries addressed:

EU Group Differences, EU Special National Conditions, EU A-Deviations, AT, BE, CH, CN*, CZ, DE, DK, ES, FI, FR, GB, GR, HU, IE, IL, IT, JP#, KR, NL, NO, PL, SE, SI, SK

Explanation of used codes: AT=Austria, BE=Belgium, CH=Switzerland, CN=China, CZ=Czech Republic, DE=Germany, DK=Denmark, ES=Spain, FI=Finland, FR=France, GB=United Kingdom, GR=Greece, HU=Hungary, IE=Ireland, IL=Israel, IT=Italy, JP=Japan, KR=Korea, NL=The Netherlands, NO=Norway, PL=Poland, SE=Sweden, SI=Slovenia, SK=Slovakia

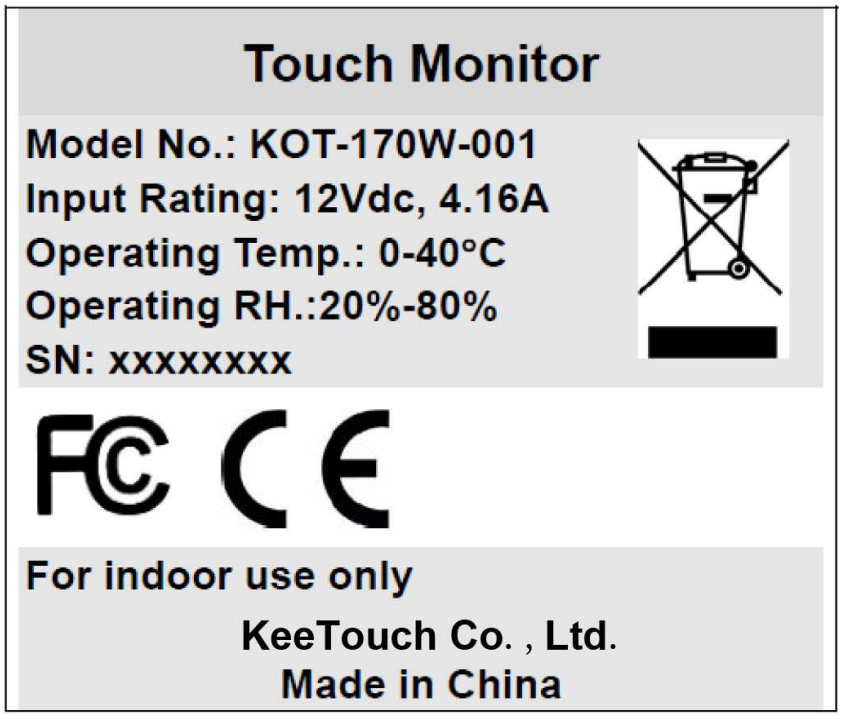
For National Differences see end of this test report.

* National differences to IEC 60950-1:2005 evaluated.

National differences to IEC 60950-1:2001 evaluated.

The product fulfils the requirements of EN 60950-1: 2006 + A11:2009 + A1:2010 + A12:2011.

Copy of marking plate



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

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 [] permanent connection [] detachable power supply cord [] non-detachable power supply cord [x] not directly connected to the mains
Operating condition..... :	[x] continuous [] rated operating / resting time:
Access location ..... :	[x] operator accessible [] restricted access location
Over voltage category (OVC) ..... :	[] OVC I [] OVC II [] OVC III [] OVC IV [x] other: no direct mains connection
Mains supply tolerance (%) or absolute mains supply values ..... :	N/A
Tested for IT power systems ..... :	[] Yes [x] No
IT testing, phase-phase voltage (V) ..... :	N/A
Class of equipment ..... :	[] Class I [] Class II [x] Class III [] Not classified
Considered current rating of protective device as part of the building installation (A) ..... :	<16A
Pollution degree (PD) ..... :	[] PD 1 [x] PD 2 [] PD 3
IP protection class ..... :	IP20
Altitude during operation (m) ..... :	<2000m
Altitude of test laboratory (m) ..... :	<1000m
Mass of equipment (kg) ..... :	4.42 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..... :	22 April, 2011(CB report 17020672 001); 10 March 2014
Date(s) of performance of tests..... :	May - June. 2011(CB report 17020672 001); 16 April, 2014

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 6.2.5 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) ..... : KeeTouch Co., Ltd.

1/F, 3/F, 4/F of Building 9 Luck-King Science & Industry Park Gongyedong Road, Longhua, Baoan Shenzhen P.R. China

General product information:

1. The product is a touch monitor without enclosure which could be used build in cabinet or enclosure in end product and named as open frame LCD monitor with touch screen.
2. According to the client's request, as the final using condition is not defined, to simulate the most unfavorable condition of the final equipment, the EUT is sealed in a plastic bag during the heating test.
3. The model is a Class III product, powered by an approved external adapter (class I). The output of the external adapter complies with limited power source.
4. The touch screen is controlled by the signal from the Serial port or the USB port. The Serial port and the USB port can not be functional at the same time. If Serial port is chosen to connect the touch screen, USB port is disabled, and vice versa. The USB port is chosen during the test if not specified.
5. The model has an internal inverter for CCFL backlight of the LCD panel. The inverter output is 916V in CN3 connector, 898V in CN2 connector, be evaluated to clause 2.4 of the standard as those would be accessed by operator.
6. There are two output connectors on the main board, VGA and DVI.
7. The specified maximum ambient temperature is +40 ℃.

This report is based on TÜV Rheinland CB reports 17020672 001 issued on 17. 06, 2011 for standard upgrade, in addition to:

1. Replace external AC adapter KPA-050F(Channel Well Technology Co., Ltd.) by PDN-48-48A (Shenzhen Meikai Electronics Stock Co., Ltd.);
2. Add table 2.10.2 as the working voltage of inverter output given in table 2.4.2 which is not suitable for this clause;
3. Remove national differences of Australia, Canada and United States of America, add national difference of China, Japan;
4. Replace the name and address of applicant, manufacturer and factory, see below for details.
   Original name and adress of applicant, manufacturer and factory:
   Shenzhen K&JAD Technology Co., Ltd.
   1-4/F Of Building 9 Luck-King Science & Industry Park Gongyedong Road Longhua, Baoan, Shenzhen P.R. China

After Revised:
KeeTouch Co., Ltd.
1/F, 3/F, 4/F of Building 9 Luck-King Science & Industry Park Gongyedong Road, Longhua, Baoan Shenzhen P.R. China

For the above described change(s) the following was considered to be necessary:

Change	Testing	Comments
1	1.6.2	See appended table 1.5.1 in bold for the new component.
2	N/A	Re-evaluate clause 2.10.2, see clause 2.10.2 for details.
3	N/A	See attachment 1 for details
4	N/A	See page 1, 6 for details

Definition of variable(s):

Variable:	Range of variable:	Content:
KXT-ABCY-ZZZ		
X	D or O	For product colour, no technical difference.
A, B, C	0-9	For product internal code, no technical difference.
Y	G, C, or W	For sales area, no technical difference.
ZZZ	001-999	For customer code, no technical difference.

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)

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1	**GENERAL**		**P**
1.5	**Components**		**P**
1.5.1	General		**P**
	Comply with IEC 60950 or relevant component standard	(see appended table 1.5.1)	**P**
1.5.2	Evaluation and testing of components	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**
1.5.3	Thermal controls	No thermal controls.	**N/A**
1.5.4	Transformers	Considered in approved external adapter.	**N/A**
1.5.5	Interconnecting cables	No cable provided with the unit.	**N/A**
1.5.6	Capacitors bridging insulation	Considered in approved external adapter.	**N/A**
1.5.7	Resistors bridging insulation	Considered in approved external adapter.	**N/A**
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		**N/A**
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		**N/A**
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		**N/A**
1.5.8	Components in equipment for IT power systems	No such components.	**N/A**
1.5.9	Surge suppressors	Considered in approved external adapter.	**N/A**
1.5.9.1	General		**N/A**
1.5.9.2	Protection of VDRs		**N/A**
1.5.9.3	Bridging of functional insulation by a VDR		**N/A**
1.5.9.4	Bridging of basic insulation by a VDR		**N/A**
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		**N/A**
1.6	**Power interface**		**P**
1.6.1	AC power distribution systems	Unit is not directly connected to the AC mains.	**N/A**

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	This appliance is not hand-held equipment.	**N/A**
1.6.4	Neutral conductor	No primary circuit.	**N/A**
1.7	**Marking and instructions**		**P**
1.7.1	Power rating	See below.	**P**
	Rated voltage(s) or voltage range(s) (V) ..... :	See copy of marking plate in page 4	**N/A**
	Symbol for nature of supply, for d.c. only..... :	See copy of marking plate in page 4	**N/A**
	Rated frequency or rated frequency range (Hz) ... :		**N/A**
	Rated current (mA or A) ..... :	See copy of marking plate in page 4	**N/A**
	ManuFacturer's name or trade-mark or identification mark ..... :	The manufacturer's name on the label in page 4	**P**
	Model identification or type reference ..... :	See copy of marking plate in page 4	**P**
	Symbol for Class II equipment only ..... :		**N/A**
	Other markings and symbols ..... :	Additional symbol or marking does not give rise to misunderstanding.	**P**
1.7.2	Safety instructions and marking	English safety instruction provided.	**P**
1.7.2.1	General		**P**
1.7.2.2	Disconnect devices		**N/A**
1.7.2.3	Overcurrent protective device		**N/A**
1.7.2.4	IT power distribution systems		**N/A**
1.7.2.5	Operator access with a tool	No such access required.	**N/A**
1.7.2.6	Ozone	Ozone not used or generated.	**N/A**
1.7.3	Short duty cycles	Equipment is designed for continuous operation.	**N/A**
1.7.4	Supply voltage adjustment ..... :	Single input voltage range without adjustment.	**N/A**
	Methods and means of adjustment; reference to installation instructions ..... :		**N/A**
1.7.5	Power outlets on the equipment ..... :	No power outlets provided.	**N/A**
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) ..... :	Considered in approved external adapter.	**N/A**
1.7.7	Wiring terminals	See below.	**N/A**

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.7.1	Protective earthing and bonding terminals ..... :	No earthing terminals and bonding terminals	**N/A**
1.7.7.2	Terminals for a.c. mains supply conductors	Not connected to a.c. mains	**N/A**
1.7.7.3	Terminals for d.c. mains supply conductors	Not connected to d.c. mains	**N/A**
1.7.8	Controls and indicators	See below	**N/A**
1.7.8.1	Identification, location and marking ..... :		**N/A**
1.7.8.2	Colours ..... :	No safety related colour used.	**N/A**
1.7.8.3	Symbols according to IEC 60417..... :		**N/A**
1.7.8.4	Markings using figures ..... :	No figures used.	**N/A**
1.7.9	Isolation of multiple power sources ..... :		**N/A**
1.7.10	Thermostats and other regulating devices ..... :	No such components.	**N/A**
1.7.11	Durability	The label was subjected to the permanence of marking test. The label was rubbed with cloth soaked with water for 15 sec. and then again for 15 sec. with the cloth soaked with petroleum spirit. After this test there was no damage to the label. The marking on the label did not fade. There was no curling or lifting of the label edge.	**P**
1.7.12	Removable parts	None.	**N/A**
1.7.13	Replaceable batteries ..... :	No batteries.	**N/A**
	Language(s) .....:		—
1.7.14	Equipment for restricted access locations ..... :	Equipment not intended for installation in 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	Only SELV signal interface accessible by operator.	**P**
2.1.1.1	Access to energized parts	No hazardous voltage inside, class III product	**P**
	Test by inspection ..... :		**N/A**
	Test with test finger (Figure 2A) ..... :		**N/A**
	Test with test pin (Figure 2B) ..... :		**N/A**
	Test with test probe (Figure 2C) ..... :		**N/A**
2.1.1.2	Battery compartments	No battery compartment.	**N/A**

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.1.1.3	Access to ELV wiring	No ELV wiring in operator accessible area.	**N/A**
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage wiring in operator accessible area.	**N/A**
2.1.1.5	Energy hazards ..... :	Supplied by SELV having a energy level less than 240VA	**P**
2.1.1.6	Manual controls	No manual controls.	**N/A**
2.1.1.7	Discharge of capacitors in equipment	Considered in approved external adapter.	**N/A**
	Measured voltage (V); time-constant (s)..... :		—
2.1.1.8	Energy hazards – d.c. mains supply		**N/A**
	a) Capacitor connected to the d.c. mains supply .. :		**N/A**
	b) Internal battery connected to the d.c. mains supply ..... :		**N/A**
2.1.1.9	Audio amplifiers ..... :		**N/A**
2.1.2	Protection in service access areas	No service access area.	**N/A**
2.1.3	Protection in restricted access locations	Equipment not intended for installation 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) ..... :	42.4V peak or 60V d.c. are not exceeded in SELV circuit under normal operation.	**P**
2.2.3	Voltages under fault conditions (V) ..... :	Considered in approved external adapter.	**N/A**
2.2.4	Connection of SELV circuits to other circuits ..... :	Connect to SELV circuit and Limited current circuit.	**P**
2.3	**TNV circuits** *No TNV circuits, requirements not applicable to the evaluated product.*		**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**

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.3.2.3	Protection by earthing		**N/A**
2.3.2.4	Protection by other constructions ..... :		**N/A**
2.3.3	Separation from hazardous voltages		**N/A**
	Insulation employed ..... :		—
2.3.4	Connection of TNV circuits to other circuits		**N/A**
	Insulation employed ..... :		—
2.3.5	Test for operating voltages generated externally		**N/A**
2.4	**Limited current circuits** *Applied for inverter output 916V in CN3 connector, 898V in CN2 connector as that would be accessed by operator (see appended table 2.4.2)*		**P**
2.4.1	General requirements	See below	**P**
2.4.2	Limit values	(see appended table 2.4.2)	**P**
	Frequency (Hz) ..... :	(see appended table 2.4.2)	—
	Measured current (mA)..... :	(see appended table 2.4.2)	—
	Measured voltage (V)..... :	(see appended table 2.4.2)	—
	Measured circuit capacitance (nF or µF) ..... :	< 45 µC	—
2.4.3	Connection of limited current circuits to other circuits	Only intended to be connected with SELV circuits.	**P**
2.5	**Limited power sources** *Requirement not applicable to the evaluated product. Considered for approved external adapter.*		**N/A**
	a) Inherently limited output		**N/A**
	b) Impedance limited output		**N/A**
	c) Regulating network limited output under normal operating and single fault condition		**N/A**
	d) Overcurrent protective device limited output		**N/A**
	Max. output voltage (V), max. output current (A), max. apparent power (VA) ..... :		—
	Current rating of overcurrent protective device (A)		—
2.6	**Provisions for earthing and bonding** *Class III equipment.*		**P**
2.6.1	Protective earthing		**N/A**
2.6.2	Functional earthing		**N/A**
2.6.3	Protective earthing and protective bonding conductors		**N/A**

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.3.1	General		**N/A**
2.6.3.2	Size of protective earthing conductors		**N/A**
	Rated current (A), cross-sectional area (mm^2), AWG ..... :		—
2.6.3.3	Size of protective bonding conductors		**N/A**
	Rated current (A), cross-sectional area (mm^2), AWG ..... :		—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min)..... :		**N/A**
2.6.3.5	Colour of insulation ..... :		**N/A**
2.6.4	Terminals		**N/A**
2.6.4.1	General		**N/A**
2.6.4.2	Protective earthing and bonding terminals		**N/A**
	Rated current (A), type, nominal thread diameter (mm)..... :		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		**N/A**
2.6.5	Integrity of protective earthing		**N/A**
2.6.5.1	Interconnection of equipment		**N/A**
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		**N/A**
2.6.5.3	Disconnection of protective earth		**N/A**
2.6.5.4	Parts that can be removed by an operator		**N/A**
2.6.5.5	Parts removed during servicing		**N/A**
2.6.5.6	Corrosion resistance		**N/A**
2.6.5.7	Screws for protective bonding		**N/A**
2.6.5.8	Reliance on telecommunication network or cable distribution system	No TNV circuit.	**N/A**
2.7	**Overcurrent and earth fault protection in primary circuits** *No primary circuit, requirement not applicable to the evaluated product*		**N/A**
2.7.1	Basic requirements		**N/A**
	Instructions when protection relies on building installation		**N/A**
2.7.2	Faults not simulated in 5.3.7		**N/A**
2.7.3	Short-circuit backup protection		**N/A**
2.7.4	Number and location of protective devices ..... :		**N/A**
2.7.5	Protection by several devices		**N/A**

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.6	Warning to service personnel ..... :		**N/A**
2.8	**Safety interlocks**		**N/A**
2.8.1	General principles		**N/A**
2.8.2	Protection requirements		**N/A**
2.8.3	Inadvertent reactivation		**N/A**
2.8.4	Fail-safe operation		**N/A**
2.8.5	Moving parts		**N/A**
2.8.6	Overriding		**N/A**
2.8.7	Switches and relays		**N/A**
2.8.7.1	Contact gaps (mm) ..... :		**N/A**
2.8.7.2	Overload test		**N/A**
2.8.7.3	Endurance test		**N/A**
2.8.7.4	Electric strength test		**N/A**
2.8.8	Mechanical actuators		**N/A**
2.9	**Electrical insulation**		**P**
2.9.1	Properties of insulating materials	Function insulation Considered.	**P**
2.9.2	Humidity conditioning		**N/A**
	Relative humidity (%), temperature (℃) .... :		—
2.9.3	Grade of insulation		**P**
2.9.4	Separation from hazardous voltages		**N/A**
	Method(s) used ..... :		—
2.10	**Clearances, creepage distances and distances through insulation** *Supplied by SELV, and functional insulation inside the unit, requirements not applicable, see clause 5.3.4*		**P**
2.10.1	General	See below	**P**
2.10.1.1	Frequency ..... :		**N/A**
2.10.1.2	Pollution degrees ..... :	See Test item particulars	**P**
2.10.1.3	Reduced values for functional insulation	See 5.3.4c)	**P**
2.10.1.4	Intervening unconnected conductive parts		**N/A**
2.10.1.5	Insulation with varying dimensions		**N/A**
2.10.1.6	Special separation requirements		**N/A**
2.10.1.7	Insulation in circuits generating starting pulses		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.2	Determination of working voltage		**P**
2.10.2.1	General	Applied for inverter output	**P**
2.10.2.2	RMS working voltage	Peak working voltage measured	**N/A**
2.10.2.3	Peak working voltage	See table 2.10.2	**P**
2.10.3	Clearances		**N/A**
2.10.3.1	General		**N/A**
2.10.3.2	Mains transient voltages		**N/A**
	a) AC mains supply .....:		**N/A**
	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		**N/A**
2.10.3.4	Clearances in secondary circuits		**N/A**
2.10.3.5	Clearances in circuits having starting pulses		**N/A**
2.10.3.6	Transients from a.c. mains supply .....:		**N/A**
2.10.3.7	Transients from d.c. mains supply .....:		**N/A**
2.10.3.8	Transients from telecommunication networks and cable distribution systems .....:		**N/A**
2.10.3.9	Measurement of transient voltage levels		**N/A**
	a) Transients from a mains supply		**N/A**
	For an a.c. mains supply .....:		**N/A**
	For a d.c. mains supply .....:		**N/A**
	b) Transients from a telecommunication network :		**N/A**
2.10.4	Creepage distances		**N/A**
2.10.4.1	General		**N/A**
2.10.4.2	Material group and comparative tracking index		**N/A**
	CTI tests.....:		—
2.10.4.3	Minimum creepage distances		**N/A**
2.10.5	Solid insulation		**N/A**
2.10.5.1	General		**N/A**
2.10.5.2	Distances through insulation		**N/A**
2.10.5.3	Insulating compound as solid insulation		**N/A**
2.10.5.4	Semiconductor devices		**N/A**
2.10.5.5.	Cemented joints		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.5.6	Thin sheet material – General		**N/A**
2.10.5.7	Separable thin sheet material		**N/A**
	Number of layers (pcs)..... :		—
2.10.5.8	Non-separable thin sheet material		**N/A**
2.10.5.9	Thin sheet material – standard test procedure		**N/A**
	Electric strength test		—
2.10.5.10	Thin sheet material – alternative test procedure		**N/A**
	Electric strength test		—
2.10.5.11	Insulation in wound components		**N/A**
2.10.5.12	Wire in wound components		**N/A**
	Working voltage ..... :		**N/A**
	a) Basic insulation not under stress ..... :		**N/A**
	b) Basic, supplementary, reinforced insulation ..... :		**N/A**
	c) Compliance with Annex U ..... :		**N/A**
	Two wires in contact inside wound component; angle between 45° and 90° ..... :		**N/A**
2.10.5.13	Wire with solvent-based enamel in wound components		**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		**N/A**
2.10.6.1	Uncoated printed boards		**N/A**
2.10.6.2	Coated printed boards		**N/A**
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		**N/A**
2.10.6.4	Insulation between conductors on different layers of a printed board		**N/A**
	Distance through insulation		**N/A**
	Number of insulation layers (pcs)..... :		**N/A**
2.10.7	Component external terminations		**N/A**
2.10.8	Tests on coated printed boards and coated components		**N/A**
2.10.8.1	Sample preparation and preliminary inspection		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.8.2	Thermal conditioning		**N/A**
2.10.8.3	Electric strength test		**N/A**
2.10.8.4	Abrasion resistance test		**N/A**
2.10.9	Thermal cycling		**N/A**
2.10.10	Test for Pollution Degree 1 environment and insulating compound		**N/A**
2.10.11	Tests for semiconductor devices and cemented joints		**N/A**
2.10.12	Enclosed and sealed parts		**N/A**
3	**WIRING, CONNECTIONS AND SUPPLY**		**P**
3.1	General		**P**
3.1.1	Current rating and overcurrent protection	The internal wires have suitable size to carry rated current	**P**
3.1.2	Protection against mechanical damage	Wireways smooth and free from sharp edges.	**P**
3.1.3	Securing of internal wiring	Internal wires are secured by connectors so that a loosening of the terminal connection is unlikely	**P**
3.1.4	Insulation of conductors	The insulation of the individual conductors suitable for the application and the working voltage. For the insulation material see 3.1.1.	**P**
3.1.5	Beads and ceramic insulators	Not used.	**N/A**
3.1.6	Screws for electrical contact pressure		**N/A**
3.1.7	Insulating materials in electrical connections		**N/A**
3.1.8	Self-tapping and spaced thread screws	No self-tapping screws are used.	**N/A**
3.1.9	Termination of conductors	All conductors are reliably secured.	**P**
	10 N pull test	Applied	**P**
3.1.10	Sleeving on wiring		**N/A**
3.2	**Connection to a mains supply** *No direct connection to mains. Requirements not applicable to the evaluated product.*		**N/A**
3.2.1	Means of connection		**N/A**
3.2.1.1	Connection to an a.c. mains supply		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.2	Connection to a d.c. mains supply		**N/A**
3.2.2	Multiple supply connections		**N/A**
3.2.3	Permanently connected equipment		**N/A**
	Number of conductors, diameter of cable and conduits (mm) ..... :		—
3.2.4	Appliance inlets		**N/A**
3.2.5	Power supply cords		**N/A**
3.2.5.1	AC power supply cords		**N/A**
	Type ..... :		—
	Rated current (A), cross-sectional area (mm^2), AWG ..... :		—
3.2.5.2	DC power supply cords		**N/A**
3.2.6	Cord anchorages and strain relief		**N/A**
	Mass of equipment (kg), pull (N) ..... :		—
	Longitudinal displacement (mm) ..... :		—
3.2.7	Protection against mechanical damage		**N/A**
3.2.8	Cord guards		**N/A**
	Diameter or minor dimension D (mm); test mass (g) ..... :		—
	Radius of curvature of cord (mm)..... :		—
3.2.9	Supply wiring space		**N/A**

3.3	**Wiring terminals for connection of external conductors** *No direct connection to mains. Requirements not applicable to the evaluated product.*		**N/A**
3.3.1	Wiring terminals		**N/A**
3.3.2	Connection of non-detachable power supply cords		**N/A**
3.3.3	Screw terminals		**N/A**
3.3.4	Conductor sizes to be connected		**N/A**
	Rated current (A), cord/cable type, cross-sectional area (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**
3.3.8	Stranded wire		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
3.4	**Disconnection from the mains supply** *No direct connection to mains. Requirements not applicable to the evaluated product.*		**N/A**
3.4.1	General requirement		**N/A**
3.4.2	Disconnect devices		**N/A**
3.4.3	Permanently connected equipment		**N/A**
3.4.4	Parts which remain energized		**N/A**
3.4.5	Switches in flexible cords		**N/A**
3.4.6	Number of poles - single-phase and d.c. equipment		**N/A**
3.4.7	Number of poles - three-phase equipment		**N/A**
3.4.8	Switches as disconnect devices		**N/A**
3.4.9	Plugs as disconnect devices		**N/A**
3.4.10	Interconnected equipment		**N/A**
3.4.11	Multiple power sources		**N/A**
3.5	**Interconnection of equipment**		**P**
3.5.1	General requirements	This power supply is not considered for connection to TNV.	**P**
3.5.2	Types of interconnection circuits .....:	Interconnection circuits of SELV through the connector. No ELV interconnection circuits.	**P**
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection	**N/A**
3.5.4	Data ports for additional equipment	Unit powered by LPS.	**P**
4	**PHYSICAL REQUIREMENTS**		**P**
4.1	Stability		**P**
	Angle of 10°	As the unit is less than 7kg.	**N/A**
	Test force (N) ..... :		**N/A**
4.2	**Mechanical strength** *Evaluated product supplied by SELV and all the circuits inside the enclosure are SELV circuits or Limited Current Circuits*		**N/A**
4.2.1	General		**N/A**
	Rack-mounted equipment.		**N/A**
4.2.2	Steady force test, 10 N		**N/A**
4.2.3	Steady force test, 30 N		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
4.2.4	Steady force test, 250 N		**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	No CRT	**N/A**
4.2.8	Cathode ray tubes		**N/A**
	Picture tube separately certified .....:		**N/A**
4.2.9	High pressure lamps		**N/A**
4.2.10	Wall or ceiling mounted equipment; force (N) .....:		**N/A**
4.3	**Design and construction**		**P**
4.3.1	Edges and corners	Edges and corners of the enclosure are rounded.	**P**
4.3.2	Handles and manual controls; force (N) .....:	No safety relevant handles or manual controls.	**N/A**
4.3.3	Adjustable controls	No such controls.	**N/A**
4.3.4	Securing of parts	All parts secured properly. Spring washer used for securing screws.	**P**
4.3.5	Connection by plugs and sockets	Output connector does not comply with IEC 60083 or IEC 60320.	**N/A**
4.3.6	Direct plug-in equipment	Not such equipment.	**N/A**
	Torque .....:		—
	Compliance with the relevant mains plug standard .....:		**N/A**
4.3.7	Heating elements in earthed equipment	None.	**N/A**
4.3.8	Batteries	No 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	None.	**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	None	**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.12	Flammable liquids .....:	None	**N/A**
	Quantity of liquid (l) .....:		**N/A**
	Flash point (°C) .....:		**N/A**
4.3.13	Radiation		**P**
4.3.13.1	General	See below	**P**
4.3.13.2	Ionizing radiation	No 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	No ultraviolet radiation	**N/A**
	Part, property, retention after test, flammability classification .....:		**N/A**
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....:	No ultraviolet radiation	**N/A**
4.3.13.5	Lasers (including laser diodes) and LEDs	See below.	**P**
4.3.13.5.1	Lasers (including laser diodes)	Not used.	**N/A**
	Laser class .....:		—
4.3.13.5.2	Light emitting diodes (LEDs)	Indicating LED on secondary is inherently exempted group according to IEC 62471.	**P**
4.3.13.6	Other types .....:		**N/A**

4.4	**Protection against hazardous moving parts**		**N/A**
4.4.1	General		**N/A**
4.4.2	Protection in operator access areas .....:		**N/A**
	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**

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Clause	Requirement + Test	Result - Remark	Verdict
	Use of symbol or warning ……..:		**N/A**
4.5	**Thermal requirements**		**P**
4.5.1	General		**P**
4.5.2	Temperature tests	According to the client's request, to simulate the worst case end use of the final equipment, the EUT is tested in a sealed plastic bag.	**P**
	Normal load condition per Annex L .....:	The equipment was continuous working with contrast and brightness set to max.	—
4.5.3	Temperature limits for materials	(see appended table 4.5)	**P**
4.5.4	Touch temperature limits	(see appended table 4.5)	**P**
4.5.5	Resistance to abnormal heat .....:		**N/A**
4.6	**Openings in enclosures**		**P**
4.6.1	Top and side openings	(see appended table 4.6.1 and 4.6.2)	**P**
	Dimensions (mm) .....:		—
4.6.2	Bottoms of fire enclosures	(see appended table 4.6.1 and 4.6.2)	**P**
	Construction of the bottomm, dimensions (mm) ..:		—
4.6.3	Doors or covers in fire enclosures	No doors or covers.	**N/A**
4.6.4	Openings in transportable equipment	Not 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	No adhesives for constructional purposes.	**N/A**
	Conditioning temperature (°C), time (weeks).....:	See above	—
4.7	**Resistance to fire**		**P**
4.7.1	Reducing the risk of ignition and spread of flame	Use of materials with the required flammability classes.	**P**
	Method 1, selection and application of components wiring and materials		**P**
	Method 2, application of all of simulated fault condition tests		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.2	Conditions for a fire enclosure	The unit is powered by limited power source from approved external adapter and internal parts/components mounted on V-0 PCB.	**P**
4.7.2.1	Parts requiring a fire enclosure	See above.	**N/A**
4.7.2.2	Parts not requiring a fire enclosure	See above.	**P**
4.7.3	Materials		**P**
4.7.3.1	General	PCB rated V-0	**P**
4.7.3.2	Materials for fire enclosures		**N/A**
4.7.3.3	Materials for components and other parts outside fire enclosures		**P**
4.7.3.4	Materials for components and other parts inside fire enclosures		**N/A**
4.7.3.5	Materials for air filter assemblies	No air filter.	**N/A**
4.7.3.6	Materials used in high-voltage components	No such high voltage components in this meaning	**N/A**

5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		**P**
5.1	Touch current and protective conductor current *Class III product, requirements not applicable to the evaluated product.*		**N/A**
5.1.1	General		**N/A**
5.1.2	Configuration of equipment under test (EUT)		**N/A**
5.1.2.1	Single connection to an a.c. mains supply		**N/A**
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		**N/A**
5.1.4	Application of measuring instrument		**N/A**
5.1.5	Test procedure		**N/A**
5.1.6	Test measurements		**N/A**
	Supply voltage (V) ..... :		—
	Measured touch current (mA) ..... :		—
	Max. allowed touch current (mA) ..... :		—
	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**

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Clause	Requirement + Test	Result - Remark	Verdict
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	No TNV circuits.	**N/A**
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** *Class III product, requirements not applicable to the evaluated product.*		**N/A**
5.2.1	General		**N/A**
5.2.2	Test procedure		**N/A**
5.3	**Abnormal operating and fault conditions**		**P**
5.3.1	Protection against overload and abnormal operation	see appended table 5.3	**P**
5.3.2	Motors	No motors.	**N/A**
5.3.3	Transformers	Considered in approved external adapters.	**N/A**
5.3.4	Functional insulation.....:	Method c used, see appended table 5.3	**P**
5.3.5	Electromechanical components	No electromechanical component.	**N/A**
5.3.6	Audio amplifiers in ITE .....:		**N/A**
5.3.7	Simulation of faults	(see appended table 5.3.)	**P**
5.3.8	Unattended equipment	No such equipment.	**N/A**
5.3.9	Compliance criteria for abnormal operating and fault conditions		**P**
5.3.9.1	During the tests	No fire or molten metal occurred and no deformation of enclosure during the tests.	**P**
5.3.9.2	After the tests		**N/A**

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

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Clause	Requirement + Test	Result - Remark	Verdict
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		**N/A**
A.1.1	Samples ..... :		—
	Wall thickness (mm) ..... :		—
A.1.2	Conditioning of samples; temperature (°C) ..... :		**N/A**
A.1.3	Mounting of samples ..... :		**N/A**
A.1.4	Test flame (see IEC 60695-11-3)		**N/A**
	Flame A, B, C or D ..... :		—
A.1.5	Test procedure		**N/A**
A.1.6	Compliance criteria		**N/A**
	Sample 1 burning time (s) ..... :		—
	Sample 2 burning time (s) ..... :		—
	Sample 3 burning time (s) ..... :		—
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		**N/A**
A.2.1	Samples, material ..... :		—
	Wall thickness (mm) ..... :		—
A.2.2	Conditioning of samples; temperature (℃) .. .. :		**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**

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Clause	Requirement + Test	Result - Remark	Verdict
B	**ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)**		**N/A**
B.1	General requirements		**N/A**
	Position ..... :		—
	ManuFacturer ..... :		—
	Type ..... :		—
	Rated values ..... :		—
B.2	Test conditions		**N/A**
B.3	Maximum temperatures		**N/A**
B.4	Running overload test		**N/A**
B.5	Locked-rotor overload test		**N/A**
	Test duration (days) ..... :		—
	Electric strength test: test voltage (V) ..... :		—
B.6	Running overload test for d.c. motors in secondary circuits		**N/A**
B.6.1	General		**N/A**
B.6.2	Test procedure		**N/A**
B.6.3	Alternative test procedure		**N/A**
B.6.4	Electric strength test; test voltage (V) ..... :		**N/A**
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		**N/A**
B.7.1	General		**N/A**
B.7.2	Test procedure		**N/A**
B.7.3	Alternative test procedure		**N/A**
B.7.4	Electric strength test; test voltage (V) ..... :		**N/A**
B.8	Test for motors with capacitors		**N/A**
B.9	Test for three-phase motors		**N/A**
B.10	Test for series motors		**N/A**
	Operating voltage (V) ..... :		—

C	**ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)** *Considered in approved external adapter.*		**N/A**
	Position ..... :		—
	ManuFacturer ..... :		—
	Type ..... :		—
	Rated values ..... :		—
	Method of protection ..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
C.1	Overload test		**N/A**
C.2	Insulation		**N/A**
	Protection from displacement of windings .....:		**N/A**
D	**ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)**		**N/A**
D.1	Measuring instrument		**N/A**
D.2	Alternative measuring instrument		**N/A**
E	**ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)**		**N/A**
F	**ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)**		**N/A**
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**

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Clause	Requirement + Test	Result - Remark	Verdict

H	**ANNEX H, IONIZING RADIATION (see 4.3.13)**		**N/A**

J	**ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)**		**N/A**
	Metal(s) used ..... :		—

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

L	**ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)**		**P**
L.1	Typewriters		**N/A**
L.2	Adding machines and cash registers		**N/A**
L.3	Erasers		**N/A**
L.4	Pencil sharpeners		**N/A**
L.5	Duplicators and copy machines		**N/A**
L.6	Motor-operated files		**N/A**
L.7	Other business equipment	See 1.6.2.	**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**

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Clause	Requirement + Test	Result - Remark	Verdict
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		**N/A**
M.3.2.2	Tripping device		**N/A**
M.3.2.3	Monitoring voltage (V) ..... :		**N/A**
N	**ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)**		**N/A**
N.1	ITU-T impulse test generators		**N/A**
N.2	IEC 60065 impulse test generator		**N/A**
P	**ANNEX P, NORMATIVE REFERENCES**		—
Q	**ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1) .**		**N/A**
	a) Preferred climatic categories ..... :		**N/A**
	b) Maximum continuous voltage ..... :		**N/A**
	c) Pulse current ..... :		**N/A**
R	**ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES**		**N/A**
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		**N/A**
R.2	Reduced clearances (see 2.10.3)		**N/A**
S	**ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)**		**N/A**
S.1	Test equipment		**N/A**
S.2	Test procedure		**N/A**
S.3	Examples of waveforms during impulse testing		**N/A**
T	**ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)**		**N/A**
			—
U	**ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		**N/A**
			—
V	**ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)**		**N/A**
V.1	Introduction		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
V.2	TN power distribution systems		**N/A**
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**		**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)**		**N/A**
AA	**ANNEX AA, MANDREL TEST (see 2.10.5.8)**		**N/A**
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**
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**

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Clause	Requirement + Test	Result - Remark	Verdict
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**

1.5.1	TABLE: list of critical components				P
Object/part no.	Manufacturer/ trademark	Type/model	Technical data	Standard	Mark(s) of conformity [1.]
LCD Panel with CCFL backlight	Samsung Electronics Co., Ltd.	LTM170ET01	17 inch TFT, CCFL backlight.	--	--
PCB	Interchangeable	Interchangeable	V-0, 130°C	--	UL
AC Adapter	**Shenzhen Meikai Electronics Stock Co., Ltd.**	**PDN-48-48A**	**I/P: 100-240Vac, 50/60Hz, 1.0A,** **Class I** **O/P: 12.0Vdc, 4.16A** **Max. ambient temperature is 40°C.**	**IEC 60950-1:2005+A1:2009*,** **EN 60950-1: 2006+A11: 2009+A1: 2010+A12: 2011***	**Nemko Hong Kong Ltd. CB, GS (CB report no. 227063, cert. No. NO72373)** **(GS cert. No. GS-1212-227063-000)**
Transformer (T1 on inverter board)	Shenzhen Data-Power Electronics Co., Ltd.	DP1EEL19-011aH	130°C	---	Test with appliance
Inverter	Shenzhen Data-Power Electronics Co., Ltd.	DATA-02-15042AH	Input: 12Vd.c Output: 916V in CN3 connector, 898V in CN2 connector	---	Test with appliance
Internal wires	Interchangeable	Interchangeable	300V, 80°C, min 26 AWG	UL 758	UL
Enclosure	--	--	Metallic, minimum 1.0mm thickness	--	--
Supplementary information: * Standard version should be updated when necessary before applying for national approval. [1)] An asterisk indicates a mark that assures the agreed level of surveillance.					

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
Tested with AC adapter (PDN-48-48A), VGA mode						
12Vdc	1.34	4.16	16.2	--	--	Normal load condition
Tested with AC adapter (PDN-48-48A), DVI mode						
12Vdc	1.33	4.16	16.1	--	--	Normal load condition
Note(s): - Normal load: Brightness: 100%, Contrast: 100%, resolution 1280x1024, white screen.						

2.4.2	TABLE: limited current circuit measurement				P
Location	Voltage (V)	Current (mA)	Freq. (kHz)	Limit (mA)	Comments
Normal condition					
CN3, between pin 1 and pin 2	16.4	8.2	50.5	35.35	--
CN3, between pin 1 and GND	16.4	8.2	50.5	35.35	--
CN2, between pin 1 and pin 2	15.1	7.55	50.5	35.35	--
CN2, between pin 1 and GND	18.3	9.15	50.5	35.35	--
CN2, between pin 2 and GND	4.8	2.4	50.5	35.35	--
Single fault condition:C12 short					
CN3, between pin1 and pin 2	0	*	0	*	Unit shut down
CN3, between pin1 and GND	0	*	0	*	Unit shut down
CN2, between pin1 and pin 2	0	*	0	*	Unit shut down
CN2, between pin1 and GND	0	*	0	*	Unit shut down
CN2, between pin2 and GND	0	*	0	*	Unit shut down
Single fault condition: D1 pin 2 - GND short					
CN3, between pin1 and pin 2	0	*	0	*	Unit shut down
CN3, between pin1 and GND	0	*	0	*	Unit shut down
CN2, between pin1 and pin 2	0	*	0	*	Unit shut down
CN2, between pin1 and GND	0	*	0	*	Unit shut down
CN2, between pin2 and GND	0	*	0	*	Unit shut down
Single fault condition: Q1 pin 1 – pin 2 short					
CN3, between pin1 and pin 2	0	*	0	*	Unit shut down
CN3, between pin1 and GND	0	*	0	*	Unit shut down
CN2, between pin1 and pin 2	0	*	0	*	Unit shut down

CN2, between pin1 and GND	0	*	0	*	Unit shut down
CN2, between pin2 and GND	0	*	0	*	Unit shut down
Single fault condition: Q1 pin 1 – pin 8 short					
CN3, between pin1 and pin 2	0	*	0	*	Unit shut down
CN3, between pin1 and GND	0	*	0	*	Unit shut down
CN2, between pin1 and pin 2	0	*	0	*	Unit shut down
CN2, between pin1 and GND	0	*	0	*	Unit shut down
CN2, between pin2 and GND	0	*	0	*	Unit shut down
CN3, between pin1 and pin 2	0	*	0	*	Unit shut down
Single fault condition: Q1 pin 2 – pin 8 short					
CN3, between pin1 and pin 2	0	*	0	*	Unit shut down
CN3, between pin1 and GND	0	*	0	*	Unit shut down
CN2, between pin1 and pin 2	0	*	0	*	Unit shut down
CN2, between pin1 and GND	0	*	0	*	Unit shut down
CN2, between pin2 and GND	0	*	0	*	Unit shut down
Single fault condition: U1 pin 7 – pin 13 short					
CN3, between pin1 and pin 2	0	*	0	*	Unit shut down
CN3, between pin1 and GND	0	*	0	*	Unit shut down
CN2, between pin1 and pin 2	0	*	0	*	Unit shut down
CN2, between pin1 and GND	0	*	0	*	Unit shut down
CN2, between pin2 and GND	0	*	0	*	Unit shut down
Note: "*" indicates the unit shut down immediately.					

2.10.2	**Table: working voltage measurement**	P

Location	RMS voltage (V)	Peak voltage (V)	Comments
Working voltage of the inverter output			
CN3, between pin1 and pin 2	--	916 V peak	For reference
CN2, between pin1 and pin 2	--	898 V peak	For reference
supplementary information:			
Fault condition test is considered, see table 5.3. Although the working voltage of inverter output is exceeds SELV, however it has been classified as bare parts of limited current circuits due to it has been passed the test of clause 2.4 limited current circuit, so no electric shock hazard exists and no test requirement of clause 2.10.3&2.10.4 is required.			

4.5.1	TABLE: maximum temperatures		P
	Test voltage (V)	12Vdc	—
	T_{amb1} (°C)	--	—
	T_{amb2} (°C)	--	—

Monitored point:	12Vdc	allowed T_{max} (°C)
Monitor		
DC inlet	40.7	--
PCB of control plate	46.7	130-40+25.9 = 115.9
PCB of USB	40.1	130-40+25.9 = 115.9
Internal wires	42.6	80-40+25.9 = 65.9
Annular line choke (T2) (on main board)	58.0	130-40+25.9-10 = 105.9
Electrolytic capacitor (E5) (on main board)	57.7	105-40+25.9 = 90.9
PCB near chip U3 (on main board)	58.0	130-40+25.9 = 115.9
Inverter transformer winding (T1) (on inverter board)	72.5	130-40+25.9-10 = 105.9
Inverter transformer core (T1) (on inverter board)	63.4	130-40+25.9-10 = 105.9
Electrolytic capacitor (C12) (on inverter board)	58.1	85-40+25.9 = 70.9
PCB near T1 (on inverter board)	60.4	130-40+25.9 = 115.9
Enclosure inside	41.2	70-40+25.9 = 55.9
Enclosure outside	41.2	70-40+25.9 = 55.9
Surface of LCD panel	35.1	80-40+25.9 = 65.9
Ambient	25.9	--

Note:

- As the EUT is a open frame LCD monitor with touch screen, in order to simulate the most unfavourable condition in final equipment, according to the client's request, the test is performed in a sealed plastic bag. No need to perform the block opening test in clause 5.3.
- Max. ambient temperature is 40°C.

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				(see table 1.5.1)	—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
Ventilation openings	blocked	12Vd.c.	2hrs	--	--	Unit normal operation. Measured maximum temperature see Table 4.5.1.
DC inlet	reversed	12Vd.c.	10min	--	--	Unit shut down immediately, recoverable after the fault removed, no hazard.
Electrolytic capacitor (E5) (on main board)	s-c	12Vd.c.	10min	--	--	Unit shut down immediately, recoverable after the fault removed, no hazard.
Electrolytic capacitor (E1) (on main board)	s-c	12Vd.c.	10min	--	--	Unit shut down immediately, recoverable after the fault removed, no hazard.
Chip U4 (on main board), pin 1 and pin 2	s-c	12Vd.c.	10min	--	--	Unit shut down immediately, recoverable after the fault removed, no hazard.
C12 (on inverter board)	s-c	12Vd.c.	10min	--	--	Unit shut down immediately, recoverable after the fault removed, no hazard.
D1 (on inverter board), pin 2 and GND	s-c	12Vd.c.	10min	--	--	Unit shut down immediately, recoverable after the fault removed, no hazard.
Q1 (on inverter board), pin 1 and pin 8	s-c	12Vd.c.	10min	--	--	Unit shut down immediately, recoverable after the fault removed, no hazard.
Q1 (on inverter board), pin 2 and pin 8	s-c	12Vd.c.	10min	--	--	Unit shut down immediately, recoverable after the fault removed, no hazard.
Q1 (on inverter board), pin 1 and pin 2	s-c	12Vd.c.	10min	--	--	Unit shut down immediately, recoverable after the fault removed, no hazard.
U1 (on inverter board), pin 7 and pin 13	s-c	12Vd.c.	10min	--	--	Unit shut down immediately, recoverable after the fault removed, no hazard.
Supplementary information: s-c = short-circuited						

IEC60950_1C – ATTACHMENT 1			
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
Attachment Form No.....:	EU_GD_IEC60950_1C_II
Attachment Originator .....:	SGS Fimko Ltd
Master Attachment.....:	Date 2011-08

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

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)		
Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions	**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_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
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	Deleted.	**N/A**
1.5.1	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC	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.	Added.	**N/A**
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.		**N/A**
	Zx Protection against excessive sound pressure from personal music players		**N/A**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
	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.	Not personal music player	**N/A**

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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.		
	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
	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**

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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**

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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**

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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'.		**N/A**
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.		**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**

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Clause	Requirement + Test	Result - Remark	Verdict
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)**			
Clause	Requirement + Test	Result - Remark	Verdict
1.2.4.1	In **Denmark**, certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.		**N/A**
1.2.13.14	In **Norway** and **Sweden**, for requirements see 1.7.2.1 and 7.3 of this annex.		**N/A**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.7.1	In **Finland, Norway** and **Sweden**, resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. 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).		**N/A**
1.5.9.4	In **Finland**, **Norway** and **Sweden**, the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
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” 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. 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).”		**N/A**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
	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.”		
1.7.5	In **Denmark**, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a. For **CLASS II EQUIPMENT** the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.		**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**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
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 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, 1		**N/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**

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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 mm^2 is allowed for equipment with a rated current over 10 A and up to and including 13 A.		**N/A**
3.3.4	In the **United Kingdom**, the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm^2 to 1,5 mm^2 nominal cross-sectional area.		**N/A**

IEC60950_1C – ATTACHMENT 1			
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**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
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 CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.		**N/A**
	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.		**N/A**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.2	In **Finland**, **Norway** and **Sweden**, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		**N/A**
7.2	In **Finland**, **Norway** and **Sweden**, for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		**N/A**
7.3	In **Norway** and **Sweden**, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.		**N/A**
7.3	In **Norway**, for installation conditions see EN 60728-11:2005.		**N/A**

IEC60950_1C – ATTACHMENT 1			
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.....:	GB 4943.1--2011
Attachment Form No.....:	CN_ND_IEC60950_1A
Attachment Originator .....:	CQC-TIRT
Master Attachment.....:	Date 2012-11

	China National Differences		
1.5. 2	Add a note behind the first dashed paragraph. Note: A component used shall comply with related requirements corresponding altitude of 5000m.	Used below 2000m	**N/A**
1.7	Add a paragraph before the last paragraph: The required marking and instruction should be given in normative Chinese unless otherwise specified.	Evaluated during national approval.	**N/A**
1.7.1	Amend dashed paragraph at the fifth paragraph : 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.	Class III equipment	**N/A**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1	Add requirements of warning for equipment intended to be used at altitude 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.	Used below 2000m	**N/A**
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.	Considered in approved external adapter.	**N/A**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
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℃ 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.	Considered in approved external adapter.	**N/A**
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.	Considered in approved external adapter.	**N/A**
2.10.3.3& 2.10.3.4	Add "(applicable for altitude up to 2000m)" in header of Table 2K、2L and 2M.		**N/A**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
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 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.	Used below 2000m	**N/A**
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.	Class III equipment	**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 such equipment	**N/A**
Annex E	Amend last section: 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. 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.		**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.		**N/A**

IEC60950_1C – ATTACHMENT 1			
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.	Evaluated during national approval.	**N/A**
Annex EE (informative)	Added annex EE: Illustration relative to safety explanation in normative Chinese、Tibetan、Mongolian、Zhuang Language and Uighur.		**N/A**

	Special national conditions		
1.1.2	GB4943.1-2011 applies to equipment used at altitudes not exceeding 5000m above sea level, primarily in regions with moderate or tropical climates. Revise 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;	Used below 2000m	**N/A**
1.4.5	Amend the second paragraph by the following: If the equipment is intended for direct connection to an AC mains supply, the tolerances on RATED VOLTAGE shall be taken as +10% and -10%.	Class III equipment	**N/A**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
1.4.12.1	Tma: 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 to be operated at 2000m-5000m above sea leave, its temperature test conditions and temperature limits are under consideration.	40 °C is specified by manufacturer	**P**

IEC60950_1C – ATTACHMENT 1			
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 ProdSG, 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**

IEC60950_1C – ATTACHMENT 1			
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		
General	See also Group Differences (EN 60950-1:2006/A11/A1)		
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.	No such construction.	**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.	No TNV.	**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.	No TNV.	**N/A**

IEC60950_1C – ATTACHMENT 1			
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.	No TNV.	**N/A**

IEC60950_1C – ATTACHMENT 1			
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.	No TNV.	**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.	Not connected to cable distribution system.	**N/A**

IEC60950_1C – ATTACHMENT 1			
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.	Replaced.	**P**
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.	Added	**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:	Added	**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.	Evaluated during national approval.	**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.	Evaluated during national approval.	**N/A**
2	The clause is applicable with the following additions:		**N/A**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
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)	Added. Considered for approved external adapter.	**P**
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.	Evaluated during national approval.	**N/A**
3	The clause is applicable with the following additions:		
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.	No feed plug provided.	**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.	No connected to d.c. mains supply	**N/A**
Annex P	Normative references (List of relevant Israel Standards that have been inserted in place of some of the International Standards)	Inserted	**P**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict

J 60950-1 (H22) : 2009 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):2009(=JIS C 6950-1:2009)			
1.1.A	Add this sub-clause See Annex P for normative references	Added.	**P**
1.2	Add the following terms. Equipment, Class 0I 1.2.4.3A	Added.	**N/A**
1.2.4.1	Add the following NOTE 2: NOTE 2 – Even in the case of CLASS 0I equipment, two-pins plug with a protective earthing lead wire (an adapter for converting a Class 0I equipment plug into a two-pin plug without earthing wire) and cord sets having a two-pin type plug with a lead wire for earthing are also regarded as Class 0I equipment if they are included in packaging as accessories or if users are recommended to use them.	Added.	**N/A**
1.2.4.3A	Add this sub-clause: CLASS 0I EQUIPMENT: Equipment where protection against electric shock is achieved by: using BASIC INSULATION, and providing a means of connecting to the protective earthing conductor in the building wiring those conductive parts that are otherwise capable of assuming HAZARDOUS VOLTAGES if the BASIC INSULATION fails, and using a supply cord without earthing conductor and a plug without earthing wire although the equipment has externally an earth terminal or a lead wire for earthing. Equipment provided with a cord set having a two-pin type plug with a lead wire for earthing is also regarded as Class 0I. NOTE – Class 0I equipment may have a part constructed with Double Insulation or Reinforced Insulation as well as an operating part as SELV circuit.	Added.	**N/A**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
1.3.2	Add the following NOTE 1 and 2: Note1: transportable equipments or similar equipments that are frequently transported for use should not be considered Class I or Class 0I equipments. However, this shall not apply to equipments that are intended for installation by service personnel or installation personnel. Note 2: in consideration of the state of electrical power distribution in Japan, it is best to avoid the use of Class I or Class 0I devices if it is evident that it will be difficult to connect earthing during installation of the equipment. However, this shall not apply to devices that are intended for installation by service personnel or installation personnel.	Added.	**N/A**
1.5.1	When safety issues apply, in the absence of matters required by these specifications or JIS stipulated required matters concerning safety of related components, or in the absence of JIS concerning the component, the component must comply with one of the related IEC safety requirements. However, if a component compliant with ministerial ordinance (1962 Trade and Commerce Ministerial Ordinance No. 85) providing technical standards for electrical products is being used in accordance with the rating indicated for that component, apply articles 1.5.4, 2.8.7 and 3.2.5; electrical power cord sets that fit with inlets for equipments regulated by the IEC 60320-1 Standards Sheet must match the dimensions indicated on the applicable IEC 60320-1 Connector Standards Sheet. Note 1: regarding the JIS or IEC standards related to a component as related shall be limited to cases where the component in question is clearly within the scope of application of those standards.		**P**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.2	In the case of components that are certified as being in compliance with JIS harmonized with the related IEC, it must be confirmed that the component is being used correctly in accordance with the stipulated standards. In the absence of JIS harmonized with the related IEC, Note 1: When using an IEC 60320-1 C.14 device coupler with rated voltage less than 125 V and rated current in excess of 10A, refer to 1.7.5A. If JIS harmonized with the IEC related to the component does not exist concurrently with the IEC standards, or if the component is using circuitry that does not comply with its rating, the component must be tested in accordance with the conditions and within equipment. The number of samples required for testing shall normally be the same as the number required under similar standards.		**P**
1.5.6	Replace “IEC 60384-14:1993” to “JIS C 5101-14:1998 or IEC 60384-14:1993” of this Sub-Clause	Replaced.	**N/A**
1.5.7.2	Replace “IEC 60384-14:1993” to “JIS C 5101-14:1998 or IEC 60384-14:1993” of this Sub-Clause	Replaced.	**N/A**
1.5.8	Replace “IEC 60384-14:1993” to “JIS C 5101-14:1998 or IEC 60384-14:1993” of this Sub-Clause	Replaced.	**N/A**
1.7.1	Add local importer in this sub-clause manufacturer’s name or **local importer** or trade-mark or identification mark;	Added.	**N/A**
1.7.5	Replace “IEC 60083” to “IEC/TR 60083:1997 or JIS C 8303:2007” of this Sub-Clause	Replaced.	**N/A**
1.7.5.A	Add this sub-clause 1.7.5A Device Coupler When using an IEC 60320-1 C.14 device coupler (rated current 10A) with rated voltage less than 125 V and rated current in excess of 10A, be sure to write “Only use power supply cord sets that are provided with this device” or a similar statement in the user’s manual.	Added.	**N/A**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.17A	Add this sub-clause: *Marking for CLASS 0I EQUIPMENT* For CLASS 0I EQUIPMENT, the following instruction shall be indicated on the visible place of the mains plug or the main body: “Provide an earthing connection” *Example in Japanese:* 必ず接地接続を行って下さい Moreover, for CLASS 0I EQUIPMENT, the following instruction shall be indicated on the visible place of the main body or written in the operating instructions: “Provide an earthing connection before the mains plug is connected to the mains. And, when disconnecting the earthing connection, be sure to disconnect after pulling out the mains plug from the mains.” *Example in Japanese:* 接地接続は必ず、電源プラグを電源につなぐ前に行って下さい。又、接地接続を外す場合は、必ず電源プラグを電源から切り離してから行って下さい。	Class III equipment	**N/A**
2.1.1.1	In the Item b) of this Sub-Clause, replace “IEC 60083” to “IEC 60083 or JIS C 8303:2007”.	Replaced.	**N/A**
2.6.3.2	Add the following in front of 1st paragraph of this Sub-Clause. This also applies to the conductor of lead wire for protective earthing of CLASS 0I EQUIPMENT.	Class III equipment	**N/A**
2.6.3.4	Add the following in this Sub-Clause. (See 2.6.3.3)	Class III equipment	**N/A**
2.6.4.2	Add the following after 1st paragraph of this Sub-Clause. However, this shall not apply when the Class 0I equipment is equipped with a separate main protective earthing terminal.	Class III equipment	**N/A**
2.6.5.4	Replace the first sentence of this Sub-Clause by: Protective earthing connections of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the following:	Class III equipment	**N/A**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.5.8A	Add this sub-clause: *Earthing of CLASS 0I EQUIPMENT* Plugs with a lead wire for earthing shall not be used for equipment having a rated voltage exceeding 150V. For plugs with a lead wire for earthing, the lead wire shall not be earthed by a clip. CLASS 0I EQUIPMENT shall be provided with an earthing terminal or lead wire for earthing in the external where easily visible.	Class III equipment	**N/A**
2.10.1	Replace “IEC 60664-1” to “JIS C 0664:2003” in NOTE of this Sub-Clause	Replaced.	**P**
2.10.3.1	Replace “IEC 60664-1” to “JIS C 0664:2003” in NOTE 1 and NOTE 2	Replaced.	**P**
2.10.3.2	Replace “IEC 60664-1” to “JIS C 0664:2003” in the first sentence of this Sub-Clause	Replaced.	**P**
3.2.3	Add the following after Table 3A of this Sub-Clause. **Table 3A shall apply when a JIS C 3662 or JIS C 3663 compliant cable is used. Other cables that are used must be designed to allow suitable conduits to be run in,**	Added.	**N/A**
3.2.5.1	Add the following of this Sub-Clause. Or must be sheathed in accordance with Section 1, Annex 1 of the ministerial ordinance (1962 Trade and Commerce Ministerial Ordinance No. 85) providing technical standards for electrical products. - Or must be sheathed in accordance with Section 1, Annex 1 of the ministerial ordinance (1962 Trade and Commerce Ministerial Ordinance No. 85) providing technical standards for electrical products. - Electric cables that comply with JIS C 3662 or JIS C 3663 have a conductor with a cross-sectional area value greater than the values provided for in Table 3B. Other electrical cables comply with relevant wiring regulations. Delete 1) in Table 3B.	Added.	**N/A**
3.3.4	Add the following in Table 3D Note: when using JIS C 3662 or JIS C 3663-compliant electrical wiring, the terminal must enable connection of electric wiring commensurate with the regulated sizes	Added.	**N/A**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
3.3.7	Add the following after 1st paragraph of this Sub-Clause. 。 However, this shall not apply to the external grounding terminals of Class 0I equipment.	Added.	**N/A**
4.3.4	Add the following of this Sub-Clause. 。 Class 0I equipment where the values for creepage distance and clearance distance of the basic insulation drop further to a level lower than that stipulated in 2.10 must be properly fixed to withstand the mechanical stress generated in the course of normal use.	Added.	**N/A**
4.3.5	Replace “IEC 60083” to “JIS C 8303:2007” in the first sentence of this Sub-Clause	Replaced.	**N/A**
4.3.13.3	Add the following in Table 4A Note: JIS K 7161:1994, JIS K 7162:1994, IS K 7127:1999 are available as JIS compatible with part of ISO527.	Added.	**N/A**
4..3.13.5	Replace “IEC 60825-1” to “JIS C 6802:2005 or JIS C of this Sub-Clause	Replaced.	**N/A**
	Replace “IEC 60825-2:2000” to “JIS C 6803:2006 or IEC 60825-2:2000” of this Sub-Clause	Replaced.	**N/A**
4.5.1	Add the following to Suffix 3) of Table 4B (part one and part two). Note: When data concerning materials is unavailable, Annex 4, 1 (1) 3 of “Regarding Interpretation of Ministerial Ordinance Providing Technical Standards for Electrical Products” (June 19, 2008 Bureau of Commerce No. 3) may be applied to Item 1.	Added.	**P**

Attachment

The insulating materials shall not be exposed to the temperature exceeding the values when the appliance is operated at rated voltage and normal operating condition.

These values may be increased by;

8 degrees for Duty 2 appliance, and

16 degrees for Duty 3 appliance.

In order to classify the appliances, following assumptions are to be used.

Duty 1 appliances: considered to be connected to supply mains throughout the years such as refrigerators

Duty 2 appliances: considered to be connected to be in between Duty 1 and Duty 3 such as room heaters

Duty 3 appliances: considered to be connected to supply mains when it is operated for rather short time such as portable coffee mill.

Permissible temperature limits of insulating materials

Natural materials	
Material	Permissible temperature limit (ºC)
Bituminous compound for filter	75, (105) 1)
Paper, cotton, silk, other natural fiber and wood	90, (105) 2)
Oil denatured natural resin	105

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict

Silica powder	500
Mica (Hard)	500, (600) 3)
(Soft)	650, (850) 3)

Notes: 1) Value applies to thermal insulating materials.
2) Value applies to materials impregnated with varnish.
3) Value in parenthesis is applied when mechanical external force is absent.

Mica splittings and untreated mica papers

Lining	Adhesive							Permissible Temperature Limit (ºC)
	a	b	c	d	e	f	g	
None	X	X	X	X				130
					X			155
						X		180; 450, (700) [1];
						X		600, (800) [2]
							X	600, (700) [1]; 700, (850) [2]
Paper	X	X	X	X				130
Polyethylene terephtalate film				X				130
Glass fabric				X				130
					X			155
						X		180
Polyester nonwoven fabric, Polyester woven, and Polyethylene naphthalate film				X				130
					X			155
Polyamide-imide film, Aramide film, and Polymide film						X		155
							X	180

a: with asphalt base
b: with natural resin or denatured natural resin base
c: with ceramic base
d: with oil-denatured synthetic resin, alkyd orthophatalate resin or cross-linked polyester base.
e: with silicon–denatured synthetic resin, isophatalate alkyd resin, telephatalate alkyd resin or epoxy resin.
f: with silicon resin.
g: inorganic

Notes: 1) value applies to hard mica-made heating substrate.
2) value applies to soft mica-made heating substrate.

Remarks: value in parenthesis is applied when mechanical external force is absent.

Organic materials (Thermosetting Resins)

Material	Permissible temperature limit (ºC)
laminated melamine resin mixed with glass fiber	75, (100) [1]
moulded lemaine resin mixed with:	
cellulose	120
inorganics	140
laminated phenol resin with:	
cotton fiber base	115, (85) [2]
paper base	120, (70) [3]

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict

polyamide cloth base inorganics	75 140
moulded phenol resin with: inorganics others	 150, (160) [1] 140, (150) [1]
moulded melamine phenol resin with the gravity of less than 1.55	130
moulded urea resin mixed with cellulose	90
unsaturated polyester-casting	120
laminated unsaturated polyester mixed with inorganics	140
moulded unsaturated polyester mixed with: other than organics inorganic powder glass fiber	 120 140 155
epoxy resin-casting	120
laminated epoxy resin mixed with: inorganic other than inorganics	 130, (140) [1] 110, (90) [3]
moulded epoxy resin mixed with inorganics	130
laminated diallyl phthalate resin mixed with inorganics	140
moulded diallyl phthalate resin mixed with: other than inorganics inorganic powder glass fiber	 130 150 155
xylene resin-casting	140
polyamide-imide film	180
laminated silicone resin mixed with inorganics	180, (220) [1]
moulded silicon resins mixed with inorganics	180, (240) [4]
polymide film	210
laminated polymide	190
polybutadiene-casting	120
moulded polybutadiene mixed with inorganics	130
laminated dipheny oxide mixed with inorganics	180

Notes: 1) Values apply to thermal insulating materials.
2) Values apply to materials with a thickness less than 0.8 mm.
3) Values apply to materials with a thickness less than 0.8 mm when treated to retard flame.
4) Values apply to materials used for thermal insulation and to seal outlets of sheathed heating wires.

Organic materials (Thermoplastic Resins)

Material	Permissible temperature limit (ºC)
methacrylic resin, cellulose resin, cellulose acetate butylate resin, ulcanise, polyethylene	50
foamed polyethylene compound for insulated conductors, polyvinyl chloride	60
polyethylene compound for insulated conductors, heat-resistant polyvinyl chloride, cross-linked polyvinyl chloride compound for insulated conductors	75
cross-linked polyethylene, chlorinated polyethylene compound for insulated conductors	90
acrylonitrile acrylic rubber styrene resin, acrylontirile chlorinate polyethylene styrene	55

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict

resin	
acrylonitrile styrene resin, acrylonitrile butadiene resin, acrylonitrile butadiene chlorinated polyethylene resin : general : reinforced with glass fiber	 55 80
polypropylene : general : reinforced with glass fiber	105, (85) [3] 110
denatured polyphenyle oxide : general : reinforced with glass fiber	75 100
Polystyrene	50, (70) [1]
polyacetal : general : reinforced with glass fiber	100 120
polyamide : general : reinforced with glass fiber	90 120
polycarbonate : general : reinforced with glass fiber	110 120
polyethylene terephtalate : general : reinforced with glass fiber	120 130
polybutylene terephtalate : general : reinforced with glass fiber	120 135
heat resistant polyethylene terephthalate film	135
fluorinated polyvinylidene compound for insulated conductors, polychlorotrifluoroethylene (ethylene-trifluoride resin), ethylene-tetrafleorethylene copomylene for insulated conductors	150
tetrafluoroethylene hexafluoropropylene resin	200
polytetrafluoroethylene(ethylene-tetrafluoride), perflouroalkoxy compound for insulated conductors	250
aramide(aromatic polyamide paper)	220
Polysulfone	140, (150) [2]
polyethylene naphthalate	155
polyallylate : general : reinforced with glass fiber	120 130

Notes : 1) Values apply to capacitor dielectrics.
2) Values apply to thermal insulating material
3) Values apply to materials with a thickness of less than 0.8 mm
4) Inorganic materials

Inorganic materials

Material	Permission temperature limit (ºC)
glass fiber (only alkaline free)	300
lead glass	380
borosilicate glass	490
quartz glass	800
ceramic	800, (1000) [1]

Note: 1) Value apply to materials used as electric heating elements

Rubber compounds

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict

Material	Permission temperature limit (ºC)
natural rubber, polyurethane rubber, ebonite	60
nitrile rubber, styrene butadiene rubber, chloroprene rubber	75
butyl rubber	80
ethylene propylene (diene) rubber, chlorosulfonated polyethylene rubber	90
silicone rubber	180, (200) [1)]

Note : 1) Value apply to thermal insulating material and sealing compounds for sheathed heating elements.

Sleeves, Cloth, Tapes and like

Material	Impergnat or coating	Permission temperature limit (ºC)
rayon, cellulose acetate, vinylon	adhesive, oil varnish	105
paper, cotton fabric, silk fabric, polyamide, polyester fabric, polyester nonwoven fabric	oil varnish	105
polyester fabric, polyester nonwoven fabric	alkyd resin varnish	120
glass fabric	(ditto)	130
paper	Iso or terephtalate alkyd resin varnish, epoxy resin varnish, alkyd resin varnish	105
polyester fabric, polyester nonwoven fabric	(ditto)	120
glass fabric, aramide paper	Iso or terephtalate, alkyd resin varnish, epoxy resin varnish silicone resin varnish, silicone rubber	155 180
vulcanised fiber		105
heat resistant fiber		120

5.1.3	Add the following NOTE Note: Note that domestic three-phase power distribution systems have many delta connections, in which case tests should be performed using IEC 60990:1990 Figure 13 test circuitry.	Added.	**N/A**
5.1.6 Table 5A	Replace Table 5A of this Sub-Clause by:	Class III equipment	**N/A**

Table 5A – Maximum current

Type of equipment	Terminal A of measuring instrument connected to:	Maximum TOUCH CURRENT mA r.m.s. [1)]	Maximum PROTECTIVE CONDUCTOR CURRENT
ALL equipment	Accessible parts and circuits not connected to protective earth	0,25	-
HAND-HELD		0,75	-

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict

	MOVABLE (other than HAND-HELD, but including TRANSPORTABLE EQUIPMENT	Equipment main protective earthing terminal (if any) CLASS I 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.				
6	Add the following after NOTE1 of this Sub-Clause. Refer to the accompanying document, JB, for details concerning appropriate additional measures,		Added.		**N/A**
	Replace “IEC 60664-1” to “JIS C 0664 in note 4		Replaced.		**N/A**
7	Replace “IEC 60664-1” to “JIS C 0664:2003 of this NOTE 3		Replaced.		**N/A**
7.2	Add the following However, when all of the following criteria are satisfied, the separation requirement and test in 6.2.1 a), b) and c) shall not be applied to the cable distribution system. - the applicable circuit is a TNV-1 circuit. - the applicable circuit’s common side or grounding side is connected to the coaxial cable shielding, and to all accessible parts and circuits (SELV circuits, accessible metal parts, and limited current circuits also applicable if they exist) - the external conductor of the coaxial cable is intended to be connected to the grounding wire used for building wiring.		Added.		**N/A**
Annex G 2.1	Replace “IEC 60664-1” to “JIS C 0664:2003”		Replaced.		**N/A**
Annex G 6	Replace “IEC 60664-1” to “JIS C 0664:2003”		Replaced.		**N/A**
Annex N	Add Note Note: ITU-T Recommendation K.17:1996 has been abolished and replaced with ITU-T Recommendation K.44:2003, K.45:2003.		Added.		**N/A**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
	Note: The ITU-T Recommendation K.21:1996 test circuit was replaced with K.44:2003 in July 2003.		**N/A**
Annex P	Add the following terms. JIS C 5101-14:1998 Fixed capacitors for use in electronic equipment -- Part 14: Type-specific standards: Fixed capacitors for electromagnetic interference suppression in electrical power supply Fixed capacitors for use in electronic equipment —Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains	Added.	**N/A**
	Replace “IEC 60065:1998” to “IEC 60065:2001”	Replaced.	**N/A**
	Add the following terms. **JIS C 6802**:2005	Added.	**N/A**
	Add the following terms. **JIS C 6803**:2006 2004.	Added.	**N/A**
	Add the following terms. JIS C 8303:2007	Added.	**N/A**
	Add the following terms. JIS S 0101:2000	Added.	**N/A**
	Add the following terms. **ITU-T Recommendation K.44**:2003 , Resistibility tests for telecommunication equipment exposed to overvoltages and overcurrents—Basic Recommendation.	Added.	**N/A**
	Add the following terms. **ITU-T Recommendation K.45**:2003, Resistibility of telecommunication equipment installed in the access and trunk networks to overvoltages and overcurrents.	Added.	**N/A**
Annex Q	Add the following terms. **ITU-T Recommendation K.66**:2004, Protection of customer premises from overvoltages.	Added.	**N/A**
Annex T	Replace “IEC 60529:1989” to “JIS C 0920:2003	Replaced.	**N/A**
Annex W.1	Add following. Equipment, Class 0I	Added.	**N/A**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
Annex JA	Add Annex JA (Document shredding machines) Document shredding machines shall also comply with the requirements of this annex except those of STATIONARY EQUIPMENT used by connecting directly to an AC MAINS SUPPLY of three-phase 200V or more.	Added. Not Document shredding machines.	**N/A**
JA.1	***Markings and instructions*** *In the easily visible part near the document-slot, by a method capable to make out clearly and not easily disappeared, and by easily understandable wording, shall indicate the symbol of;* ⚠ and, also the following precautions for use; that use by an infant/child may cause a hazard of injury etc.; that a hand can be drawn into the mechanical section for shredding when touching the document-slot; that clothes can be drawn into the mechanical section for shredding when touching the document-slot; that hairs can be drawn into the mechanical section for shredding when touching the document-slot; in case of equipment incorporating a commutator motor, that equipment may catch fire or explode by spraying of flammable gas.	Added. Not Document shredding machines.	**N/A**
JA.2	**Inadvertent reactivation** Any safety interlock which can be operated by means of the test finger, Figure JA.1, is considered to cause reactivation of the hazard. Compliance is checked by inspection and, where necessary, by a test with the test finger, Figure JA.1.	Added. Not Document shredding machines.	**N/A**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict

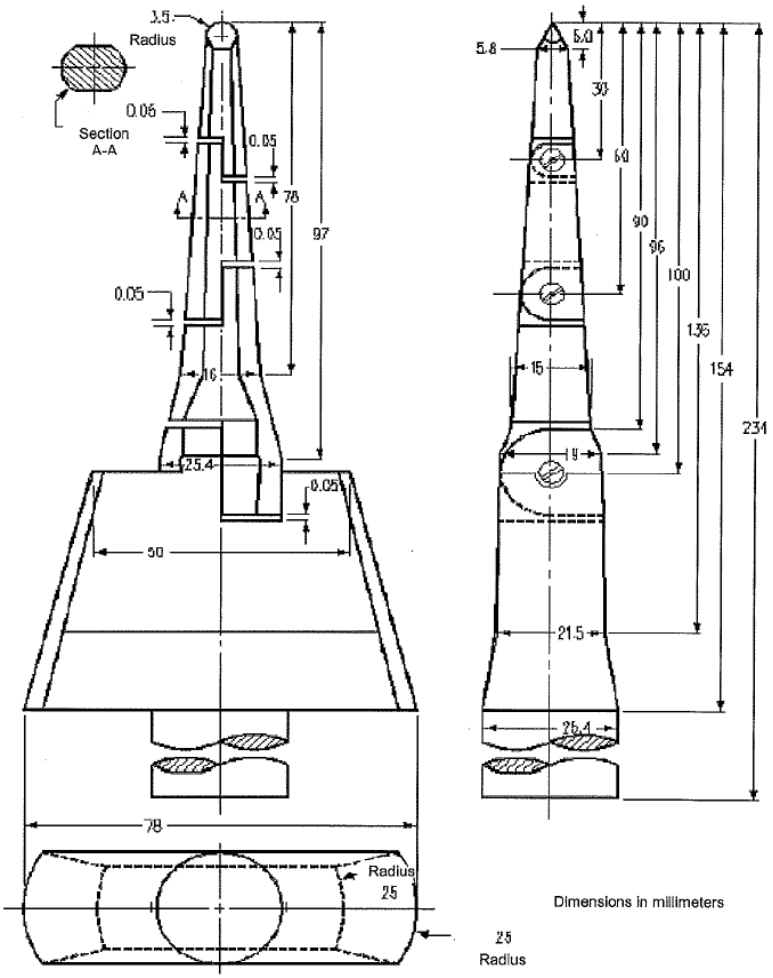
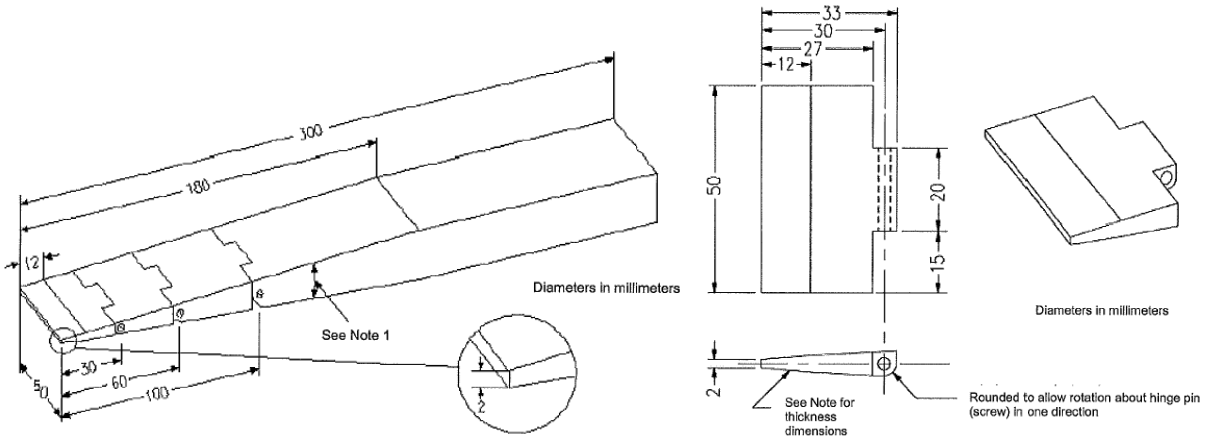


Figure JA.1 Test finger

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict
JA.3	**Isolating switch** Document shredding machines shall incorporate an isolating switch complying with sub-clause 3.4.2 as the device disconnecting the power of hazardous moving parts. For this switch, two-position (single-use) switch or multi-position (multifunction) switch (e.g., slide switch) may be used. If two-position switch, the positions for "ON" and "OFF" shall be indicated in accordance with sub-clause 1.7.8. If multi-position switch, the position for "OFF" shall be indicated in accordance with sub-clause 1.7.8 and other positions shall be indicated with proper terms or symbols. Compliance is checked by inspection.	Added. Not Document shredding machines.	**N/A**
JA.4	**Protection in operator access areas** Any warning shall not be used instead of the structure for preventing access to hazardous moving parts. Document shredding machines shall comply with the following requirements. Push the test finger, Figure JA.1, into all openings in MECHANICAL ENCLOSURES without applying additional force. It shall not be possible to touch hazardous moving parts with the test finger. The document shredding machine is installed as intended, and all face of MECHANICAL ENCLOSURES are subjected to this test. Before testing with the test finger, remove the parts detachable without a tool. Push the wedge-probe, Figure JA.2, into the document-slot. And, against all directions of openings, if straight-cutting type, a force of 45 N shall apply to the probe, and 90 N if cross-cutting type. In this case, the weight of the probe shall not influence the test. Before testing withy the test finger, remove the parts detachable without a tool. It shall not be possible to touch any hazardous moving parts, including the shredding roller or the mechanical section for shedding, with the probe.	Added. Not Document shredding machines.	**N/A**

IEC60950_1C – ATTACHMENT 1			
Clause	Requirement + Test	Result - Remark	Verdict



(Details of the top of wedge)

Distance from the top	Thickness of probe
0	2
12	4
180	24

Note 1 - The probe shall be of changing the thickness linearly. However, the slope shall be changed at the respective points shown in the table.

Note 2 –The allowable dimensional tolerance of the probe is +/- 0.127 mm.

Figure JA.2 Wedge-probe

Annex JB (reference)	Add Annex JB (Current state and means of handling overvoltage and overcurrent in the installation environment) The objective of this reference is not to propose new technical standards for the device. As a means of reducing the possibility that voltages in excess of 1.5kV peak may be applied to the device, these specifications provide for matters that must be adhered to concerning the device on the premise that it is installed in an environment within which appropriate measures have been taken in accordance with "**ITU-T Recommendation K.11**:1993". However, since environments that are not commensurate with this K.11 are often discovered domestically, this document attempts to describe the preferred environment and demonstrate the means for developing the preferred installation environment, thus contributing to its enhancement.	Added.	**N/A**
JB.1	JB.1 Preferred installation environment		**N/A**
JB.2	Current state and means of handling overvoltage and overcurrent in the installation environment		**N/A**

IEC60950_1C – ATTACHMENT 1			
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)	Evaluated during national approval.	**N/A**
8	EMC The apparatus shall comply with the relevant CISPR standards.	Evaluated during national approval.	**N/A**

Product: Open frame LCD monitor with touch screen

Type Designation: KXT-ABCY-ZZZ

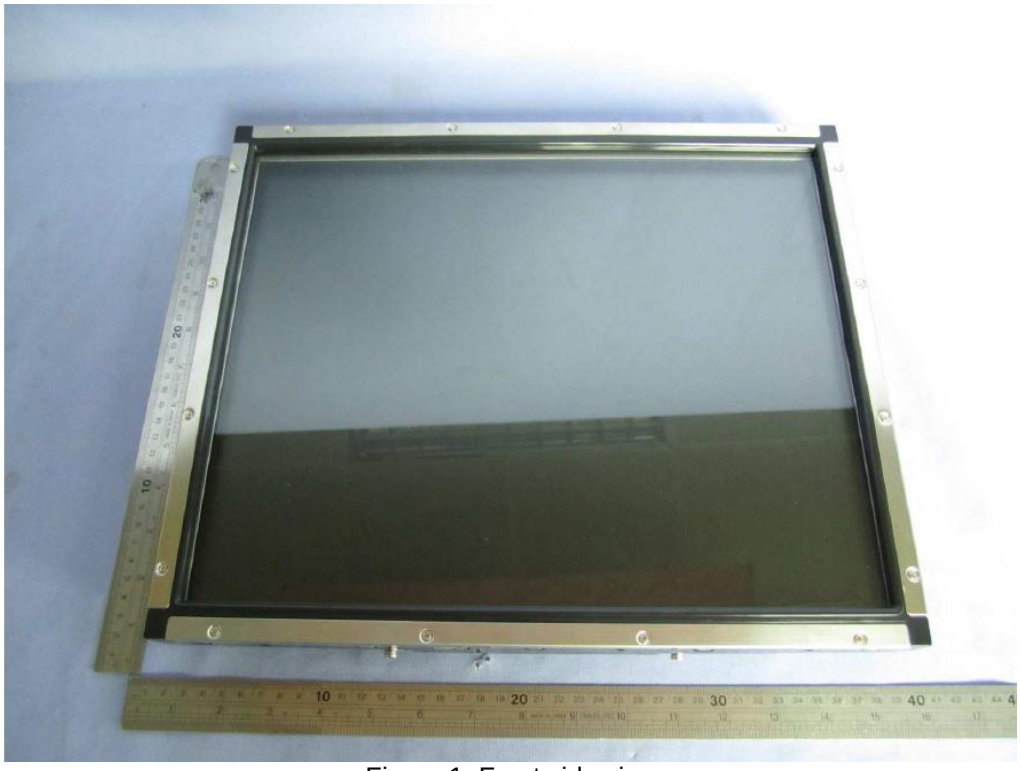


Figure 1. Front side view

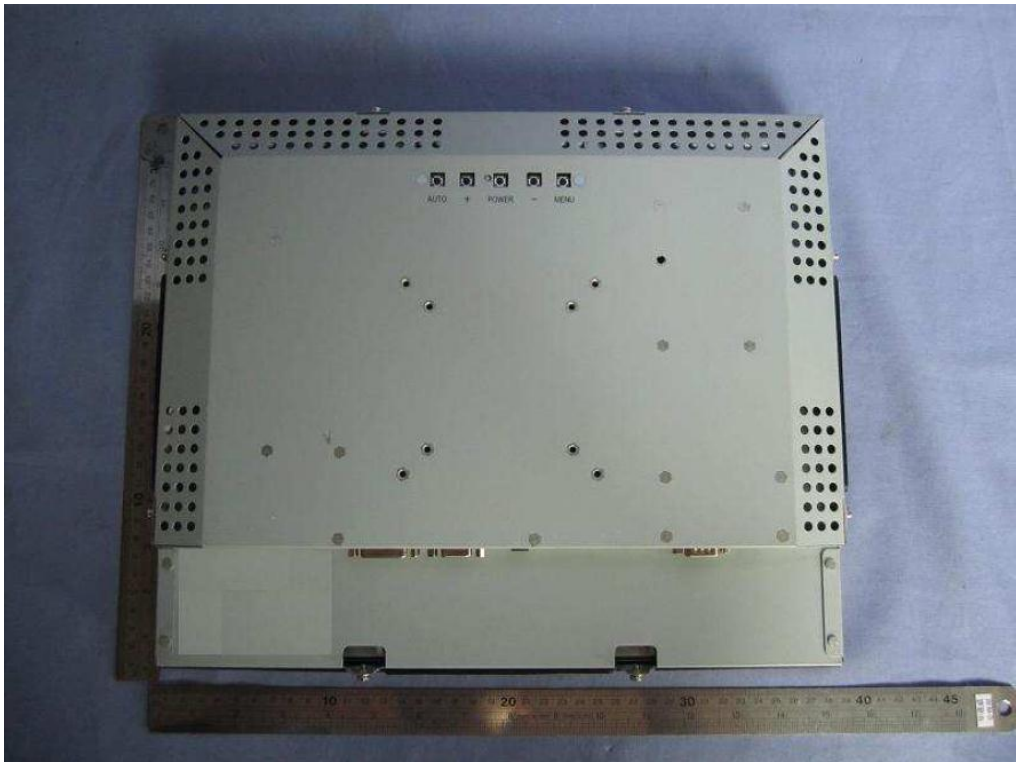


Figure 2. Rear side view

Product: Open frame LCD monitor with touch screen

Type Designation: KXT-ABCY-ZZZ

Figure 3. Side view

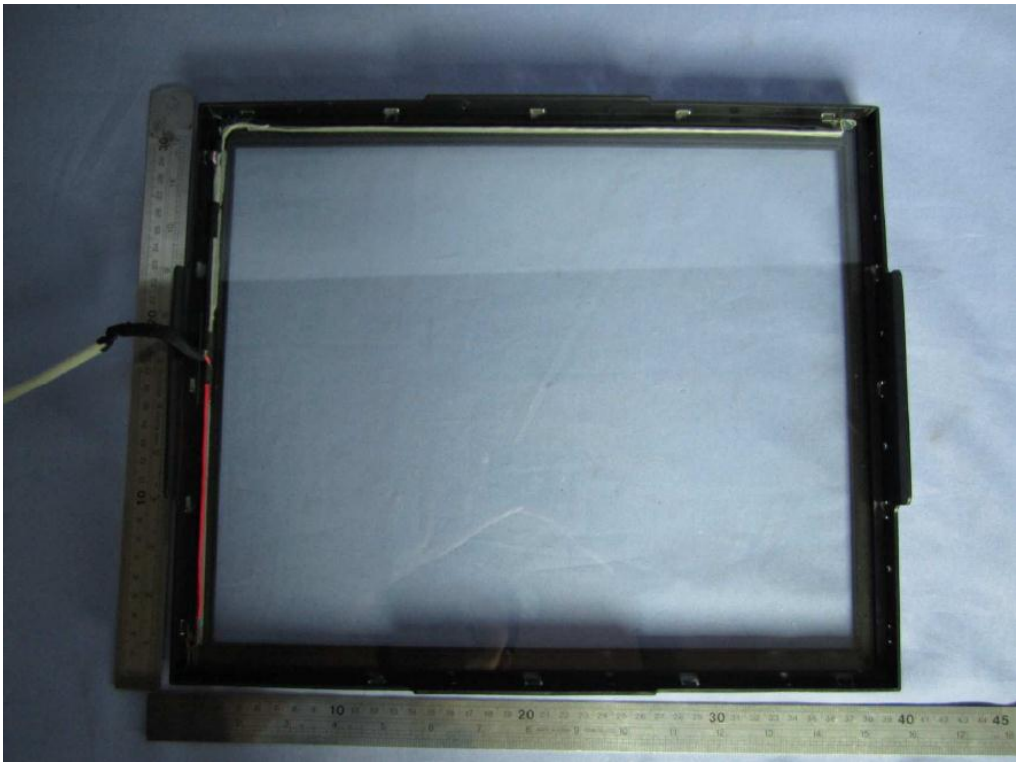


Figure 4. Touch screen view

Product: Open frame LCD monitor with touch screen

Type Designation: KXT-ABCY-ZZZ

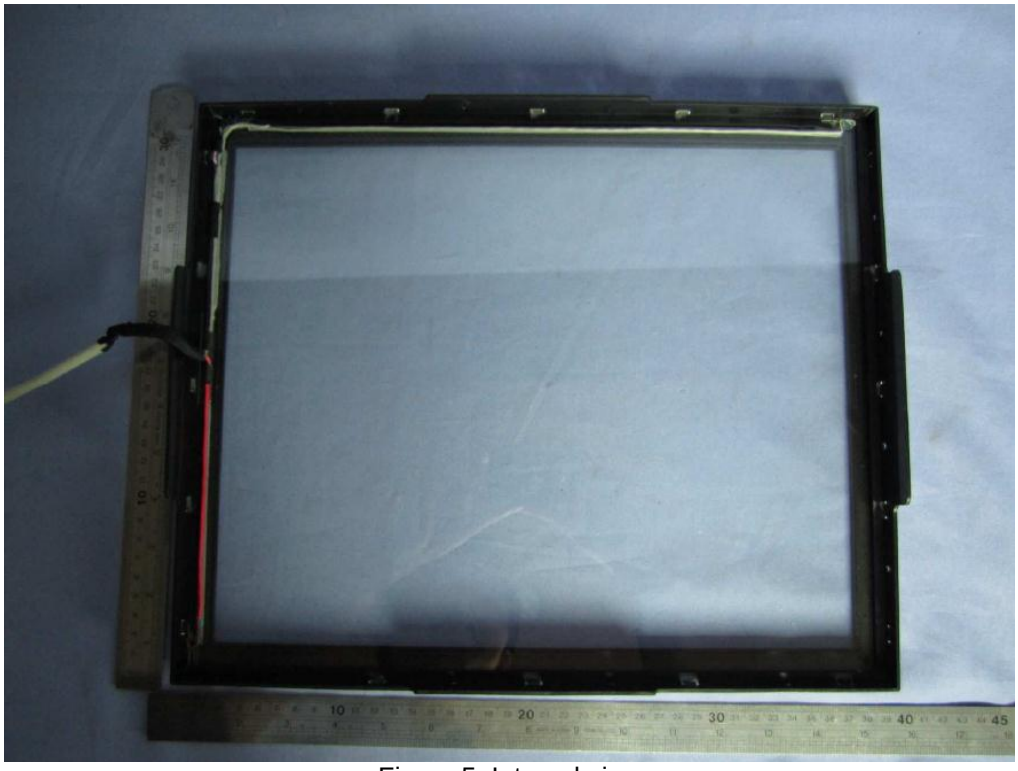


Figure 5. Internal view

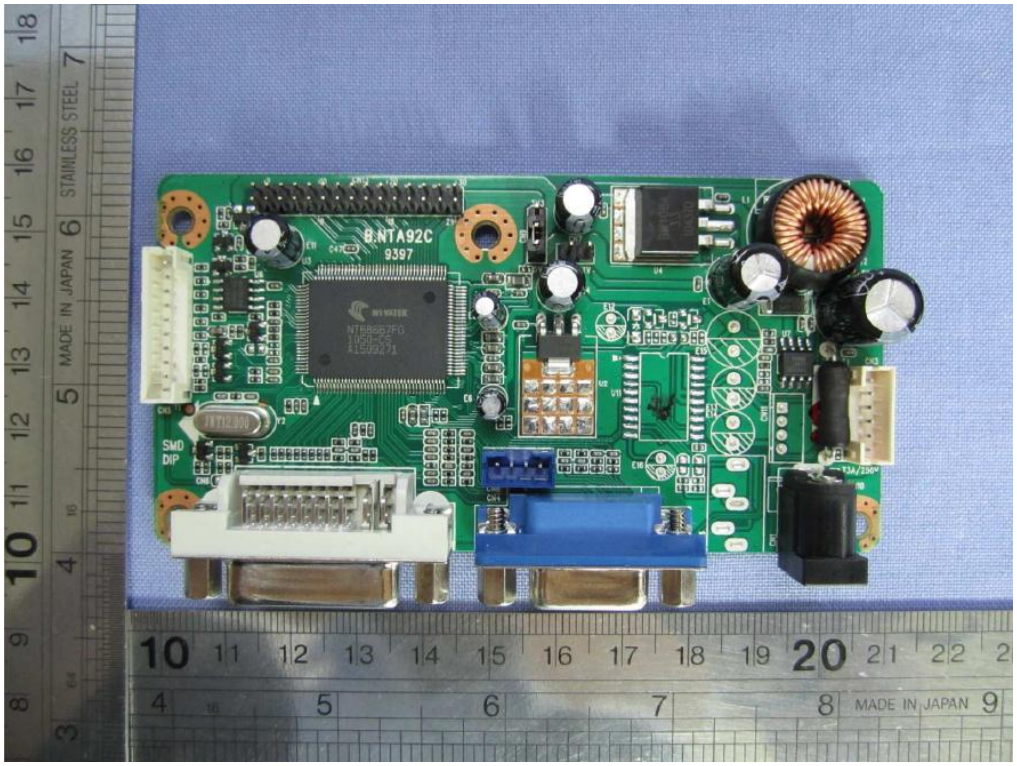


Figure 6. Main board view

Product: Open frame LCD monitor with touch screen

Type Designation: KXT-ABCY-ZZZ

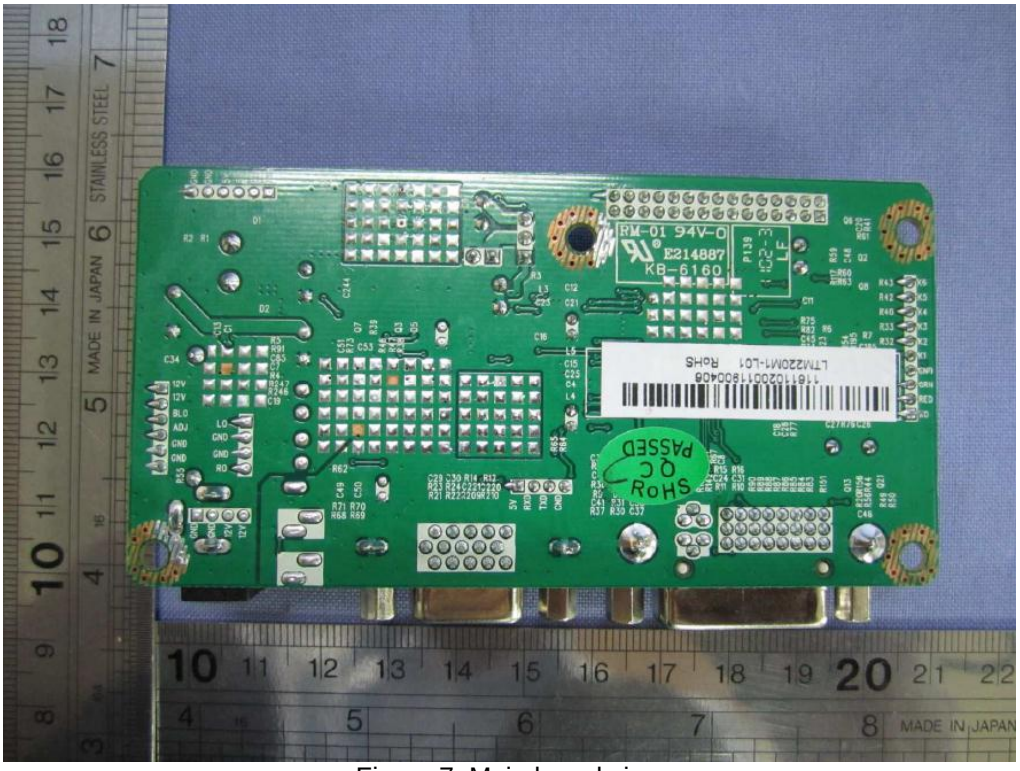


Figure 7. Main board view

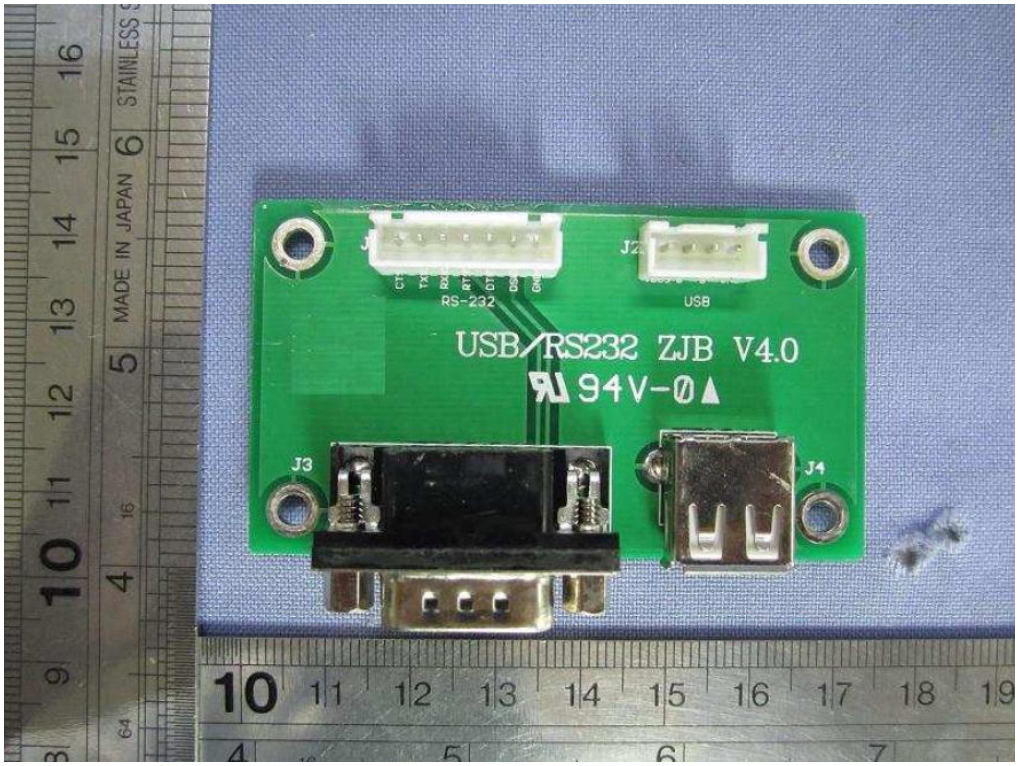


Figure 8. Connector board view

Product: Open frame LCD monitor with touch screen

Type Designation: KXT-ABCY-ZZZ

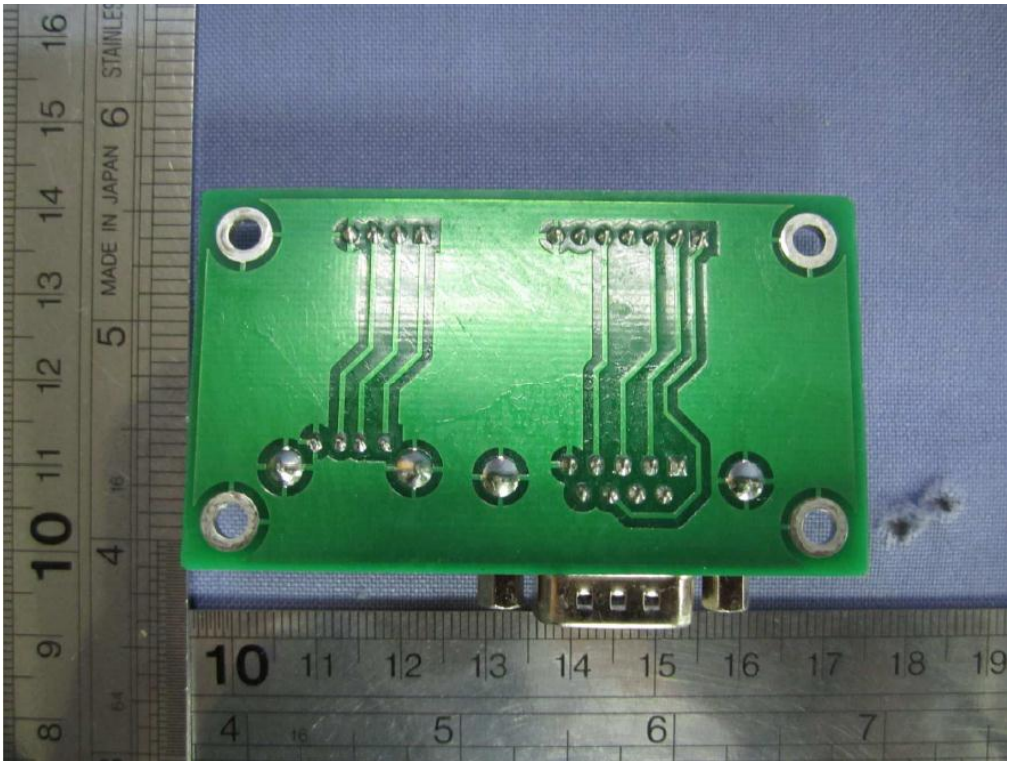


Figure 9. Connector board view

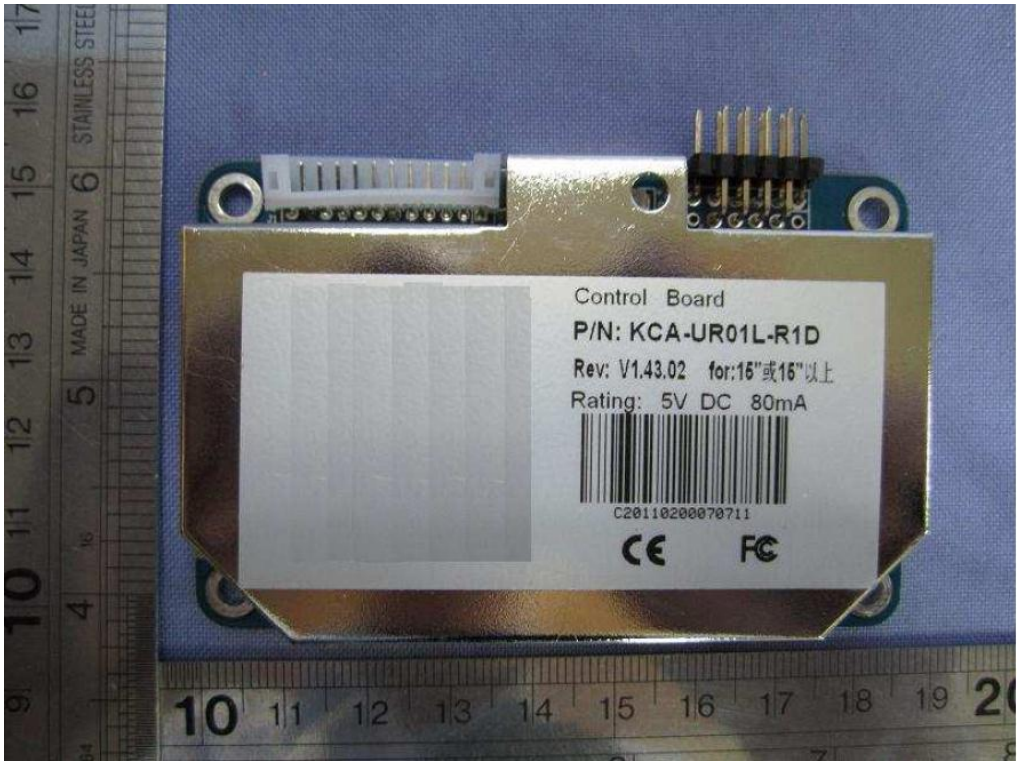


Figure 10. Touch screen control board view

Product: Open frame LCD monitor with touch screen

Type Designation: KXT-ABCY-ZZZ

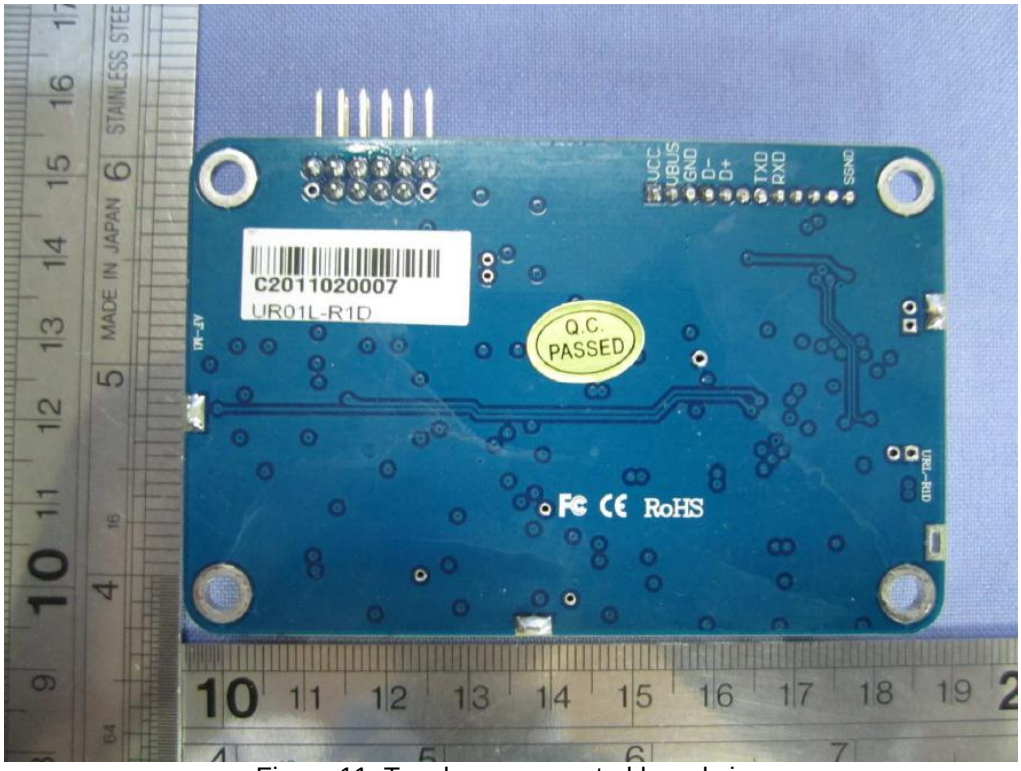


Figure 11. Touch screen control board view

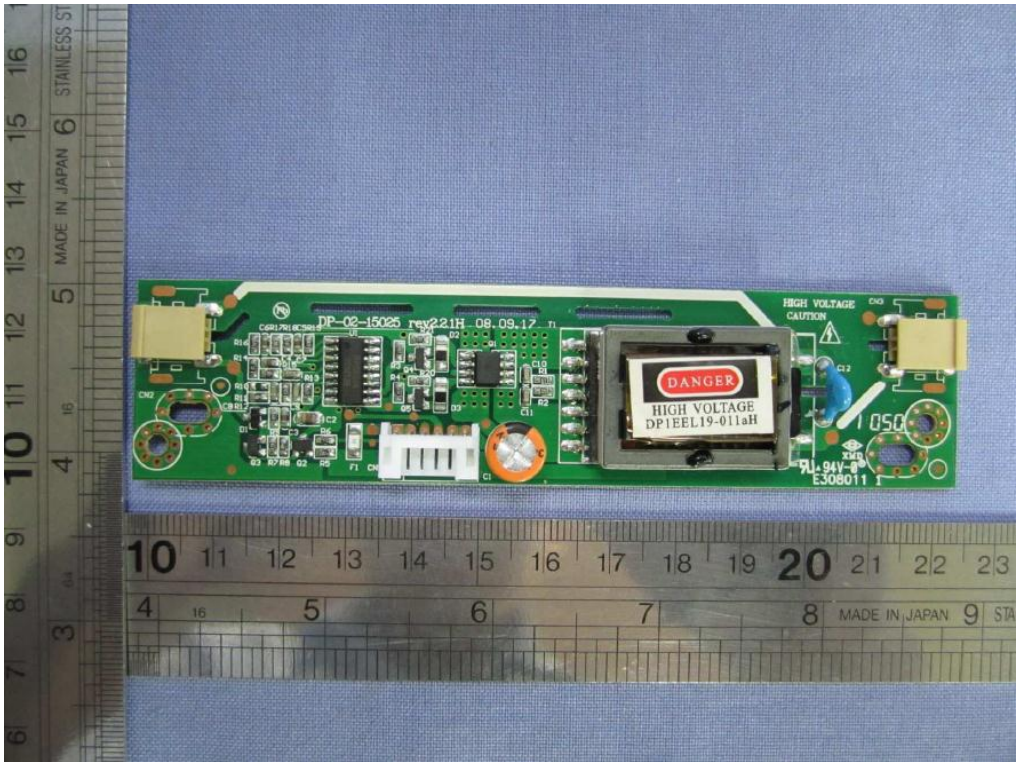


Figure 12. Inverter board view

Product: Open frame LCD monitor with touch screen

Type Designation: KXT-ABCY-ZZZ

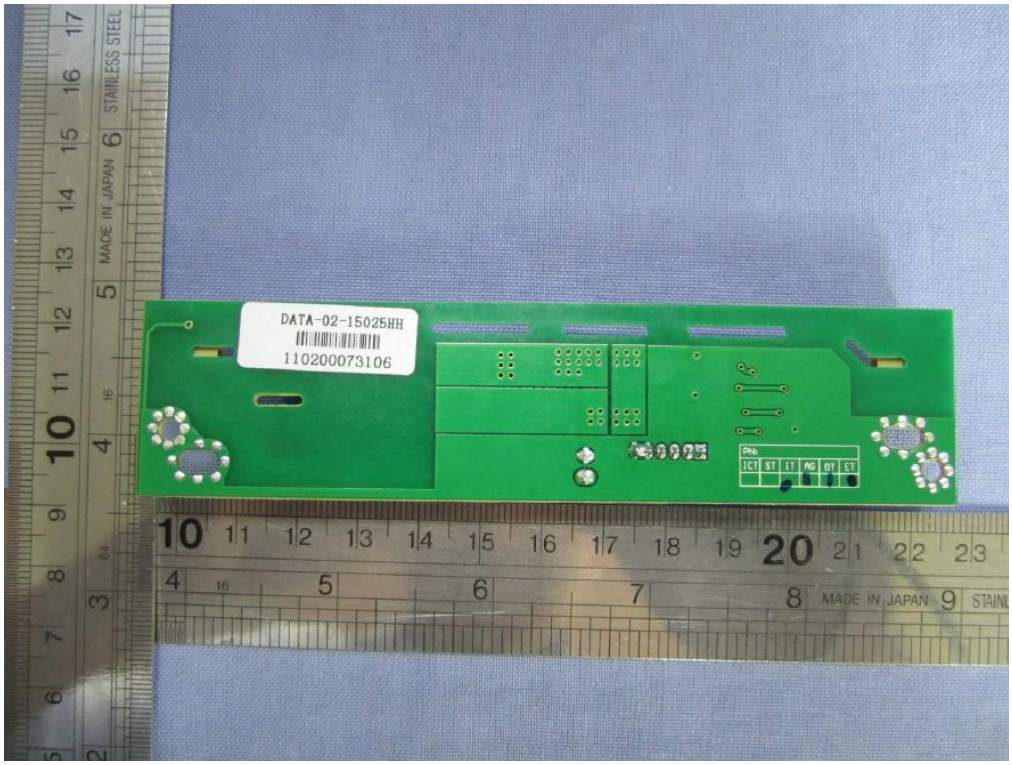


Figure 13. Inverter board view

Figure 14. External adapter view

Product: Open frame LCD monitor with touch screen

Type Designation: KXT-ABCY-ZZZ

Figure 15. External adapter view