

專業、品質、效率、服務



# 鼎安科技實驗室

*Product Safety Laboratory*





TÜV Rheinland Taiwan Ltd.

# Certificate of Appointment

**Superior Product Consulting, Inc.**  
3F., No. 10, Alley 6, Lane 235, Pao Chiao Rd., Hsin Tien,  
Taipei Hsien 231, Taiwan, R.O.C.

has been authorized to carry out Safety tests by order and under supervision of TÜV Rheinland. The laboratory has successfully demonstrated capability to conduct measurement and to process test data according to:

**European and International Safety Standards as listed in the Scope of Authorization on the Attachment to this Appointment**

An assessment according to the TÜV Rheinland requirements for second party audits, was conducted at the facility by TÜV Rheinland auditors, with reference to

**ISO/IEC 17025: 2005**

Appointment No. : 10010807-2008

Date of expiry : March 9, 2010

TÜV Rheinland Taiwan Ltd.  
Taipei, Dec. 10, 2008

Dipl.-Ing. Andreas Klinker  
Certification Body



Attachment to

# Certificate

of Appointment  
SCOPE OF AUTHORIZATION  
for

Superior Product Consulting, Inc.  
3F., No. 10, Alley 6, Lane 235, Pao Chiao Rd., Hsin Tien,  
Taipei Hsien 231, Taiwan, R.O.C.

## European Standards

EN 60 950-1	EN 60 065
EN 60 601-1	EN 61 347

## Basic and International Standards

IEC 60 950-1	IEC 60 065
IEC 60 601-1	IEC 61 347

Certificate No. : 10010807-2008

Taipei, Dec. 10, 2008



Dipl.-Ing. Andreas Klinker  
Certification Body

# DECLARATION OF CONFORMITY

According to the Low Voltage Directive 2006/95/EC

Type of Product ..... : **Fix Dome Network Camera**  
Model Designation **FD8161**  
Manufacturer's Name **VIVOTEK INC**  
Manufacturer's Address **5F, No.168, Lien-Cheng Rd., Chung-Ho  
City, Taipei County, Taiwan, R.O.C**

Is herewith confirmed to comply with the requirements set out in the Council Directive 2006/95/EC for electrical equipment used within certain voltage limits. For the evaluation of the compliance with these Directive, the following standard was applied:

IEC 60950-1: 2005, Second Edition, EN60950-1:2006+A11:2009

*Person responsible for making this declaration*

Name, Surname .....

Position/Title .....



\_\_\_\_\_ (Place)

\_\_\_\_\_ (Date)

\_\_\_\_\_ (Company stamp and signature)



## COVER PAGE FOR TEST REPORT

Test Item Description:	Fix Dome Network Camera
Model/Type Reference:	FD8161
Rating(s):	12 Vdc, 1.5 A or PoE (optional)
Standards:	IEC 60950-1: 2005, Second Edition, EN60950-1:2006+A11:2009
Applicant Name and Address:	VIVOTEK INC 6TH FL, 192 LIEN CHENG RD CHUNG HO TAIPEI HSIEN, 235 TAIWAN
Factory Location(s):	VIVOTEK INC 6TH FL, 192 LIEN CHENG RD CHUNG HO TAIPEI HSIEN, 235 TAIWAN
This Report includes the following parts, in addition to this cover page:	
<ol style="list-style-type: none"><li>1. Specific Technical Criteria</li><li>2. Clause Verdicts</li><li>3. Critical Components</li><li>4. Test Results</li><li>5. Enclosures<ol style="list-style-type: none"><li>a. National Differences</li><li>b. Photographs</li></ol></li></ol>	
This is to certify that representative samples of the products covered by this Test Report have been investigated by "Superior Product Consulting, Inc." in accordance with the above referenced Standards. The products have been found to comply with the requirements. This report shall not be reproduced, except in full, or with the written approval of "Superior Product Consulting, Inc."	

Test Report By:


Reviewed By:

Allen Huang  
Assistant General Manager

Eddie Shue  
Manager



## TEST REPORT


<b>IEC 60950-1: 2005, Second Edition, EN60950-1: 2006 Information technology equipment - Safety- Part 1: General Requirements</b>	
<b>Report Reference No</b> .....	SPCLVD911075
<b>Date of issue</b> .....	2009-12-14
<b>Total number of pages</b> .....	55
<b>CB Testing Laboratory</b> .....	Superior Product Consulting, Inc.
<b>Address</b> .....	3rd Fl, 10 Alley 6, Lane 235 Pao Chiao Rd, Hsin-Tien, Taipei, Taiwan
<b>Applicant's name</b> .....	VIVOTEK INC
<b>Address</b> .....	6TH FL, 192 LIEN CHENG RD CHUNG HO TAIPEI HSIEN, 235 TAIWAN
<b>Test specification:</b>	
<b>Standard</b> .....	IEC 60950-1:2005, Second Edition, EN 60950-1:2006
<b>Test procedure</b> .....	QE-19 IEC 60950-1:2005, Second Edition, EN 60950-1:2006
<b>Non-standard test method</b> .....	N/A
<b>Test item description</b> .....	Fix Dome Network Camera
<b>Trade Mark</b> .....	VIVOTEK 
<b>Model/Type reference</b> .....	FD8161
<b>Manufacturer</b> .....	VIVOTEK INC 5F, No.168, Lien-Cheng Rd., Chung-Ho City, Taipei County, Taiwan, R.O.C
<b>Rating</b> .....	12 Vdc, 1.5 A or PoE (optional)




<b>Summary of Testing:</b> Unless otherwise indicated, all tests were conducted at Superior Product Consulting, Inc. 3rd Fl, 10 Alley 6, Lane 235 Pao Chiao Rd, Hsin-Tien, Taipei, Taiwan.	
<b>Tests performed (name of test and test clause)</b>	<b>Testing location / Comments</b>
Input: Single-Phase (1.6.2)	
SELV circuits Test (2.2)	
Determination Of Working Voltage - Hazardous Voltage (Circuit) Measurement Test (2.10.2, Part 22 6.1)	
Loading - Wall and Ceiling Mounted Equipment (4.2.10)	
Heating (4.5.1, 1.4.12, 1.4.13)	
Electric Strength (5.2.2)	
Overload of Operator Accessible Connector (5.3.7)	
<b>Summary of Compliance with National Differences:</b>	
AT, BE, CH, CZ, DE, DK, ES, EU, FI, FR, GB, GR, HU, IE, IT, NL, NO, PL, PT, SE, SI, SK	






Copy of Marking Plate


**Network Camera** 

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Model No: FD8161 **RoHS** 

MAC: 0002D1XXXXXX **CE** **FC**

XXXXXX 

**This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:**  
**(1) this device may not cause harmful interference, and**  
**(2) this device must accept any interference received, including interference that may cause undesired operation.**

Pat. 6,930,709 Made in Taiwan





<b>Test item particulars :</b>	
Equipment mobility .....	Stationary
Connection to the mains .....	No mains direct connection
Operating condition .....	continuous
Over voltage category .....	N/A
Mains supply tolerance (%) .....	No direct connection
Tested for IT power systems .....	N/A
IT testing, phase-phase voltage (V) .....	N/A
Class of equipment .....	Class III (supplied by SELV)
Mass of equipment (kg) .....	0.7
Pollution degree .....	PD 2
IP protection class .....	IP X0
<b>Possible test case verdicts:</b>	
- 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)
<b>Testing:</b>	
Date(s) of receipt of test item .....	2009-11-20
Date(s) of Performance of tests .....	2009-11-24 to 2009-12-11
<b>General remarks:</b>	
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 point is used as the decimal separator.	
Refer to the Cover Page For Test Report for a list of all Factory Locations.	



## GENERAL PRODUCT INFORMATION:

### Report Summary

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

### Product Description

Test unit, Fix Dome Network Camera, is a Class III equipment.

The equipment is intended to be powered by a Listed/Certified ITE external AC adapter providing Limited Power Source or PoE complies with LPS.

### Model Differences

N/A

### Additional Information

Licenses for critical components to be furnished by applicant upon request.

Light Emitting Diodes (LED's) employed on the units are for use as visual indicators only, and operate within Class 1 limits in accordance to IEC 60825 Standard. The LED's operate at the visible range of 400 to 710 nm. Applicant to furnish LED specifications upon request.

For Instruction manual provided with the unit, reviewed only English language. Applicant to furnish Instructions in language suitable for countries noted in National Differences Enclosure of the report when submitting for National Certification.

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

The units are considered to be a Class III devices supplied by SELV. All applicable subclauses related to the AC mains connection, and AC Adapters, which were separately certified, are noted as "N/A".

### Technical Considerations

The product was submitted and tested for use at the maximum ambient temperature (T<sub>ma</sub>) permitted by the manufacturer's specification of: 40°C

The product was investigated to the following additional standards: EN60950-1:2006+A11:2009 (which includes all European national differences, including those specified in this test report).

The following are available from the Applicant upon request: Specific data sheets for LED indicators that are class I and operate at wavelength in the 400-710 nm range., Installation (Safety) Instructions / Manual

The power supply in this equipment was: External power adapter certified to an earlier edition/amendment of IEC 60950 or EN 60950. Additional investigation may be required when submitted for National Approval.



1	<b>GENERAL</b>		Pass
1.5	Components		Pass
1.5.1	General		Pass
	Comply with IEC 60950 or relevant component standard	(see appended table 1.5.1)	Pass
1.5.2	Evaluation and testing of components	Components certified to IEC harmonized standard and checked for correct application. Components, for which no relevant IEC-Standard exist, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950-1. Components not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950-1 and the relevant component Standard.	Pass
1.5.3	Thermal controls		N/A
1.5.4	Transformers		N/A
1.5.5	Interconnecting cables	Interconnecting cables comply with the relevant requirements of this standard.	Pass
1.5.6	Capacitors bridging insulation	Class III equipment.	N/A
1.5.7	Resistors bridging insulation	Class III equipment.	N/A
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		N/A
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		N/A
1.5.7.4	Accessible parts		N/A
1.5.8	Components in equipment for IT power systems		N/A
1.5.9	Surge suppressors		N/A
1.5.9.1	General	Class III equipment. Only surge suppressor use in secondary circuit.	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	<b>Power interface</b>		Pass
1.6.1	AC power distribution systems	Supplied by SELV.	N/A
1.6.2	Input current	The steady state input current of the equipment did not exceed the RATED CURRENT by more than 10% under NORMAL LOAD. (see appended table 1.6.2)	Pass
1.6.3	Voltage limit of hand-held equipment	The unit is not a hand-held equipment.	N/A
1.6.4	Neutral conductor		N/A

1.7	<b>Marking and instructions</b>		Pass
1.7.1	Power rating	Product provided with DC voltage rating.	Pass
	Rated voltage(s) or voltage range(s) (V).....:	12 Vdc (optional)	Pass
	Symbol for nature of supply, for d.c. only.....:		N/A
	Rated frequency or rated frequency range (Hz) .....		N/A
	Rated current (mA or A) .....	1.5 A (optional)	Pass
	Manufacturer's name or trademark or identification mark .....	VIVOTEK INC	Pass
	Model identification or type reference .....	FD8161	Pass
	Symbol for Class II equipment only.....:	Class III equipment.	N/A
	Other markings and symbols .....	Additional symbols may be provided when submitted for National Approval.	Pass
1.7.2	Safety instructions and marking	Safety instructions in English. Other languages will be provided when submitted for National Approval.	Pass
1.7.2.1	General		Pass
1.7.2.2	Disconnect devices		N/A
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT Power distribution systems	Class III equipment.	N/A
1.7.2.5	Operator access without a tool		N/A
1.7.2.6	Ozone		N/A
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment .....		N/A
	Method and means of adjustment; reference to installation instructions .....		N/A
1.7.5	Power outlets on the equipment.....:		N/A
1.7.6	Fuse identification (marking, special fusing		N/A



	characteristics, cross-reference) .....		
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals.....		N/A
1.7.7.2	Terminal for a.c. mains supply conductors		N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators		Pass
1.7.8.1	Identification, location and marking.....	The function of controls affecting safety is obvious regardless of language.	Pass
1.7.8.2	Colours .....	Only functional indicators use color.	Pass
1.7.8.3	Symbols according to IEC 60417 .....		N/A
1.7.8.4	Markings using figures .....		N/A
1.7.9	Isolation of multiple power sources .....		N/A
1.7.10	Thermostats and other regulating devices.....		N/A
1.7.11	Durability	The marking(s) withstood the required test.	Pass
1.7.12	Removable parts	No marking is located on (a) removable part(s).	Pass
1.7.13	Replaceable batteries .....	There are no lithium batteries in the equipment.	N/A
	Language(s) .....		-
1.7.14	Equipment for restricted access locations .....	Equipment not intended for installation in a RESTRICTED ACCESS LOCATION.	N/A

2	<b>PROTECTION FROM HAZARDS</b>		Pass
2.1	Protection from electric shock and energy hazards		Pass
2.1.1	Protection in operator access areas		Pass
2.1.1.1	Access to energized parts	The unit is supplied from an external power supply that provides SELV only.  No access with test probe to any parts with only basic insulation to TNV-3.  No hazardous voltage exists within the unit.	Pass
	Test by inspection .....	The unit is supplied from an external power supply that provides SELV only.  No hazardous voltage exists	Pass



		within the unit.	
	Test with test finger (Figure 2A) .....	The test finger was unable to contact bare hazardous parts, basic insulation, or ELV circuits.	Pass
	Test with test pin (Figure 2B) .....	The test pin was unable to contact bare hazardous parts.	Pass
	Test with test probe (Figure 2C).....	No access with test probe to any parts with only basic insulation to TNV-3.	Pass
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring	No internal wiring at ELV.	N/A
	Working voltage (V <sub>peak</sub> or V <sub>rms</sub> ); minimum distance through insulation (mm) .....		-
2.1.1.4	Access to hazardous voltage circuit wiring		N/A
2.1.1.5	Energy hazards .....		N/A
2.1.1.6	Manual controls	No shafts or knobs, etc. at ELV, TNV or hazardous voltage.	N/A
2.1.1.7	Discharge of capacitors in equipment		N/A
	Measured voltage (V); time-constant (s) .....		-
2.1.1.8	Energy hazards - d.c. mains supply)		N/A
	a) Capacitor connected to the d.c. mains supply) ..		N/A
	b) Internal battery connected to the mains supply) :		N/A
2.1.1.9	Audio amplifiers.....		N/A
2.1.2	Protection in service access areas	No bare parts operating at HAZARDOUS VOLTAGES in a service access area.	N/A
2.1.3	Protection in restricted access locations		N/A

2.2	<b>SELV circuits</b>		Pass
2.2.1	General requirements	Supplied by SELV.	Pass
2.2.2	Voltages under normal conditions (V) .....	Supplied by SELV. All accessible voltages are less than 42.4 V pk or 60 V dc and are classified as SELV.	Pass
2.2.3	Voltages under fault conditions (V) .....		N/A
2.2.4	Connection of SELV circuits to other circuits .....	SELV circuits are only connected to other SELV circuits.	Pass

2.3	<b>TNV circuits</b>		N/A
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2.3.1	Limits		N/A
	Type of TNV circuits .....		-
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions .....		N/A
2.3.3	Separation from hazardous voltages		
	Insulation employed .....		-
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed .....	Reinforced	-
2.3.5	Test for operating voltages generated externally		N/A

2.4	<b>Limited current circuits</b>		N/A
2.4.1	General requirements		N/A
2.4.2	Limit values		N/A
	Frequency (Hz) .....		-
	Measured current (mA) .....		-
	Measured voltage (V) .....		-
	Measured circuit capacitance (nF or uF) .....		-
2.4.3	Connection of limited current circuits to other circuits		N/A

2.5	<b>Limited power sources</b>		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	<b>Provisions for earthing and bonding</b>		N/A
2.6.1	Protective earthing	Class III equipment.	N/A
2.6.2	Functional earthing		N/A
2.6.3	Protective earthing and protective bonding		N/A



	conductors		
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 <sup>2</sup> ), AWG .....		-
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm <sup>2</sup> ), AWG .....		-
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (ohm), voltage drop (V), test current (A), duration (min) .....		N/A
2.6.3.5	Colour of insulation .....		N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type, nominal thread diameter (mm) .....		-
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A

2.7	<b>Overcurrent and earth fault protection in primary circuits</b>		N/A
2.7.1	Basic requirements		N/A
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not covered 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
2.7.6	Warning to service personnel.....		N/A





2.8	<b>Safety interlocks</b>		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	<b>Electrical insulation</b>		N/A
2.9.1	Properties of insulating materials		N/A
2.9.2	Humidity conditioning		N/A
	Relative humidity (%), temperature (°C).....:		-
2.9.3	Grade of insulation		N/A
2.9.4	Separation from hazardous voltages		N/A
	Method(s) used.....:		-

2.10	<b>Clearances, creepage distances and distances through insulation</b>		Pass
2.10.1	General	Unit is to be powered by a certified external AC adapter or PoE with SELV output.	Pass
2.10.1.1	Frequency.....:	Less than 30 k Hz.	Pass
2.10.1.2	Pollution degrees.....:		N/A
2.10.1.3	Reduced values for functional insulation		N/A
2.10.1.4	Intervening values for functional insulation		N/A
2.10.1.5	Insulation with varying dimensions		N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage	SELV	Pass
2.10.2.1	General	Unit is to be powered by a certified external AC adapter or PoE with SELV output.	Pass
2.10.2.2	RMS working voltage		N/A



2.10.2.3	Peak working voltage		N/A
2.10.3	Clearances	(see appended table 2.10.3 and 2.10.4).	Pass
2.10.3.1	General	Unit is to be powered by a certified external AC adapter or PoE with SELV output.	Pass
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 circuit		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	See sub-clause 2.10.3.8.	N/A
2.10.4	Creepage distances		Pass
2.10.4.1	General	Unit is to be powered by a certified external AC adapter or PoE with SELV output.	Pass
2.10.4.2	Material group and comparative tracking index		Pass
	CTI tests .....	Material group IIIb; $100 \leq CTI < 175$ .	-
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
2.10.5.6	Thin sheet material - General	Thin sheet material is not used for supplementary or reinforced insulation.	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	No coated printed boards provided.	N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs).....:		N/A
2.10.7	Component external terminations		N/A
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A



2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts		N/A

3	<b>WIRING, CONNECTIONS AND SUPPLY</b>		Pass
3.1	General		N/A
3.1.1	Current rating and overcurrent protection		N/A
3.1.2	Protection against mechanical damage		N/A
3.1.3	Securing of internal wiring		N/A
3.1.4	Insulation of conductors		N/A
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure		N/A
3.1.7	Insulating materials in electrical connections		N/A
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors		N/A
	10 N pull test		N/A
3.1.10	Sleeving on wiring		N/A

3.2	<b>Connection to mains supply</b>		N/A
3.2.1	Means of connection		N/A
3.2.1.1	Connection to an a.c. mains supply		N/A
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 <sup>2</sup> ), 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 of minor dimension D (mm); test mass (g) .....:		-
	Radius of curvature of cord (mm).....:		-
3.2.9	Supply wiring space		N/A

3.3	<b>Wiring terminals for connection of external conductors</b>		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 <sup>2</sup> ).....:		-
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type and nominal thread diameter (mm).....:		-
3.3.6	Wiring terminals design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A

3.4	<b>Disconnection from the mains supply</b>		N/A
3.4.1	General requirement		N/A
3.4.2	Disconnect devices		N/A
3.4.3	Permanently connected equipment	Not 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 equipment 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	<b>Interconnection of equipment</b>		Pass
3.5.1	General requirements		Pass
3.5.2	Types of interconnection circuits.....:	Interconnection circuits are SELV CIRCUITS.	Pass



3.5.3	ELV circuits as interconnection circuits	No ELV interconnection.	N/A
3.5.4	Data ports for additional equipment	All ports only provides signal / data transmitting non-powered.	Pass

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

4.2	<b>Mechanical strength</b>		Pass
4.2.1	General		Pass
4.2.2	Steady force test, 10 N	Steady Force Test (10 N) applied to components which continue to comply with the requirements of Sub clause 2.10.	Pass
4.2.3	Steady force test, 30 N	The equipment does not have any internal enclosures.	N/A
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		N/A
4.2.8	Cathode ray tubes	The equipment does not have any CRT's	N/A
	Picture tube separately certified.....		N/A
4.2.9	High pressure lamps	The equipment does not have any high pressure lamps.	N/A
4.2.10	Wall or ceiling mounted equipment; force (N).....	Mounting means withstands four times unit weight or 50N minimum.	Pass

4.3	<b>Design and construction</b>		Pass
4.3.1	Edges and corners	All edges and corners are judged to be sufficiently well rounded so as not to constitute a hazard.	Pass
4.3.2	Handles and manual controls; force (N) .....		N/A
4.3.3	Adjustable controls		N/A
4.3.4	Securing of parts	The equipment does not have	N/A



		any supplementary or reinforced insulation.	
4.3.5	Connection of plugs and sockets	The equipment does not have any interchangeable plugs/sockets.	N/A
4.3.6	Direct plug-in equipment	Not direct plug-in equipment.	N/A
	Torque .....		N/A
	Compliance with the relevant mains plug standard:		N/A
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries	The equipment does not have any batteries.	N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging of any battery		N/A
4.3.9	Oil and grease		N/A
4.3.10	Dust, powders, liquids and gases	The equipment does not produce dust or employ powders, liquids or gases.	N/A
4.3.11	Containers for liquids or gases	The equipment does not contain liquids.	N/A
4.3.12	Flammable liquids .....	The equipment does not use any flammable liquids.	N/A
	Quantity of liquid (l) .....		N/A
	Flash point (°C) .....		N/A
4.3.13	Radiation		Pass
4.3.13.1	General	LED indicators.	Pass
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg) .....		-
	Measured high-voltage (kV) .....		-
	Measured focus voltage (kV) .....		-
	CRT markings .....		-
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	The equipment does not contain lamps.	N/A
	Part, property, retention after test, flammability classification .....		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....	The equipment does not contain lamps.	N/A
4.3.13.5	Laser (including LEDs)	This product contains only visible indicator LEDs (Class 1) operating in the range of 400 - 700 nm wavelength. No	Pass



		IEC60825-1 evaluation was deemed necessary. Additional review may be required at the discretion of the accepting NCB.	
	Laser class .....	(For indicator LEDs, see above statement.)	-
4.3.13.6	Other types.....		N/A

4.4	<b>Protection against hazardous moving parts</b>		N/A
4.4.1	General		N/A
4.4.2	Protection in operator access areas.....		N/A
4.4.3	Protection in restricted access locations.....		N/A
4.4.4	Protection in service access areas		N/A

4.5	<b>Thermal requirements</b>		Pass
4.5.1	General		Pass
4.5.2	Temperature tests	(see appended table 4.5)	Pass
	Normal load condition per Annex L.....	Operated in the most unfavorable way of operation given in the operating instructions until steady conditions established.	-
4.5.3	Temperature limits for materials	(see appended table 4.5)	Pass
4.5.4	Touch temperature limits		N/A
4.5.5	Resistance to normal heat .....		N/A

4.6	<b>Openings in enclosures</b>		N/A
4.6.1	Top and side openings		N/A
	Dimensions (mm) .....		-
4.6.2	Bottoms of fire enclosures		N/A
	Construction of the bottom, dimensions (mm) .....		-
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment		N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm) .....		-
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C), time (weeks).....		-





4.7	<b>Resistance to fire</b>		Pass
4.7.1	Reducing the risk of ignition and spread of flame	See below for details.	Pass
	Method 1, selection and application of components wiring and materials	Materials with the required flammability classes are used.	Pass
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure	A fire enclosure is not required.	Pass
4.7.2.1	Parts requiring a fire enclosure		N/A
4.7.2.2	Parts not requiring a fire enclosure	Circuit supplied by a limited power source complying with 2.5 and with components mounted on materials of Class V-1 or better. Enclosure material of Class HB or better.	Pass
4.7.3	Materials		Pass
4.7.3.1	General	Components and materials have adequate flammability classification. See Table 1.5.1.	Pass
4.7.3.2	Materials for fire enclosures		N/A
4.7.3.3	Materials for components and other parts outside fire enclosures	Enclosure, decorative parts and antenna are made of minimum HB material.	Pass
4.7.3.4	Materials for components and other parts inside fire enclosures		N/A
4.7.3.5	Materials for air filter assemblies	The equipment does not have any air filters.	N/A
4.7.3.6	Materials used in high-voltage components	No high-voltage components.	N/A

5	<b>ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS</b>		Pass
5.1	Touch current and protective conductor current		N/A
5.1.1	General	Supplied by SELV.	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
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network and 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	<b>Electric strength</b>		N/A
5.2.1	General		N/A
5.2.2	Test procedure		N/A

5.3	<b>Abnormal operating and fault conditions</b>		Pass
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	Pass
5.3.2	Motors	The equipment does not have any motors.	N/A
5.3.3	Transformers	Unit uses signal transformer which is not subject to overload.	N/A
5.3.4	Functional insulation.....:	Functional insulation complies with the requirement (c).	Pass
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE.....:		N/A



5.3.7	Simulation of faults		N/A
5.3.8	Unattended equipment	The equipment does not have any thermostats, temperature limiters, or thermal cut-outs which functioned during the Heating Test.	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	No fire, emission of molten metal or deformation was noted during the tests. Electric Strength tests performed after abnormal and fault tests.	Pass
5.3.9.1	During the tests	No fire, emission of molten metal or deformation was noted during the tests.	Pass
5.3.9.2	After the tests	Electric Strength tests performed after abnormal and fault tests. Considered for TNV-3 to SELV.	Pass

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

6.2	<b>Protection of equipment users from overvoltages on telecommunication networks</b>		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	<b>Protection of the telecommunication wiring system from overheating</b>		N/A
	Max. output current (A) .....		-
	Current limiting method .....		-



7	<b>CONNECTION TO CABLE DISTRIBUTION SYSTEMS</b>		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	<b>ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE</b>		N/A
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples .....		-
	Wall thickness (mm) .....		-
A.1.2	Conditioning of samples; temperature (°C) .....		N/A
A.1.3	Mounting of samples .....		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D .....		N/A
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s) .....		-
	Sample 2 burning time (s) .....		-
	Sample 3 burning time (s) .....		-
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N/A
A.2.1	Samples, material .....		-
	Wall thickness (mm) .....		-
A.2.2	Conditioning of samples .....		N/A
A.2.3	Mounting of samples .....		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C .....		-
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s) .....		-



	Sample 2 burning time (s) .....		-
	Sample 3 burning time (s) .....		-
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A
	Sample 1 burning time (s) .....		-
	Sample 2 burning time (s) .....		-
	Sample 3 burning time (s) .....		-
A.3	Hot flaming oil test (see 4.6.2)		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

<b>B</b>	<b>ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS(see 4.7.2.2 and 5.3.2)</b>		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) .....		-
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<b>C</b>	<b>ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)</b>		N/A
	Position.....		-
	Manufacturer .....		-
	Type .....		-
	Rated values .....		-
	Method of protection .....		-
C.1	Overload test		N/A
C.2	Insulation		N/A
	Protection from displacement of windings .....		N/A

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

<b>E</b>	<b>ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)</b>		N/A
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<b>F</b>	<b>ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)</b>		Pass
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<b>G</b>	<b>ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES</b>		N/A
G.1	Clearances		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply .....		N/A
G.2.2	Earthed d.c. mains supply .....		N/A
G.2.3	Unearthed d.c. mains supply.....		N/A
G.2.4	Battery operation.....		N/A
G.3	Determination of telecommunication network transient voltage (V) : .....		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.4.1	Mains transients and internal repetitive peaks .....		N/A



G.4.2	Transients from telecommunication networks.....:		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	Measurement of transient levels (V)		N/A
G.6	Determination of minimum clearances.....:		N/A

H	<b>ANNEX H, IONIZING RADIATION (see 4.3.13)</b>		N/A
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J	<b>ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)</b>		N/A
	Metal(s) used.....:		-

K	<b>ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)</b>		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	<b>ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)</b>		Pass
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment	Operated in the most unfavorable way of operation given in the operating instructions until steady conditions established.	Pass

M	<b>ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)</b>		N/A
M.1	Introduction		N/A
M.2	Method A		N/A



M.3	Method B		N/A
M.3.1	Ringing signal		N/A
M.3.1.1	Frequency (Hz).....:		-
M.3.1.2	Voltage (V) .....		-
M.3.1.3	Cadence; time (s), voltage (V) .....		-
M.3.1.4	Single fault current (mA) .....		-
M.3.2	Tripping device and monitoring voltage .....		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V) .....		N/A

N	<b>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)</b>		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A

P	<b>ANNEX P, NORMATIVE REFERENCES</b>		Pass
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Q	<b>ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)</b>		N/A
	a) Preferred climatic categories .....		N/A
	b) Maximum continuous voltage .....		N/A
	c) Pulse current .....		N/A

R	<b>ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES</b>		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	<b>ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)</b>		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	<b>ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)</b>	N/A
	.....:	-

U	<b>ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)</b>	N/A
	.....:	-

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

W	<b>ANNEX W, SUMMATION OF TOUCH CURRENTS</b>	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	<b>ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)</b>	N/A
X.1	Determination of maximum input current	N/A
X.2	Overload test procedure	N/A

Y	<b>ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)</b>	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	<b>ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)</b>	N/A
---	--	-----



AA	<b>ANNEX AA, MANDREL TEST (see 2.10.5.8)</b>	N/A
----	--	-----



1.5.1	TABLE: list of critical components					Pass
object/part No.	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity <sup>1)</sup>	
01. Plastics Enclosure	Various	Various	Rated minimum HB, minimum RTI 60 degree C.	UL94	UL, --	
02. External Power Supply	ENG ELECTRIC CO LTD	3A-183WP12	I/P: 100-240 Vac, 50-60 Hz, 0.6 A, O/P: 12 Vdc, 1.5A, complies with LPS, Tma = 40 degree C.	EN60950-1, IEC 60950-1	UL, TUV, CB	
02a. External Power Supply (Alternate)	Various	Various	I/P: 100-240 Vac, 50-60 Hz, 0.6 A, O/P: 12 Vdc, 1.5A, complies with LPS, Tma = 40 degree C.	EN60950-1, IEC 60950-1	UL, TUV, NEMKO, FIMKO, SEMKO or DEMKO	
03. SELV Connectors	Various	Various	Copper alloy pins housed in bodies of plastic rated minimum V-2 for following connectors. One Audio Input port, one AV Out ports, one GPIO port, one ETHERNET port w/PoE ad one DC power jack.	UL 94	UL, --	
03a. SELV Connectors (Alternate)	Various	Various	Copper alloy pins housed in bodies of plastic rated minimum V-2 for following connectors. One Audio Input port, one AV Out ports, one GPIO port, one ETHERNET port w/PoE ad one DC power jack.	UL498, UL1977, UL1863	UL, --	
04. Secondary Internal Wiring	Various	Various	Routed away from sharp edges, moving parts. FEP, PTFE, PVC, TFE, neoprene or surface marked VW-1;	UL 758	UL, --	



			rated minimum 60 degree C, minimum 30 V.		
05. Printed Wiring Boards	Various	Various	Rated minimum V-1, minimum 105 degree C.	UL796	UL, --
1) an asterisk indicates a mark which assures the agreed level of surveillance					



1.6.2	<b>TABLE: electrical data (in normal conditions)</b>						Pass
U (V)	I (A)	I rated (A)	P (W)	Fuse #	I fuse (A)	condition/status	
12Vdc	0.435	1.5	5.22	--	0.435	Maximum normal load: All Ports were seeking and working.	
44Vdc( POE)	0.136	1.5	5.98	--	0.136	Maximum normal load: All Ports were seeking and working.	
57Vdc( POE)	0.124	1.5	7.07	--	0.124	Maximum normal load: All Ports were seeking and working.	
supplementary information:							
--							

2.10.3 and 2.10.4	<b>TABLE: clearance and creepage distance measurements</b>						N/A
Clearance (cl) and creepage distance (cr) at/of/between:		U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
supplementary information:							
--							

2.10.5	<b>TABLE: distance through insulation measurements</b>					N/A
Distance through insulation (DTI) at/of:		U peak (V)	Urms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
supplementary information:						

4.3.8	<b>TABLE: Batteries</b>								N/A
The tests of 4.3.8 are applicable only when appropriate battery data is not available.									
Is it possible to install the battery in a reverse polarity position									
Non-rechargeable batteries				Rechargeable batteries					
Discharging		Un-intentional charging	Charging		Discharging		Reversed charging		
Meas. current	Manuf. specs.		Meas. current	Manuf. specs.	Meas. current	Manuf. specs.	Meas. current	Manuf. specs.	



Max. current during normal operation									
Max. current during fault operation									
Test results:									
- Chemical leaks									Verdict
- Explosion of the battery									
- Emission of flame or expulsion of molten metal									
- Electric strength tests of equipment after completion of tests									
supplementary information:									

4.5	<b>TABLE: Thermal requirements</b>						Pass
	Supply voltage (V) .....	See below	See below	See below	--	--	—
	Ambient Tmin (°C) .....	--	--	--	--	--	—
	Ambient Tmax (°C) .....	--	--	--	--	--	—
Maximum measured temperature T of part/at:		T (°C)					allowed Tmax (°C)
--		Input: 12Vdc, Maximum Normal Load	Input: 44Vdc (POE), Maximum Normal Load	Input: 57Vdc (POE), Maximum Normal Load	--	--	--
--		Measured under ambient/ Computed per Tma	Measured under ambient/ Computed per Tma	Measured under ambient/ Computed per Tma	--	--	--
	L41 coil	41.2/56.9	46.3/61.9	49.2/64.8	--	--	105
	T1 coil on Power Module Board	43.2/58.9	58.6/74.2	64.4/80.	--	--	105



L10 body	40.8/5 6.5	43.8/5 9.4	46.4/6 2.0	--	--	105	
PCB near H5	39.5/5 5.2	44.2/5 9.8	47.3/6 2.9	--	--	105	
BT1 body	42.5/5 8.2	44.6/6 0.2	47.3/6 2.9	--	--	105	
PCB near PAD7	40.7/5 6.4	44.9/6 0.5	47.9/6 3.5	--	--	105	
PCB near U3	48.9/6 4.6	48.0/6 3.6	50.8/6 6.4	--	--	105	
PCB near LD5	33.7/4 9.4	60.8/7 6.4	62.1/7 7.7	--	--	105	
Metal near Top	38.5/5 4.2	42.0/5 7.6	44.4/6 0.0	--	--	70	
Enclosure inside near bottom	26.5/4 2.2	35.1/5 0.7	36.3/5 1.9	--	--	70	
Ambient/Tma	24.3/4 0.0	24.4/4 0.0	24.4/4 0.0	--	--	--	
Test duration (Times) (hour: minute) Note: Time is for reference only	2:00	1:02	1:16	--	--	--	
temperature T of winding:	t <sub>1</sub> (°C)	R <sub>1</sub> (Ω)	t <sub>2</sub> (°C)	R <sub>2</sub> (Ω)	T (°C)	allowed T <sub>max</sub> (°C)	insulation class
--	--	--	--	--	--	--	--
supplementary information:							
--							

4.5.5	<b>TABLE: Ball pressure test of thermoplastic parts</b>					N/A
	allowed allowed impression diameter (mm)..... :					—
part	test temperature (°C)			impression diameter (mm)		
supplementary information:						
--						

4.7	<b>TABLE: resistance to fire</b>					Pass
part	manufacturer of material	type of material	thickness (mm)	flammability class	Evidence	
--	--	--	--	--	--	--
supplementary information:						
All internal materials are rated V-2 or better or are mounted on a PWB rated V-1 or better. See Table 1.5.1 for material information.						



5.2	<b>TABLE: electric strength tests, impulse tests and voltage surge tests</b>			N/A
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
supplementary information:				
--				

5.3	<b>TABLE: fault condition tests</b>					Pass
ambient temperature (°C) .....		: See below			—	
Power source for EUT: Manufacturer, model/type, output rating.....		: See below			—	
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
GPIO, Pin 1	Overload	57Vdc	1 hour	--	--	Open Circuit Voltage: 11.79 V, Maximum Available Current: 222 mA, NC, NT.
GPIO, Pin 3	Overload	57Vdc	1 hour	--	--	Open Circuit Voltage: 6.46 V, Maximum Available Current: 11 mA, NC, NT.
GPIO, Pin 2, 4	Overload	57Vdc	--	--	--	Open Circuit Voltage: 0 V, Maximum Available Current: 0 mA
MIC, Pin 1, 2	Overload	57Vdc	--	--	--	Open Circuit Voltage: 0 V, Maximum Available Current: 0 mA
supplementary information:						
Results Key: IP = Internal protection operated (component indicated) CT = Constant temperatures were obtained TW = Transformer winding opened CD = Components damaged (damaged components indicated) NB = No indication of dielectric breakdown YB = Dielectric breakdown (time and location indicated) NC = Cheesecloth remained intact YC = Cheesecloth charred or flamed NT = Tissue paper remained intact YT = Tissue paper charred or flamed						





## **Enclosure**

### **National Differences**

**Austria\*\***  
**Belgium\*\***  
**Czech Republic\*\***  
**Denmark**  
**Finland**  
**France\*\***  
**Germany**  
**Greece\*\***  
**Group**  
**Hungary\*\***  
**Ireland**  
**Italy\*\***  
**Netherlands\*\***  
**Norway**  
**Poland\*\***  
**Portugal\*\***  
**Slovakia\*\***  
**Slovenia\*\***  
**Spain**  
**Sweden**  
**Switzerland**  
**United Kingdom**

\* No National Differences  
Declared

\*\* Only Group Differences



Denmark - Differences to IEC 60950-1:2005, Second Edition			
1.2.4.1	Certain types of Class I appliances (see sub-clause 3.2.1.1) may be provided with plug not establishing earthing continuity when inserted into Danish socket-outlets.		N/A
1.7.2.1	Supply cords of Class I equipment, which is delivered without a plug, must be provided with a visible tag with the following text:  "Vigtigt ! Lederen med grøn/gul isolation må kun tilsluttes en klemme marked (IEC 417, No. 5019) eller (IEC 417, No. 5017)."  If essential for the safety of the equipment, the tag must in addition be provided with a diagram, which shows the connection of the other conductors, or be provided with the following text: "For tilslutning af de øvrige ledere, se medfølgende installationsvejledning".		N/A
1.7.5	Socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For stationary equipment, the socket outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.		N/A
1.7.5	With the exception of CLASS II EQUIPMENT provided with a socket outlet in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-4a, CLASS II EQUIPMENT shall not be fitted with socket-outlets for providing power to other equipment.		N/A
3.2.1.1	Supply cord of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1.  Class I equipment provided with socket-outlets with earth contact or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a.  If poly-phase equipment and single-phase equipment having a rated current exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.		N/A
5.1.7.1	TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for		N/A



	PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE EQUIPMENT TYPE B.		
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Finland - Differences to IEC 60950-1:2005, Second Edition			
1.5.7.1	Resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2.		N/A
1.5.9.4	The third dashed sentence is applicable only to equipment as defined by this annex, 6.1.2.2		N/A
1.7.2.1	Class I Pluggable Equipment Type A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text shall be: "Laite on liitettava suojamaadoitus-koskettimilla varustettuun pistorasiaan"		N/A
2.3.2	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		Pass
2.10.5.13	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		N/A
5.1.7.1	Touch current measurement results exceeding 3,5 mA r.m.s are permitted only for the following equipment: - Stationary pluggable equipment Type A that: (1) is intended to be used in a Restricted Access Location where equipotential bonding has been applied, for example, in a telecommunication centre; and (2) has provision for a permanently connected protective earthing conductor; and (3) is provided with instructions for the installation of that conductor by a service person; - Stationary pluggable equipment Type B - Stationary permanently connected equipment		N/A
6.1.2.1	Add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below.  If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound		N/A



	<p>completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"> <li>- 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</li> <li>- is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.</li> </ul> <p>It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2. A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> <li>- the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1;</li> <li>- the additional testing shall be performed on all the test specimens as described in EN 132400;</li> <li>- the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400, in the sequence of tests as described in EN 132400.</li> </ul>		
6.1.2.2	The exclusions are applicable for permanently connected equipment and pluggable equipment type B and equipment intended to be used in a restricted access location where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected protective earthing conductor and is provided with instructions for the installation of that conductor by a service person.		N/A
7.2	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply with the term telecommunication network in 6.1.2 being replaced by the term cable distribution system.		N/A

<b>Germany - Differences to IEC 60950-1:2005, Second Edition</b>			
1.7.2.1	If for the assurance of safety and health certain rules during use, amending or maintenance of a technical labour equipment or readymade consumer product are to be followed, a manual in German language has to be delivered when placing the product on the market. Of this requirement, rules for use even only by SERVICE PERSONS are not exempted.	To be evaluated in national approval.	N/A



Group - Differences to IEC 60950-1:2005, Second Edition			
1.3.Z1	Exposure to excessive sound pressure - The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for "one package equipment", and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.		N/A
1.5.1	Add the following NOTE Z1: The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC	Added. See Enclosure Miscellaneous for manufacturer's letter of assurance.	Pass
1.7.2.1	Add the following NOTE Z1: In addition, the instructions shall include, as far as applicable, a warning that excessive sound pressure from earphones and headphones can cause hearing loss.		N/A
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in primary circuits, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for pluggable equipment type B or permanently connected equipment, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building		N/A



	installation, the installation instructions shall so state, except that for pluggable equipment type A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		
2.7.2	Void		N/A
3.2.3	Delete the NOTE and conduit sizes in parentheses in Table 3A		N/A
3.2.5.1	<p>Replace: "60245 IEC 53" by "H05 RR-F" "60227 IEC 52" by "H03 VV-F or H03 VVH2-F" "60227 IEC 53" by "H05 VV-F or H05 VVH2-F"</p> <p>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</p> <p>In the conditions applicable to table 3B, delete the words "in some countries" in condition a). In Note 1, applicable Table 3B, to delete the second sentence.</p>		N/A
3.3.4	<p>In table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: "Over 10 up to and including 16              1.5 to 2.5    1.5 to by 4"</p> <p>Delete the fifth line: conductor sizes for 13 to 16A.</p>		N/A
4.3.13.6	Add 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. Standards taking into account this Recommendation which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A
H	<p>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 <math>\mu</math>Sv/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.</p>		N/A

<b>Ireland - Differences to IEC 60950-1:2005, Second Edition</b>			
3.2.1.1	Apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a		N/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.		
4.3.6	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

<b>Norway - Differences to IEC 60950-1:2005, Second Edition</b>			
1.5.7.1	Resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2.		N/A
1.5.8	Due to the IT power system used (see annex V, figure V.7), capacitors are required to be rated for the applicable phase-to-phase voltage ( 230 V).	This unit not provided with means for connection to mains.	N/A
1.5.9.4	The third dashed sentence is applicable only to equipment as defined by this annex, 6.1.2.2		N/A
1.7.2.1	Class I Pluggable Equipment Type A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text shall be: "Apparatet ma tilkoples jordet stikkontakt"		N/A
2.2.4	Requirements according to this annex, 1.7.2.1, 6.1.2.1 and 6.1.2.2 apply.		N/A
2.3.2	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		Pass
2.3.4	Requirements according to this annex, 1.7.2.1, 6.1.2.1 and 6.1.2.2 apply.		Pass
2.10.5.13	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		N/A
5.1.7.1	Touch current measurement results exceeding 3,5 mA r.m.s are permitted only for the following equipment: - Stationary pluggable equipment Type A that: (1) is intended to be used in a Restricted Access Location where equipotential bonding has been applied, for example, in a telecommunication centre; and (2) has provision for a permanently connected protective earthing conductor; and (3) is provided with instructions for the installation of that conductor by a service person; - Stationary pluggable equipment Type B - Stationary permanently connected equipment		N/A



6.1.2.1	<p>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</p> <ul style="list-style-type: none"><li>- two layers of thin sheet material, each of which shall pass the electric strength test below, or</li><li>- one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below.</li></ul> <p>If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"><li>- 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</li><li>- is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.</li></ul> <p>It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2. A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"><li>- the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1;</li><li>- the additional testing shall be performed on all the test specimens as described in EN 132400;</li><li>- the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400, in the sequence of tests as described in EN 132400.</li></ul>		N/A
6.1.2.2	<p>The exclusions are applicable for permanently connected equipment and pluggable equipment type B and equipment intended to be used in a restricted access location where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected protective earthing conductor and is provided with instructions for the installation of that conductor by a service person.</p>		N/A
7.2	<p>Requirements according to this annex, 6.1.2.1 and</p>		N/A





	6.1.2.2 apply with the term telecommunication network in 6.1.2 being replaced by the term cable distribution system.		
7.3	There are many buildings where the screen of the coaxial cable is not normally connected to the earth in the building installation		N/A
7.3	Refer to EN 60728-11:2005 for installation conditions		N/A

<b>Spain - Differences to IEC 60950-1:2005, Second Edition</b>			
3.2.1.1	<p>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.</p> <p>CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994.</p> <p>If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.</p>		N/A

<b>Sweden - Differences to IEC 60950-1:2005, Second Edition</b>			
1.5.1	(Ordinance (1990:944)) Add NOTE: Switches containing mercury such as thermostats, relays and level controllers are not allowed.		N/A
1.5.7.1	Resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2.		N/A
1.5.9.4	The third dashed sentence is applicable only to equipment as defined by this annex, 6.1.2.2		N/A
1.7.2.1	Class I Pluggable Equipment Type A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text shall be: "Apparaten skall anslutas till jordat uttag"		N/A
2.3.2	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		Pass
2.10.5.13	Requirements according to this annex, 6.1.2.1 and		N/A



	6.1.2.2 apply.		
5.1.7.1	<p>Touch current measurement results exceeding 3,5 mA r.m.s are permitted only for the following equipment:</p> <ul style="list-style-type: none"> <li>- Stationary pluggable equipment Type A that: (1) is intended to be used in a Restricted Access Location where equipotential bonding has been applied, for example, in a telecommunication centre; and (2) has provision for a permanently connected protective earthing conductor; and (3) is provided with instructions for the installation of that conductor by a service person;</li> <li>- Stationary pluggable equipment Type B</li> <li>- Stationary permanently connected equipment</li> </ul>		N/A
6.1.2.1	<p>"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</p> <ul style="list-style-type: none"> <li>- two layers of thin sheet material, each of which shall pass the electric strength test below, or</li> <li>- one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below.</li> </ul> <p>If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition</p> <ul style="list-style-type: none"> <li>- 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</li> <li>- is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.</li> </ul> <p>It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2. A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> <li>- the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1;</li> <li>- the additional testing shall be performed on all the</li> </ul>		N/A



	test specimens as described in EN 132400; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400, in the sequence of tests as described in EN 132400."		
6.1.2.2	The exclusions are applicable for permanently connected equipment and pluggable equipment type B and equipment intended to be used in a restricted access location where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected protective earthing conductor and is provided with instructions for the installation of that conductor by a service person.		N/A
7.2	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply with the term telecommunication network in 6.1.2 being replaced by the term cable distribution system.		N/A
7.3	There are many buildings where the screen of the coaxial cable is not normally connected to the earth in the building installation		N/A

<b>Switzerland - Differences to IEC 60950-1:2005, Second Edition</b>			
1.5.1	Add NOTE: Switches containing mercury such as thermostats, relays and level controllers are not allowed.		N/A
1.7.13	Annex 2.15 of SR 814.81 applies for batteries		N/A
3.2.1.1	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, 3P+N+PE 230/400 V,16 A SEV 5933-2.1998, Plug type 21, L+N 250 V,16 A SEV 5934-2.1998, Plug type 23, L+N+PE 250 V,16 A		N/A
3.2.4	Requirements according to this annex, 3.2.1.1		N/A



	apply		
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<b>United Kingdom - Differences to IEC 60950-1:2005, Second Edition</b>			
2.6.3.3	The current rating of the circuit shall be taken as 13 A, not 16 A.		N/A
2.7.1	To protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.		N/A
3.2.1.1	Apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a "standard plug" in accordance with Statutory Instrument 1786: 1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations.  NOTE: "Standard plug" is defined in SI 1786: 1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
3.2.5.1	A power supply cord with conductor of 1.25 mm <sup>2</sup> is allowed for equipment with a rated current over 10A and up to and including 13A.		N/A
3.3.4	The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current of over 10 A up to and including 13 A is 1.25 mm <sup>2</sup> to 1.5 mm <sup>2</sup> nominal cross-sectional area.		N/A
4.3.6	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



## Enclosure

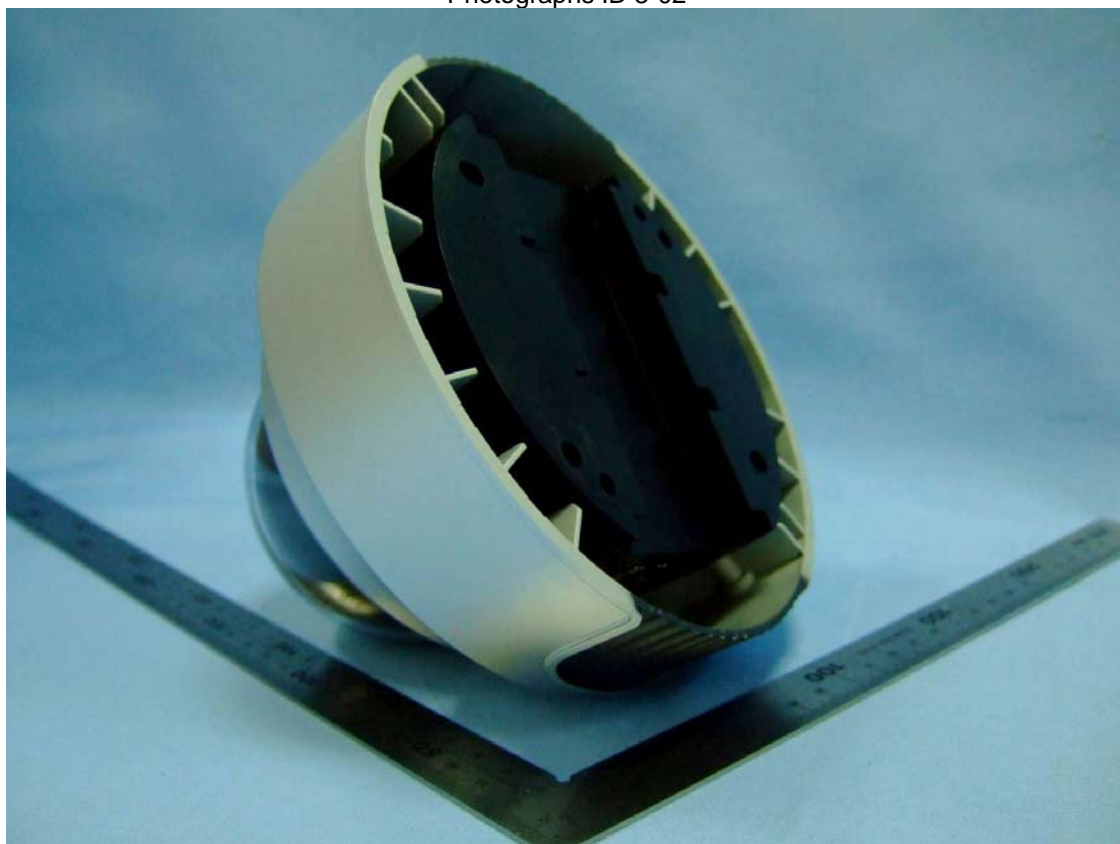
## Photographs

Supplement Id	Description
3-01	External View-1
3-02	External View-2
3-03	Internal View-1
3-04	Internal View-2
3-05	Internal View - PWB component side
3-06	Internal View - PWB trace side

Photographs ID 3-01



Photographs ID 3-02



Photographs ID 3-03

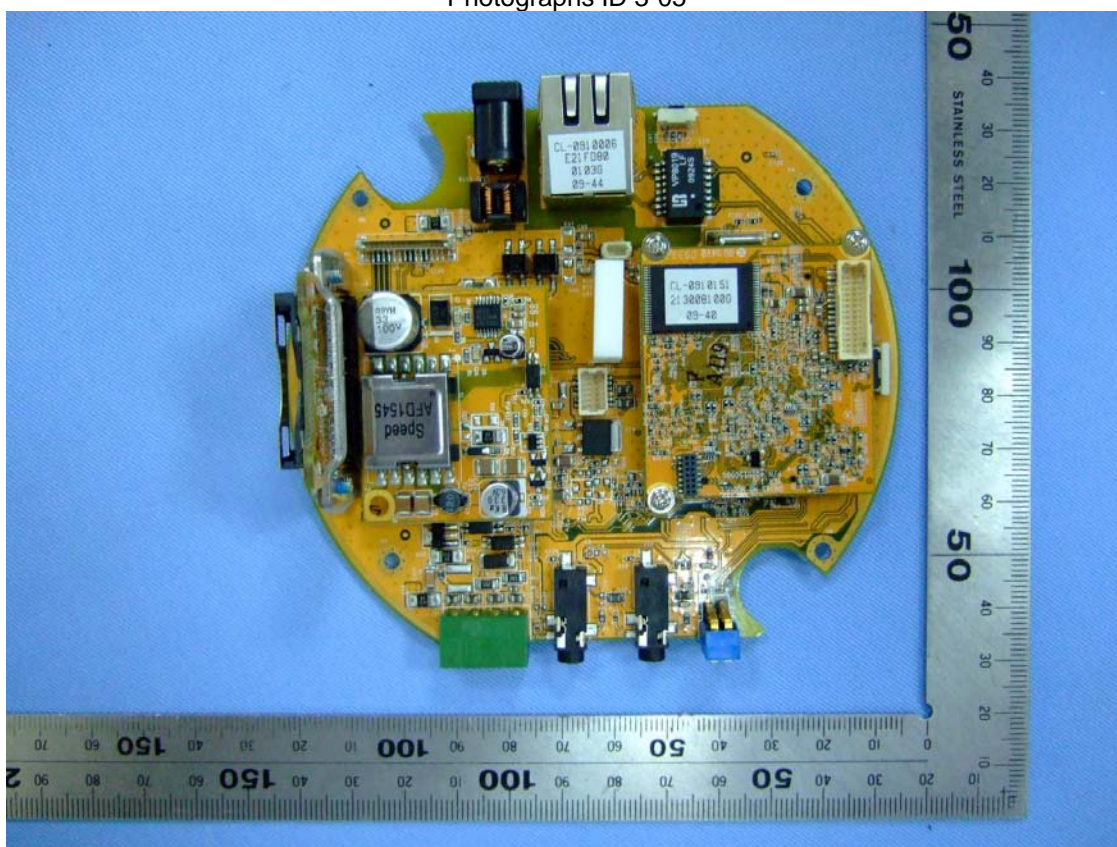




Photographs ID 3-04



Photographs ID 3-05



Photographs ID 3-06

