






Test Report issued under the responsibility of:



Prodigy Technology Consultant Co., Ltd.

TEST REPORT IEC 60950-1 Information technology equipment - Safety - Part 1: General requirements	
Report Reference No	L120823-06-A0
Date of issue	2012-10-04
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CB Testing Laboratory	Prodigy Technology Consultant Co., Ltd.
Address	No.181, Sec. 2, Wunhua 1st Rd., Linkou District, New Taipei City 244, Taiwan CHINESE TAIPEI
Applicant's name	VIVOTEK INC.
Address	6F, No.192, Lien-Cheng Rd., Chung-Ho , New Taipei City, 235, Taiwan
Test specification:	
Standard	EN 60950-1:2006/A11:2009/A1:2010/A12:2011
Test procedure	CB Scheme
Non-standard test method	N/A
Test item description	
Trade Mark	
Manufacturer	Same as Applicant
Model/Type reference	IP8172, IP8172P
Rating	For Model IP8172: Optional, (1) 12Vdc, 0.42A (for DC jack) (2) 24Vac, 0.63A, 50-60Hz (for AC source) (3) 48Vdc, 0.146A (for PoE) For Model IP8172P: Optional, (1) 12Vdc, 0.433A (for DC jack) (2) 24Vac, 0.494A, 50-60Hz (for AC source) (3) 48Vdc, 0.144A (for PoE)



Testing procedure and testing location:	
<input checked="" type="checkbox"/> CB Testing Laboratory	Testing location / address..... : Prodigy Technology Consultant Co., Ltd. / No.181, Sec. 2, Wunhua 1st Rd., Linkou District, New Taipei City 244, Taiwan CHINESE TAIPEI
<input type="checkbox"/> Associated CB Test Laboratory	Testing location / address..... : Tested by (name + signature) : Frank Chang
	
	Approved by (+ signature)..... : Yama Cheng
	
<input type="checkbox"/> Testing Procedure: TMP	Tested by (name + signature) : _____ Approved by (+ signature)..... : _____ Testing location / address..... : _____
<input type="checkbox"/> Testing Procedure: WMT	Tested by (name + signature) : _____ Witnessed by (+ signature)..... : _____ Approved by (+ signature)..... : _____ Testing location / address..... : _____
<input type="checkbox"/> Testing Procedure: SMT	Tested by (name + signature) : _____ Approved by (+ signature)..... : _____ Supervised by (+ signature) : _____ Testing location / address..... : _____
<input type="checkbox"/> Testing Procedure: RMT	Tested by (name + signature) : _____ Approved by (+ signature)..... : _____ Supervised by (+ signature) : _____ Testing location / address..... : _____

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

National Differences (19 pages)
Enclosures (25 pages)

Summary Of Testing

Unless otherwise indicated, all tests were conducted at Prodigy Technology Consultant Co., Ltd.
No.181, Sec. 2, Wunhua 1st Rd., Linkou District, New Taipei City 244, Taiwan CHINESE TAIPEI

Tests performed (name of test and test clause)	Testing location / Comments
End Product Reference Page	
General Guidelines	
Input Test: Single-Phase (1.6.2)	
SELV Reliability Test Including Hazardous Voltage Measurements (2.2.2, 2.2.3, 2.2.4, Part 22 6.1)	
Limited Power Source Measurements (2.5)	
Steady Force Tests (4.2.1 - 4.2.4)	
Impact Test (4.2.5, 4.2.1, Part 22 10.2)	
Loading Tests – Wall And Ceiling Mounted Equipment (4.2.10)	
Heating Test (4.5.1, 1.4.12, 1.4.13)	
Overload Of Operator Accessible Connector Test (5.3.7)	(for reference)

Summary of Compliance with National Differences:

Group (EU)

Copy of Marking Plate - Refer to Enclosure titled Marking Plate for copy.



Test item particulars :	
Equipment mobility	stationary
Connection to the mains	Not connect to the mains directly
Operating condition	Continuous
Access location	operator accessible
Over voltage category (OVC)	OVC I
Mains supply tolerance (%) or absolute mains supply values	No direct connection
Tested for IT power systems	No
IT testing, phase-phase voltage (V)	N/A
Class of equipment	Class III (supplied by SELV)
Considered current rating of protective device as part of the building installation (A)	N/A
Pollution degree (PD)	PD 2
IP protection class	IP X0
Altitude of operation (m)	Up to 2000
Altitude of test laboratory (m)	Up to 2000
Mass of equipment (kg)	0.71 Kg (For model IP8172 without mounting means) 0.66 Kg (For model IP8172P without mounting means) 0.11Kg (For mounting means only)
Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement	Pass
- test object does not meet the requirement	Fail
Testing:	
Date(s) of receipt of test item	2012-08-15
Date(s) of Performance of tests	2012-08-29 to 2012-09-07
General remarks:	
<p>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.</p> <p>"(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report.</p> <p>Throughout this report a point is used as the decimal separator.</p>	



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 :

No

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

Name and address of factory (ies): VIVOTEK INC.
6F, No.192, Lien-Cheng Rd., Chung-Ho , New Taipei
City, 235, Taiwan, R.O.C.

GENERAL PRODUCT INFORMATION:

Report Summary

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

Product Description

The equipment is a Class III Network Camera, consists of electronic components mounted on PWB and is equipped with a progressive scan CMOS sensor then housed within metal enclosure, also provides a General I/O Terminal Block, and RJ45 Connector, which is used to connect external input/output devices.

The EUT installs to the ceiling or wall.

The power source can choose to use PoE or external power adapter which output complied with LPS.

Model Differences

Model IP8172P is similar to model IP8172 except for input rating, lens module and model designation.

Additional Information

- The 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.

Technical Considerations

The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 50 °C.

The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): All output ports.

The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual.

Abbreviations used in the report:


- | | |
|---|-------------------------------------|
| - normal conditionsN.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 /Am 1			
Clause	Requirement + Test	Result - Remark	Verdict
1	GENERAL		Pass
1.5	Components		Pass
1.5.1	General		Pass
	Comply with IEC 60950-1 or relevant component standard	(see appended table 1.5.1)	Pass
1.5.2	Evaluation and testing of components	<p>Components certified to IEC harmonized standard and checked for correct application.</p> <p>Components, for which no relevant IEC-Standard exist, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950-1.</p> <p>Components not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950-1 and the relevant component Standard.</p>	Pass
1.5.3	Thermal controls	There are no thermal controller used.	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
1.5.8	Components in equipment for IT power systems		N/A
1.5.9	Surge suppressors		N/A
1.5.9.1	General		N/A
1.5.9.2	Protection of VDRs		N/A
1.5.9.3	Bridging of functional insulation by a VDR		N/A
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced		N/A



IEC 60950-1 /Am 1			
Clause	Requirement + Test	Result - Remark	Verdict
	insulation by a VDR		
1.6	Power interface		Pass
1.6.1	AC power distribution systems	Class III equipment.	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	Class III equipment.	N/A
1.7	Marking and instructions		Pass
1.7.1	Power rating and identification markings	Rating marking readily visible to operator. (Optional)	Pass
1.7.1.1	Power rating marking		Pass
	Multiple mains supply connections..... :		N/A
	Rated voltage(s) or voltage range(s) (V)..... :	Optional, (1) 12Vdc (for DC jack), (2) 24Vac (for AC source), (3) 48Vdc (for PoE)	Pass
	Symbol for nature of supply, for d.c. only..... :	⎓ (60417-2-IEC-5031) for 12Vdc	Pass
	Rated frequency or rated frequency range (Hz).... :	50-60Hz for 24Vac only	Pass
	Rated current (mA or A)..... :	For Model IP8172: Optional, (1) 0.42A (for DC jack), (2) 0.63A (for AC source), (3) 0.146A (for PoE) For Model IP8172P: Optional, (1) 0.433A (for DC jack), (2) 0.494A (for AC source), (3) 0.144A (for PoE);	Pass
1.7.1.2	Identification markings	See below	Pass
	Manufacturer's name or trade-mark or identification mark..... :	Manufacturer: VIVOTEK INC. or trade-mark: 	Pass
	Model identification or type reference..... :	IP8172, IP8172P	Pass
	Symbol for Class II equipment only..... :	Class III equipment.	N/A



IEC 60950-1 /Am 1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2	Safety instructions and marking	Additional markings are used and are defined in the installation instructions.	Pass
1.7.2.1	General	Operating/safety instructions made available to the user.	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		N/A
1.7.2.5	Operator access with a tool		N/A
1.7.2.6	Ozone		N/A
1.7.3	Short duty cycles	Continuous operation.	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.....	12Vdc, 0.05A	Pass
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)		N/A
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals.....		N/A
1.7.7.2	Terminals for a.c. mains supply conductors		N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators		N/A
1.7.8.1	Identification, location and marking		N/A
1.7.8.2	Colours		N/A
1.7.8.3	Symbols according to IEC 60417		N/A
1.7.8.4	Markings using figures.....		N/A
1.7.9	Isolation of multiple power sources		N/A
1.7.10	Thermostats and other regulating devices	No thermostats or similar regulating devices.	N/A
1.7.11	Durability	All markings provided on UL Recognized Component labels suitable for surface.	Pass
1.7.12	Removable parts	No marking is located on removable parts.	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



IEC 60950-1 /Am 1			
Clause	Requirement + Test	Result - Remark	Verdict
2	PROTECTION FROM HAZARDS		Pass
2.1	Protection from electric shock and energy hazards		Pass
2.1.1	Protection in operator access areas		Pass
2.1.1.1	Access to energized parts	The unit is supplied from an external power supply or a PoE power source that provides SELV only	Pass
	Test by inspection..... :	The unit is supplied from an external power supply or a PoE power source that provides SELV only	Pass
	Test with test finger (Figure 2A) :		N/A
	Test with test pin (Figure 2B) :		N/A
	Test with test probe (Figure 2C)..... :	No TNV present.	N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (V _{peak} or V _{rms}); minimum distance through insulation (mm) :		-
2.1.1.4	Access to hazardous voltage circuit wiring		N/A
2.1.1.5	Energy hazards :	There are no hazardous energy levels in this product.	Pass
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment		N/A
	Measured voltage (V); time-constant (s) :		-
2.1.1.8	Energy hazards - d.c. mains supply		N/A
	a) Capacitor connected to the d.c. mains supply .. :		N/A
	b) Internal battery connected to the mains supply :		N/A
2.1.1.9	Audio amplifiers :		N/A
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations		N/A
2.2	SELV circuits		Pass
2.2.1	General requirements	The unit intended to be supplied by SELV.	Pass
2.2.2	Voltages under normal conditions (V) :	All accessible voltage are less than 42.4Vp or 60Vdc and are classified as SELV.	Pass
2.2.3	Voltages under fault conditions (V) :	Under fault conditions voltages never exceed 71 V _{peak} and 120 V _{dc} and do not exceed 42.4 V peak or 60 V dc for more than 0.2 sec	Pass



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

		See appended table 2.2 for details.	
2.2.4	Connection of SELV circuits to other circuits	SELV circuits are only connected to other SELV circuit.	Pass

2.3	TNV circuits		N/A
2.3.1	Limits	No TNV circuit	N/A
	Type of TNV circuits		-
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed.....		-
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed.....		-
2.3.5	Test for operating voltages generated externally		N/A

2.4	Limited current circuits		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	Limited power sources		Pass
	a) Inherently limited output	See appended table 2.5 for details.	Pass
	b) Impedance limited output		N/A
	c) Regulating network limited output under normal operating and single fault condition	See appended table 2.5 for details.	Pass
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA).....	See appended table 2.5 for details.	-



IEC 60950-1 /Am 1			
Clause	Requirement + Test	Result - Remark	Verdict
	Current rating of overcurrent protective device (A):		-
2.6	Provisions for earthing and bonding		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 conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG		-
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG		-
	Protective current rating (A), cross-sectional area (mm ²), 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	Overcurrent and earth fault protection in primary circuits		N/A
2.7.1	Basic requirements	Class III equipment.	N/A



IEC 60950-1 /Am 1			
Clause	Requirement + Test	Result - Remark	Verdict
	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	Safety interlocks		N/A
2.8.1	General principles	No safety interlock used.	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 ,relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm) :		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A
2.9	Electrical insulation		Pass
2.9.1	Properties of insulating materials	Natural rubber, materials containing asbestos and hygroscopic materials are not used as insulation. Electric strength test was conducted after the humidity treatment.	N/A
2.9.2	Humidity conditioning	Class III equipment.	N/A
	Relative humidity (%), temperature (°C)..... :		-
2.9.3	Grade of insulation	Functional insulation only.	Pass
2.9.4	Separation from hazardous voltages		N/A
	Method(s) used :		-
2.10	Clearances, creepage distances and distances through insulation		Pass
2.10.1	General	See below.	Pass
2.10.1.1	Frequency..... :	Less than 30KHz	Pass



IEC 60950-1 /Am 1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.1.2	Pollution degrees..... :	Pollution degree 2 applicable	Pass
2.10.1.3	Reduced values for functional insulation	See sub-clause 5.3.4	Pass
2.10.1.4	Intervening unconnected conductive parts		N/A
2.10.1.5	Insulation with varying dimensions		N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage	Class III equipment.	N/A
2.10.2.1	General		N/A
2.10.2.2	RMS working voltage		N/A
2.10.2.3	Peak working voltage		N/A
2.10.3	Clearances		Pass
2.10.3.1	General		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 circuits		N/A
2.10.3.4	Clearances in secondary circuits	Functional insulation.	Pass
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply..... :	OVC I: 1500Vpk.	Pass
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	Functional insulation	Pass
2.10.4.1	General		Pass
2.10.4.2	Material group and comparative tracking index		Pass
	CTI tests :	Material group IIIb; 100 <=CTI <175.	-
2.10.4.3	Minimum creepage distances		Pass
2.10.5	Solid insulation		N/A
2.10.5.1	General		N/A
2.10.5.2	Distances through insulation		N/A



IEC 60950-1 /Am 1			
Clause	Requirement + Test	Result - Remark	Verdict
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		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		Pass
2.10.6.1	Uncoated printed boards		Pass
2.10.6.2	Coated printed boards	No special coating is used.	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		N/A



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

	components		
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	WIRING, CONNECTIONS AND SUPPLY		Pass
3.1	General		Pass
3.1.1	Evaluated in power supply.	All wires/conductors possess adequate cross-sectional areas for their intended application and internal wiring are adequately insulated.	Pass
3.1.2	Protection against mechanical damage	The wires are routed away from sharp edges and parts which could damage insulation.	Pass
3.1.3	Securing of internal wiring	The wires are positioned in such a manner that prevents excessive strain, loosening of terminal connections and damage of conductor insulation.	Pass
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	Connection to mains supply		N/A
3.2.1	Means of connection	Class III equipment.	N/A
3.2.1.1	Connection to an a.c. mains supply		N/A



IEC 60950-1 /Am 1			
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 of minor dimension D (mm); test mass (g) :		-
	Radius of curvature of cord (mm)..... :		-
3.2.9	Supply wiring space		N/A
3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals	Class III equipment.	N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm ²) :		-
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type and nominal thread diameter (mm) :		-
3.3.6	Wiring terminals design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A
3.4	Disconnection from the mains supply		N/A
3.4.1	General requirement	Class III equipment.	N/A
3.4.2	Disconnect devices		N/A



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Clause	Requirement + Test	Result - Remark	Verdict

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		Pass
3.5.1	General requirements	SELV circuits.	Pass
3.5.2	Types of interconnection circuits	Interconnection circuits are SELV CIRCUITS.	Pass
3.5.3	ELV circuits as interconnection circuits	No ELV interconnections.	N/A
3.5.4	Data ports for additional equipment	See appended table 2.5 for details.	Pass

4	PHYSICAL REQUIREMENTS		Pass
4.1	Stability		N/A
	Angle of 10°	Unit weight is less than 7kg.	N/A
	Test force (N).....		N/A

4.2	Mechanical strength		Pass
4.2.1	General	As there are no hazardous voltages present in the unit.	Pass
	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
4.2.4	Steady force test, 250 N	No hazardous	Pass
4.2.5	Impact test		Pass
	Fall test	No hazardous	Pass
	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.	N/A
	Picture tube separately certified		N/A



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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 (50N Minimum.). Mounting means withstands 5.2 Kg (50N)	Pass
4.2.11	Rotating solid media		N/A
	Test to cover on the door.....:		N/A

4.3	Design and construction		Pass
4.3.1	Edges and corners	All edges and corners 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	The equipment does not have a voltage selector	N/A
4.3.4	Securing of parts	Electrical and mechanical connections can be expected to withstand usual mechanical stress.	Pass
4.3.5	Connection by 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	The equipment does not have any heating elements.	N/A
4.3.8	Batteries		N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
4.3.9	Oil and grease	The insulation of the internal wiring is not exposed to oil, grease, etc.	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



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Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
	Part, property, retention after test, flammability classification :		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation :		N/A
4.3.13.5	Laser (including laser diodes) and LEDs	Indicator LEDs only	Pass
4.3.13.5.1	Lasers (including laser laser diodes)		N/A
	Laser class :		-
4.3.13.5.2	Light emitting diodes (LEDs)	This product contains only visible indicator LEDs (Class 1)	
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
4.4.3	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



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Clause	Requirement + Test	Result - Remark	Verdict
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning		N/A
4.5	Thermal requirements		Pass
4.5.1	General		Pass
4.5.2	Temperature tests	The equipment and its component parts did not attain excessive temperatures during normal operation. (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	(see appended table 4.5)	Pass
4.5.5	Resistance to abnormal heat.....		N/A
4.6	Openings in enclosures		Pass
4.6.1	Top and side openings	No openings	Pass
	Dimensions (mm)		-
4.6.2	Bottoms of fire enclosures	No openings	Pass
	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	Resistance to fire		Pass
4.7.1	Reducing the risk of ignition and spread of flame	Method 1: Selection and application of components and materials which minimize the possibility of ignition and spread of flame.	Pass
	Method 1, selection and application of components wiring and materials	(see appended table 4.7)	Pass
	Method 2, application of all of simulated fault		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	condition tests		
4.7.2	Conditions for a fire enclosure	Metal Enclosure employed.	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 complied with 2.5 and with components mounted on materials of Class V-1 or better.	Pass
4.7.3	Materials		Pass
4.7.3.1	General	See below.	Pass
4.7.3.2	Materials for fire enclosures	The fire enclosure is metal.	Pass
4.7.3.3	Materials for components and other parts outside fire enclosures	Decorative parts and parts outside of the fire enclosure are made of min. HB material or better.	Pass
4.7.3.4	Materials for components and other parts inside fire enclosures	All internal materials are rated HB or better or are mounted on a PWB rated V-1 or better	Pass
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	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		Pass
5.1	Touch current and protective conductor current		N/A
5.1.1	General	Class III equipment	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)...		-



IEC 60950-1 /Am 1			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7	Equipment with touch current exceeding 3,5 mA		N/A
5.1.7.1	General		N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable 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		N/A
5.2.1	General	Class III equipment.	N/A
5.2.2	Test procedure		N/A
5.3	Abnormal operating and fault conditions		Pass
5.3.1	Protection against overload and abnormal operation		Pass
5.3.2	Motors		N/A
5.3.3	Transformers		N/A
5.3.4	Functional insulation	Functional insulation complies with the requirements (a), (b), or (c)	Pass
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE.....		N/A
5.3.7	Simulation of faults		Pass
5.3.8	Unattended equipment		N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions		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		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		N/A

6.2	Protection of equipment users from overvoltages on telecommunication networks		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A

6.3	Protection of the telecommunication wiring system from overheating		N/A
	Max. output current (A).....		-
	Current limiting method		-

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

A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples.....		-
	Wall thickness (mm)		-



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A.1.2	Conditioning of samples; temperature (°C)..... :		N/A
A.1.3	Mounting of samples		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D		N/A
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s)		-
	Sample 2 burning time (s)		-
	Sample 3 burning time (s)		-
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N/A
A.2.1	Samples, material..... :		-
	Wall thickness (mm)		-
A.2.2	Conditioning of samples; temperature (°C)..... :		N/A
A.2.3	Mounting of samples		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C		-
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s)		-
	Sample 2 burning time (s)		-
	Sample 3 burning time (s)		-
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A
	Sample 1 burning time (s)		-
	Sample 2 burning time (s)		-
	Sample 3 burning time (s)		-
A.3	Hot flaming oil test (see 4.6.2)		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS(see 4.7.2.2 and 5.3.2)		N/A
B.1	General requirements		N/A
	Position..... :		-
	Manufacturer		-



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	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)		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

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



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Clause	Requirement + Test	Result - Remark	Verdict
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D.2	Alternative measuring instrument		N/A
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E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A
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F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		Pass
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G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	Clearances		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply..... :		N/A
G.2.2	Earthed d.c. mains supply..... :		N/A
G.2.3	Unearthed d.c. mains supply..... :		N/A
G.2.4	Battery operation..... :		N/A
G.3	Determination of telecommunication network transient voltage (V) :..... :		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.4.1	Mains transients and internal repetitive peaks..... :		N/A
G.4.2	Transients from telecommunication networks..... :		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	Measurement of transient voltages (V)		N/A
G.6	Determination of minimum clearances..... :		N/A

H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N/A
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J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		N/A
	Metal(s) used :	Investigated as an element of power supply certification	N/A

K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		N/A
K.1	Making and breaking capacity		N/A



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Clause	Requirement + Test	Result - Remark	Verdict

K.2	Thermostat reliability; operating voltage (V)..... :		N/A
K.3	Thermostat endurance test; operating voltage (V) :		N/A
K.4	Temperature limiter endurance; operating voltage (V)..... :		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A

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

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

N	ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A



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Clause	Requirement + Test	Result - Remark	Verdict

P	ANNEX P, NORMATIVE REFERENCES		Pass
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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
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V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		N/A
V.1	Introduction		N/A
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



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Clause	Requirement + Test	Result - Remark	Verdict
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A

X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A

Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N/A
Y.1	Test apparatus..... :		N/A
Y.2	Mounting of test samples..... :		N/A
Y.3	Carbon-arc light-exposure apparatus..... :		N/A
Y.4	Xenon-arc light-exposure apparatus..... :		N/A

Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		Pass
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AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N/A
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BB	ANNEX BB, CHANGES IN THE SECOND EDITION		-
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CC	ANNEX CC, Evaluation of integrated circuit (IC) current limiters		N/A
CC.1	General		N/A
CC.2	Test program 1.....:		N/A
CC.3	Test program 2.....:		N/A

DD	ANNEX DD, Requirements for the mounting means of rack-mounted equipment		N/A
DD.1	General		N/A
DD.2	Mechanical strength test, variable N.....:		N/A
DD.3	Mechanical strength test, 250N, including end stops.....:		N/A
DD.4	Compliance.....:		N/A



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

EE	ANNEX EE, Household and home/office document/media shredders		N/A
EE.1	General		N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols.....:		N/A
	Information of user instructions, maintenance and/or servicing instructions.....:		N/A
EE.3	Inadvertent reactivation test.....:		N/A
EE.4	Disconnection of power to hazardous moving parts:		N/A
	Use of markings or symbols.....:		N/A
EE.5	Protection against hazardous moving parts		N/A
	Test with test finger (Figure 2A)		N/A
	Test with wedge probe (Figure EE1 and EE2)		N/A



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

1.5.1	TABLE: list of critical components				Pass
object/part No.	manufacturer/ trademark	type/model	technical data	standard (edition/year)	mark(s) of conformity ¹⁾
01. Power Adapter (optional)	Various	Various	O/P: 12Vdc, 0.433A minimum, Tma: 50 degree C	IEC 60950-1, EN 60950-1	TUV, CE
02. Power from AC source (optional)	Various	Various	O/P: 24Vac, 50-60Hz, 0.494A minimum, Tma: 50 degree C.	IEC 60950-1, EN 60950-1	TUV, CE
03. Metal Enclosure	--	--	Aluminium, 2.5 mm thickness minimum, overall 62 by 72 by 157.67 mm, see Enclosure 4-01 for details.	--	--
04. Internal Plastic Part/Materials	Various	Various	Rated V-2 or VTM-2 min.	UL 94, UL 746C	UL
05. PWB	--	--	V-1 or better, 105 degree C	UL 796	UL
06. Transformer of PoE Board (T1)	Acroparts Technology Co.,Ltd.	13W12V	105 degree C. See Enclosure 4-03 for details.	--	--
06a. Alternate of transformer of PoE Board (T1)	Coilcraft, Inc.	POE13F-12L	105 degree C. See Enclosure 4-04 for details.	--	--
07. Wall mounting mean (Optional)	--	--	Aluminium, Overall see Enclosure 4-02 for details.	--	--
¹⁾ an asterisk indicates a mark which assures the agreed level of surveillance					



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

1.5.1	TABLE: Opto Electronic Devices		N/A
-------	--------------------------------	--	-----

Manufacturer	:
Type	:
Separately tested	:
Bridging insulation	:
External creepage distance.....	:
Internal creepage distance	:
Distance through insulation.....	:
Tested under the following conditions.....	:
Input	:
Output.....	:
supplementary information	



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

1.6.2	TABLE: Electrical data (in normal conditions)					Pass
U (V)	I (A)	I rated (A)	P (W)	Fuse #	I fuse (A)	condition/status
--	--	--	--	--	--	For Model IP8172P
12Vdc	0.433	0.433	5.2	--	--	Maximum Normal Load
24Vac/50Hz	0.466	0.494	6.2	--	--	Maximum Normal Load
24Vac/60Hz	0.45	0.494	6.2	--	--	Maximum Normal Load
48Vdc	0.128	0.144	6.15	--	--	Maximum Normal Load (For POE)
--	--	--	--	--	--	For Model IP8172
12Vdc	0.397	0.42	4.77	--	--	Maximum Normal Load
24Vac/50Hz	0.443	0.463	6.5	--	--	Maximum Normal Load
24Vac/60Hz	0.433	0.463	6.5	--	--	Maximum Normal Load
48Vdc	0.134	0.146	6.44	--	--	Maximum Normal Load (For POE)
supplementary information:						
“Maximum normal load” was defined as follows: Unit transfer video signal from RJ-45 connected to the computer , general I/O terminal Block J3 Pin 1 loaded loaded 0.05A and working continuously.						

2.1.1.5 c) 1)	TABLE: max. V, A, VA test				N/A
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
supplementary information:					

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



IEC 60950-1 /Am 1

Clause	Requirement + Test	Result - Remark	Verdict
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2.2	TABLE: evaluation of voltage limiting components in SELV circuits	Pass	
Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components
	V peak	V d.c.	
T1 Pin1,2 – 5,6 (GND)	--	40.8	--
T1 Pin3 – 5,6 (GND)	--	2.0	--
T1 Pin7,8 – 5,6 (GND)	16.4	--	--
T1 Pin10 – 5,6 (GND)	25.6	--	--
T1 Pin11,12 – 5,6 (GND)	90.0	--	--
U2 Pin1 – GND	--	6.2	--
U2 Pin2 – GND	--	5.2	--
U2 Pin4 – GND	--	2.18	--
Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)		
T1 Pin1,2 –T1 Pin 7,8 short	8.8Vdc		
T1 Pin11,12 –T1 Pin 5,6 short	5.3Vdc		
T1 Pin11,12 –T1 Pin 7,8 short	9.8Vdc		
T1 Pin11,12 –Metal enclosure short	5.4Vdc		
U2 Pin1 Open (T1 Pin11,12 –T1 Pin 7,8 short)	0		
U2 Pin1-Pin2 short (T1 Pin11,12 –T1 Pin 7,8 short)	0		
U2 Pin3-Pin4 short (T1 Pin11,12 –T1 Pin 7,8 short)	0		
supplementary information:			
The following terminals were connected to earth: T1 Pin5,6			

2.5	TABLE: limited power sources	Pass		
Regulating network				
For 12Vdc / 24Vac / 48Vdc input				
Circuit output tested:	Terminal Block Pin 1			
Measured Uoc (V) with all load circuits disconnected:	11.67V			
	I _{sc} (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	3.38	≤ 8.0	26.94	≤ 100
Single fault: T1 Pin1,2-7,8 short	0.01	≤ 8.0	0.01	≤ 100



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Clause	Requirement + Test	Result - Remark	Verdict
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Circuit output tested:	Terminal Block Pin 1			
Measured Uoc (V) with all load circuits disconnected:	0V			
	I _{sc} (A)		VA	
	Meas.	Limit	Meas.	Limit
Single fault: U2 Pin1 Open	0	≤ 8.0	0	≤ 100
Single fault: U2 Pin1-Pin2 Short	0	≤ 8.0	0	≤ 100
Single fault: U2 Pin3-Pin4 Short	0	≤ 8.0	0	≤ 100
Inherently limited				
For 12Vdc input				
Circuit output tested:	Terminal Block Pin 3			
Measured Uoc (V) with all load circuits disconnected:	6.37V			
	I _{sc} (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0.01	≤ 8.0	0.01	≤ 100
Circuit output tested:	Mic All Pins, Audio All Pins, Video out All Pins, RJ-45 All Pins, Terminal Block Pin2,4-8			
Measured Uoc (V) with all load circuits disconnected:	0V			
	I _{sc} (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	≤ 8.0	0	≤ 100
For 24Vac input				
Circuit output tested:	Terminal Block Pin 3			
Measured Uoc (V) with all load circuits disconnected:	6.37V			
	I _{sc} (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0.01	≤ 8.0	0.01	≤ 100
Circuit output tested:	Mic All Pins, Audio All Pins, Video out All Pins, RJ-45 All Pins, Terminal Block Pin2,4,7-8			
Measured Uoc (V) with all load circuits disconnected:	0V			
	I _{sc} (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	≤ 8.0	0	≤ 100



IEC 60950-1 /Am 1

Clause	Requirement + Test	Result - Remark	Verdict
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For 48Vdc input				
Circuit output tested:	Terminal Block Pin 3			
Measured Uoc (V) with all load circuits disconnected:	6.37V			
	I _{sc} (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0.01	≤ 8.0	0.01	≤ 100
Circuit output tested:	Mic All Pins, Audio All Pins, Video out All Pins, Terminal Block Pin2,4-8			
Measured Uoc (V) with all load circuits disconnected:	0V			
	I _{sc} (A)		VA	
	Meas.	Limit	Meas.	Limit
Normal condition	0	≤ 8.0	0	≤ 100
supplementary information:				
Sc=Short circuit, Oc=Open circuit				

2.10.2	TABLE: Working voltage measurement			N/A
Location	RMS voltage (V)	Peak voltage (V)	Comments	
supplementary information:				

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						Pass
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
Functional:							
--	--	--	--	--	--	--	
Basic/supplementary:							
--	--	--	--	--	--	--	
Reinforced:							
--	--	--	--	--	--	--	



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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:
All circuits are SELV, only functional insulation required.

2.10.5	TABLE: distance through insulation measurements				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	TABLE: Batteries								N/A
The tests of 4.3.8 are applicable only when appropriate battery data is not available.									--
Is it possible to install the battery in a reverse polarity position									--
Non-rechargeable batteries			Rechargeable batteries						
Discharging		Un-intentional charging	Charging		Discharging		Reversed charging		
Meas. current	Manuf. specs.		Meas. current	Manuf. specs.	Meas. current	Manuf. specs.	Meas. current	Manuf. specs.	
Max. current during normal condition									
Max. A during fault condition 1									
Max. A during fault condition 1									
--									
Test results:									Verdict
- Chemical leaks									N/A
- Explosion of the battery									N/A
- Emission of flame or expulsion of molten metal									N/A
- Electric strength tests of equipment after completion of tests									N/A
supplementary information:									



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Clause	Requirement + Test	Result - Remark	Verdict
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4.5	TABLE: Thermal requirements						Pass
	Supply voltage (V).....	See below	See below	See below	See below	--	—
	Ambient Tmin (°C)	--	--	--	--	--	—
	Ambient Tmax (°C)	--	--	--	--	--	—
	Maximum measured temperature T of part/at:	T (°C)					allowed Tmax (°C)
--		Maximum Normal Load at 12Vdc (Horizontal)	Maximum Normal Load at 12Vdc, shift to Tma 50 degree C (Horizontal)	Maximum Normal Load at 12Vdc (Vertical)	Maximum Normal Load at 12Vdc, shift to Tma 50 degree C (Vertical)	--	--
1. Ambient		26.3	50.0	26.5	50.0	--	--
For main board		--	--	--	--	--	--
2. DC jack		35.8	59.5	36.1	59.6	--	95
3. AC in connector		38.3	62.0	38.7	62.2	--	95
4. L41 coil		40.0	63.7	40.3	63.8	--	105
5. C391 body		41.2	64.9	41.5	65.0	--	85
6. T1 coil		42.2	65.9	42.4	65.9	--	105
7. T1 core		41.7	65.4	41.9	65.4	--	105
8. C8 body		41.2	64.9	41.5	65.0	--	105
9. U2 body		41.5	65.2	41.8	65.3	--	100
10. C2 body		41.8	65.5	42.4	65.9	--	105
11. PWB under U1		42.3	66.0	42.7	66.2	--	105
12. L1 coil		44.1	67.8	44.4	67.9	--	105
13. PWB under Q1		42.5	66.2	42.8	66.3	--	105
14. L71 coil		44.7	68.4	45.1	68.6	--	105
15. PWB under U3		40.4	64.1	40.8	64.3	--	105
For SD card board		--	--	--	--	--	--
16. PWB under U7		40.0	63.7	40.2	63.7	--	105
17. BT1 body		40.0	63.7	40.0	63.5	--	85
For camera board		--	--	--	--	--	--
18. PWB under TP25		41.1	64.8	41.6	65.1	--	105
19. Metal enclosure outside near TOP		34.6	58.3	37.2	60.7	--	70
Test duration		1.8 hrs	1.8 hrs	1.1 hrs	1.1 hrs	--	--
--		Maximum Normal Load at 24Vac, 50Hz (Horizontal)	Maximum Normal Load at 24Vac, 50Hz, shift to Tma 50	Maximum Normal Load at 24Vac, 50Hz (Vertical)	Maximum Normal Load at 24Vac, 50Hz, shift to Tma 50	--	--



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Clause	Requirement + Test	Result - Remark	Verdict

		degree C (Horizontal)		degree C (Vertical)			
1. Ambient	26.2	50.0	26.3	50.0	--	--	
For main board	--	--	--	--	--	--	
2. DC jack	43.5	67.3	43.2	66.9	--	95	
3. AC in connector	48.4	72.2	48.0	71.7	--	95	
4. L41 coil	48.6	72.4	48.3	72.0	--	105	
5. C391 body	55.4	79.2	55.5	79.2	--	85	
6. T1 coil	77.0	100.8	74.7	98.4	--	105	
7. T1 core	72.8	96.6	70.1	93.8	--	105	
8. C8 body	62.7	86.5	61.1	84.8	--	105	
9. U2 body	62.6	86.4	62.4	86.1	--	100	
10. C2 body	62.1	85.9	63.3	87.0	--	105	
11. PWB under U1	68.3	92.1	68.7	92.4	--	105	
12. L1 coil	70.3	94.1	70.5	94.2	--	105	
13. PWB under Q1	79.1	102.9	78.4	102.1	--	105	
14. L71 coil	56.8	80.6	56.7	80.4	--	105	
15. PWB under U3	48.9	72.7	48.7	72.4	--	105	
For SD card board	--	--	--	--	--	--	
16. PWB under U7	50.3	74.1	48.9	72.6	--	105	
17. BT1 body	49.0	72.8	47.4	71.1	--	85	
For camera board	--	--	--	--	--	--	
18. PWB under TP25	46.2	70.0	46.2	69.9	--	105	
19. Metal enclosure outside near TOP	39.2	63.0	42.6	66.3	--	70	
Test duration	2.3 hrs	2.3 hrs	1.5 hrs	1.5 hrs	--	--	
temperature T of winding:	t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	allowed T _{max} (°C)	insulation class
--	--	--	--	--	--	--	--

supplementary information:
 Heating test conducted on 24Vac waive 48Vdc due to those two input have same input circuit & 24Vac had larger input A&W.

Comments:
 - The temperatures were measured under worst case normal mode defined in 1.2.2.1 and as described in 1.6.1 at voltages as described in 1.6.5.
 - With a maximum ambient temperature is 50 °C.

Components with:
 - max. absolute temp. of 105 °C (Choke)
 - max. absolute temp. of 85 °C (Capacitor)
 - max. absolute temp. of 105 °C (PCB)
 - max. absolute temp. of 100 °C (Photocopier)

when no class of insulation is given, min. insulation 105°C assumed.

User accessible area:
 - material is metal Tmax = 70°C



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Clause	Requirement + Test	Result - Remark	Verdict
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4.5.5	TABLE: Ball pressure test of thermoplastic parts		N/A
	allowed impression diameter (mm)..... :	≤ 2 mm	—
part		test temperature (°C)	impression diameter (mm)
supplementary information:			

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

5.1	TABLE: Touch current measurement			N/A
Measured between:	Measured (mA)	Limit (mA)	Comments/conditions	
supplementary information:				

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



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Clause	Requirement + Test	Result - Remark	Verdict
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5.3	TABLE: Fault condition tests					N/A
	ambient temperature (°C)..... :					—
	Power source for EUT: Manufacturer, model/type, output rating :					—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
supplementary information:						
-						

C.2	TABLE: transformers						N/A
Loc.	Tested insulation	Working voltage peak / V (2.10.2)	Working voltage rms / V (2.10.2)	Required electric strength (5.2)	Required clearance / mm (2.10.3)	Required creepage distance / mm (2.10.4)	Required distance thr. insul. (2.10.5)
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
supplementary information:							

C.2	TABLE: transformers					N/A
Transformer						



National Differences

EUROPEAN

- * No National Differences Declared
- ** Only Group Differences



Attachment No. 1			
SubClause	Difference + 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_1B_II
Attachment Originator	SGS Fimko Ltd
Master Attachment	Date 2011-08
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EN 60950-1:2006/A11:2009/A1:2010/A12:2011 – CENELEC COMMON MODIFICATIONS

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions		Pass
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 4.7.3.1 Note 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		Pass
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		N/A



Attachment No. 1

SubClause	Difference + Test	Result - Remark	Verdict
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IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)

Clause	Requirement + Test	Result - Remark	Verdict
1.3.Z1	<p>Add the following subclause:</p> <p>1.3.Z1 Exposure to excessive sound pressure</p> <p>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.</p> <p>NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment:</p> <p>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.</p>		N/A
(A12:2011)	<p>In EN 60950-1:2006/A12:2011</p> <p>Delete the addition of 1.3.Z1 / EN 60950-1:2006</p> <p>Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010</p>		Pass
1.5.1	<p>Add the following NOTE:</p> <p>NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC</p>		N/A
1.7.2.1 (A1:2010)	<p>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.</p>		N/A
1.7.2.1 (A12.2011)	<p>In EN 60950-1:2006/A12:2011</p> <p>Delete NOTE Z1 and the addition for Portable Sound System.</p> <p>Add the following clause and annex to the existing standard and amendments.</p>		N/A
	Zx Protection against excessive sound pressure from personal music players		N/A



Attachment No. 1

SubClause	Difference + Test	Result - Remark	Verdict
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IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)

Clause	Requirement + Test	Result - Remark	Verdict
	<p>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.</p> <p>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.</p> <p>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.</p> <p>The requirements in this sub-clause are valid for music or video mode only.</p> <p>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.</p> <p>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.</p>		N/A



Attachment No. 1

SubClause	Difference + Test	Result - Remark	Verdict
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IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)

Clause	Requirement + Test	Result - Remark	Verdict
	<p>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.</p> <p>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.</p> <p>For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.</p>		
	<p>Zx.2 Equipment requirements</p> <p>No safety provision is required for equipment that complies with the following:</p> <ul style="list-style-type: none"> equipment provided as a package (personal music player with its listening device), where the acoustic output LAeq,T is ≤ 85 dBA measured while playing the fixed “programme simulation noise” as described in EN 50332-1; and a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” as described in EN 50332-1. <p>NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level LAeq,T is meant. See also Zx.5 and Annex Zx.</p> <p>All other equipment shall:</p> <ul style="list-style-type: none"> 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



Attachment No. 1			
SubClause	Difference + Test	Result - Remark	Verdict
	<p>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</p> <p>NOTE 2 Examples of means include visual or audible signals. Action from the user is always required.</p> <p>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.</p> <p>d) have a warning as specified in Zx.3; and</p> <p>e) not exceed the following:</p> <ol style="list-style-type: none"> 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. <p>For music where the average sound pressure (long term LAeq,T) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song.</p> <p>NOTE 4 Classical music typically has an average sound pressure (long term LAeq,T) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA.</p>		N/A



Attachment No. 1

SubClause	Difference + Test	Result - Remark	Verdict
	<p>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.</p>		
	<p>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.”</p> <div data-bbox="523 965 791 1227" style="text-align: center;"> </div> <p>Figure 1 – Warning label (IEC 60417-6044)</p> <p>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.</p>		N/A
	<p>Zx.4 Requirements for listening devices (headphones and earphones)</p>		N/A
	<p>Zx.4.1 Wired listening devices with analogue input With 94 dBA sound pressure output LAeq,T, the input voltage of the fixed “programme simulation noise” described in EN 50332-2 shall be ≥ 75 mV.</p> <p>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).</p> <p>NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.</p>		N/A



Attachment No. 1

SubClause	Difference + Test	Result - Remark	Verdict
	<p>Zx.4.2 Wired listening devices with digital input With any playing device playing the fixed “programme simulation noise” described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output LAeq,T of the listening device shall be ≤ 100 dBA.</p> <p>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.).</p> <p>NOTE An example of a wired listening device with digital input is a USB headphone.</p>		N/A
	<p>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 LAeq,T of the listening device shall be ≤ 100 dBA.</p> <p>NOTE An example of a wireless listening device is a Bluetooth headphone.</p>		N/A
	<p>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.</p> <p>NOTE Test method for wireless equipment provided without listening device should be defined.</p>		N/A



Attachment No. 1

SubClause	Difference + Test	Result - Remark	Verdict						
2.7.1	<p>Replace the subclause as follows:</p> <p>Basic requirements</p> <p>To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c):</p> <p>a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment;</p> <p>b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;</p> <p>c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions.</p> <p>If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.</p>		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	<p>Replace "60245 IEC 53" by "H05 RR-F"; "60227 IEC 52" by "H03 VV-F or H03 VVH2-F"; "60227 IEC 53" by "H05 VV-F or H05 VVH2-F2".</p> <p>In Table 3B, replace the first four lines by the following:</p> <table border="0" data-bbox="331 1787 932 1883"> <tr> <td>Up to and including 6 </td> <td>0,75^{a)} </td> </tr> <tr> <td>Over 6 up to and including 10 (0,75)^{b)}</td> <td>1,0 </td> </tr> <tr> <td>Over 10 up to and including 16 (1,0)^{c)}</td> <td>1,5 </td> </tr> </table> <p>In the conditions applicable to Table 3B delete the words "in some countries" in condition^{a)}.</p> <p>In NOTE 1, applicable to Table 3B, delete the second sentence.</p>	Up to and including 6	0,75 ^{a)}	Over 6 up to and including 10 (0,75) ^{b)}	1,0	Over 10 up to and including 16 (1,0) ^{c)}	1,5		N/A
Up to and including 6	0,75 ^{a)}								
Over 6 up to and including 10 (0,75) ^{b)}	1,0								
Over 10 up to and including 16 (1,0) ^{c)}	1,5								



Attachment No. 1

SubClause	Difference + 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 (artificial optical radiation). 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	—
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**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



Attachment No. 1

SubClause	Difference + Test	Result - Remark	Verdict
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**ZB ANNEX (normative)
SPECIAL NATIONAL CONDITIONS (EN)**

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



Attachment No. 1

SubClause	Difference + Test	Result - Remark	Verdict
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**ZB ANNEX (normative)
SPECIAL NATIONAL CONDITIONS (EN)**

Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1	<p>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.</p> <p>The marking text in the applicable countries shall be as follows:</p> <p>In Finland: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"</p> <p>In Norway: "Apparatet må tilkoples jordet stikkontakt"</p> <p>In Sweden: "Apparaten skall anslutas till jordat uttag"</p> <p>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.</p> <p>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.</p> <p>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:</p> <p>"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)."</p>		N/A



Attachment No. 1			
SubClause	Difference + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	<p>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.</p> <p>Translation to Norwegian (the Swedish text will also be accepted in Norway):</p> <p>“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.”</p> <p>Translation to Swedish:</p> <p>”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.”</p>		N/A
1.7.5	<p>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.</p> <p>For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.</p>		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



Attachment No. 1

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



Attachment No. 1

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



Attachment No. 1

SubClause	Difference + Test	Result - Remark	Verdict
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ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
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
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



Attachment No. 1

SubClause	Difference + Test	Result - Remark	Verdict
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**ZB ANNEX (normative)
SPECIAL NATIONAL CONDITIONS (EN)**

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



Attachment No. 1

SubClause	Difference + Test	Result - Remark	Verdict
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**ZB ANNEX (normative)
SPECIAL NATIONAL CONDITIONS (EN)**

Clause	Requirement + Test	Result - Remark	Verdict
6.1.2.1 (A1:2010)	<p>In Finland, Norway and Sweden, add the following text between the first and second paragraph of the compliance clause:</p> <p>If this insulation is solid, including insulation forming part of a component, it shall at least consist of either</p> <ul style="list-style-type: none"> - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. <p>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</p> <ul style="list-style-type: none"> - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. 		N/A



Attachment No. 1

SubClause	Difference + Test	Result - Remark	Verdict
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**ZB ANNEX (normative)
SPECIAL NATIONAL CONDITIONS (EN)**

Clause	Requirement + Test	Result - Remark	Verdict
	<p>It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b).</p> <p>It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2.</p> <p>A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions:</p> <ul style="list-style-type: none"> - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 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
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



Enclosures

<u>Type</u>	<u>Supplement Id</u>	<u>Description</u>
Marking Plate	13-01	Label
Photographs	3-01	Overall View-1 for model IP8172P (with wall mounting mean)
Photographs	3-02	Overall View-2 for model IP8172P (without wall mounting mean)
Photographs	3-03	Overall View-3 for model IP8172P (without wall mounting mean)
Photographs	3-04	Overall View-4 for model IP8172 (with wall mounting mean)
Photographs	3-05	Overall View-5 for model IP8172 (without wall mounting mean)
Photographs	3-06	Overall View-6 for model IP8172 (without wall mounting mean)
Photographs	3-07	Connector View
Photographs	3-08	Internal View-1
Photographs	3-09	Internal View-2
Photographs	3-10	Internal View-3
Photographs	3-11	Internal View-4
Photographs	3-12	Mainboard with POE Module Board top side view
Photographs	3-13	Mainboard views
Photographs	3-14	POE Module Board views
Photographs	3-15	IO Board views
Photographs	3-16	Sensor Board views
Photographs	3-17	Wall mounting mean view
Diagrams	4-01	Enclosure Dimension Drawing
Diagrams	4-02	Wall mounting mean Drawing
Diagrams	4-03	POE Transformer Spec (Acroparts Technology Co.,Ltd._13W12V)
Diagrams	4-04	POE Transformer Spec (Coilcraft, Inc._POE13F-12L)
Schematics + PWB		
Manuals		
Miscellaneous		



Photographs ID 13-01

Network Camera 

Model No:IP8172
 MAC:0002D1XXXXXX



  
 XXXXX

  
 RoHS

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

Network Camera 

Model No:IP8172P
 MAC:0002D1XXXXXX



  
 XXXXX

  
 RoHS

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



Photographs ID 3-01



Photographs ID 3-02





Photographs ID 3-03



Photographs ID 3-04





Photographs ID 3-05



Photographs ID 3-06





Photographs ID 3-07

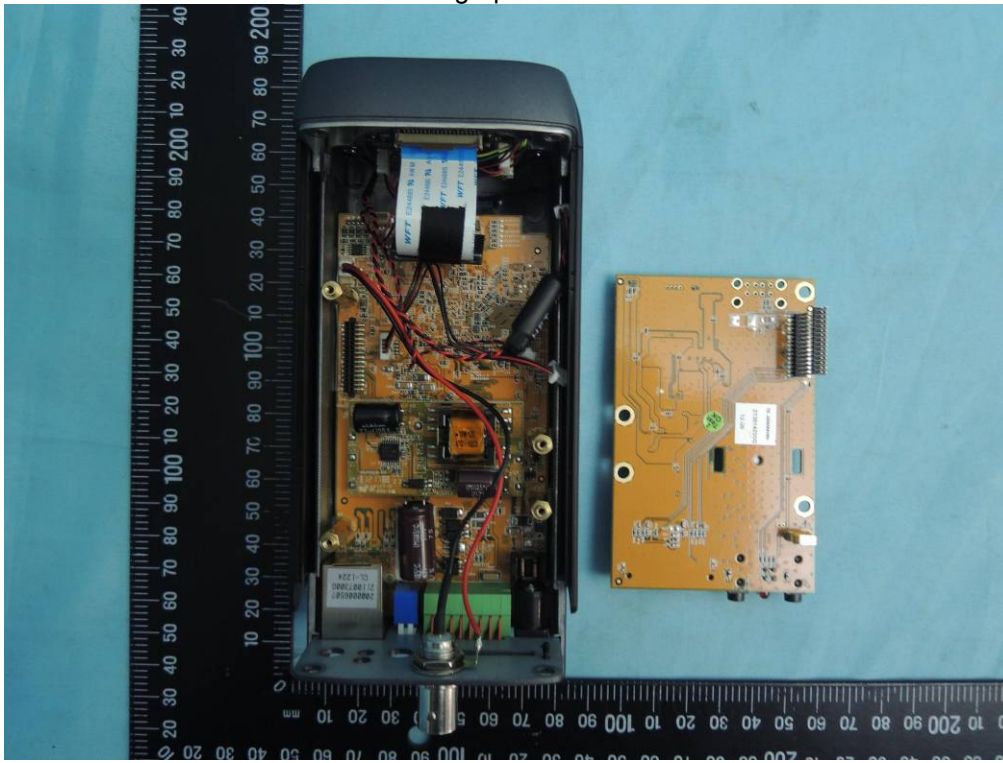


Photographs ID 3-08

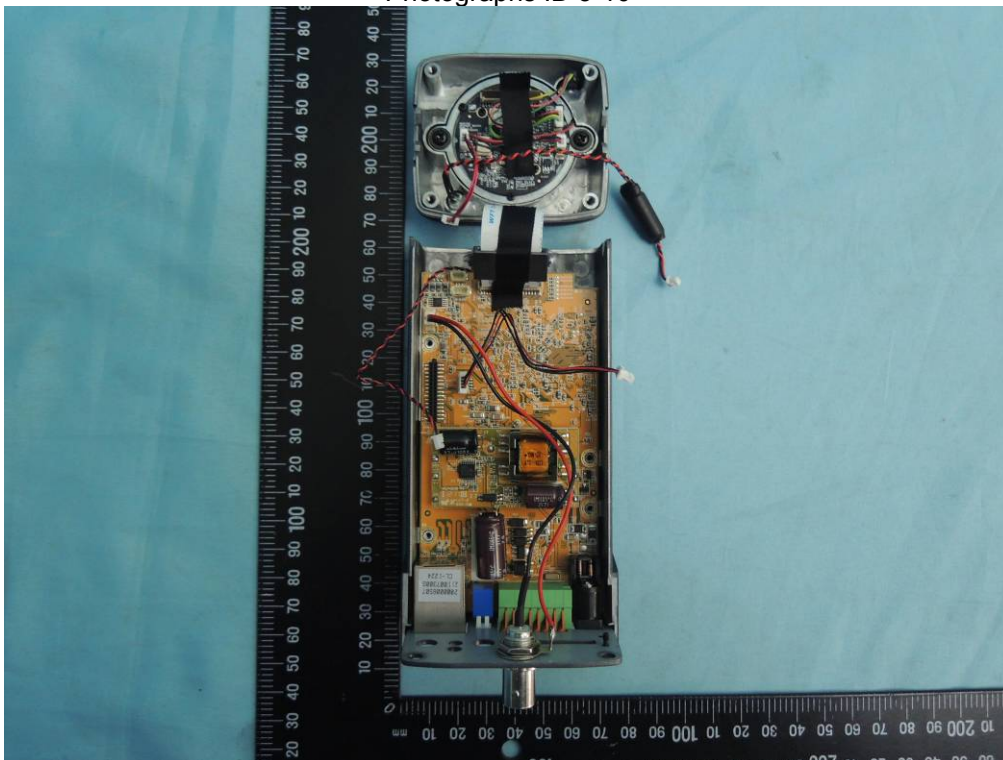




Photographs ID 3-09

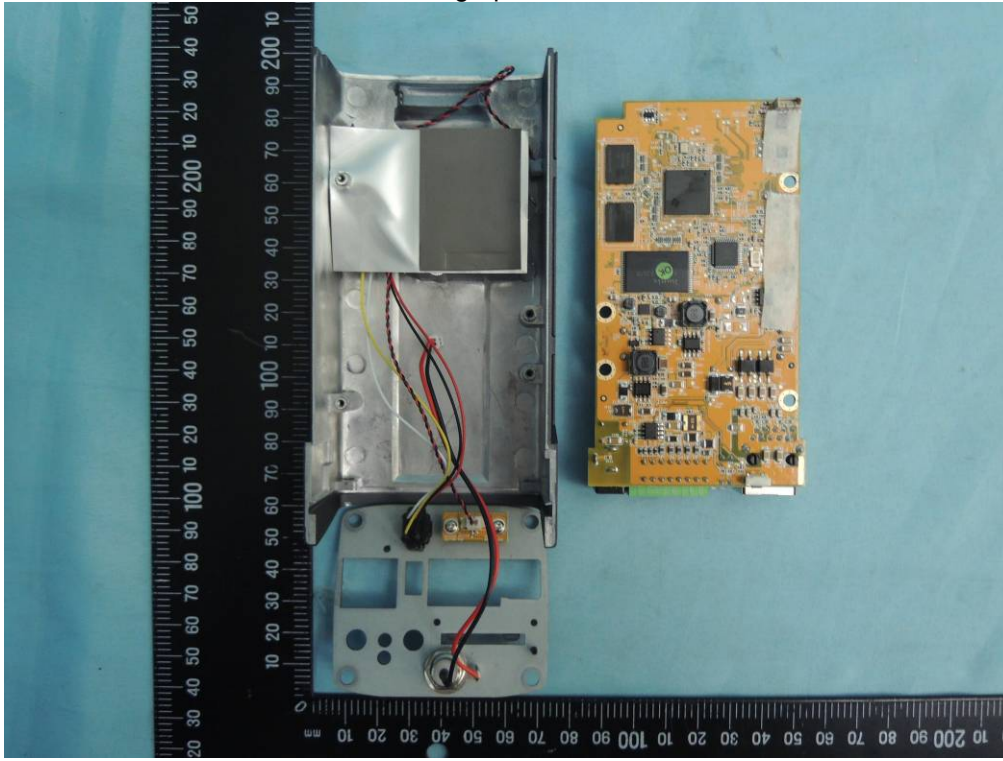


Photographs ID 3-10

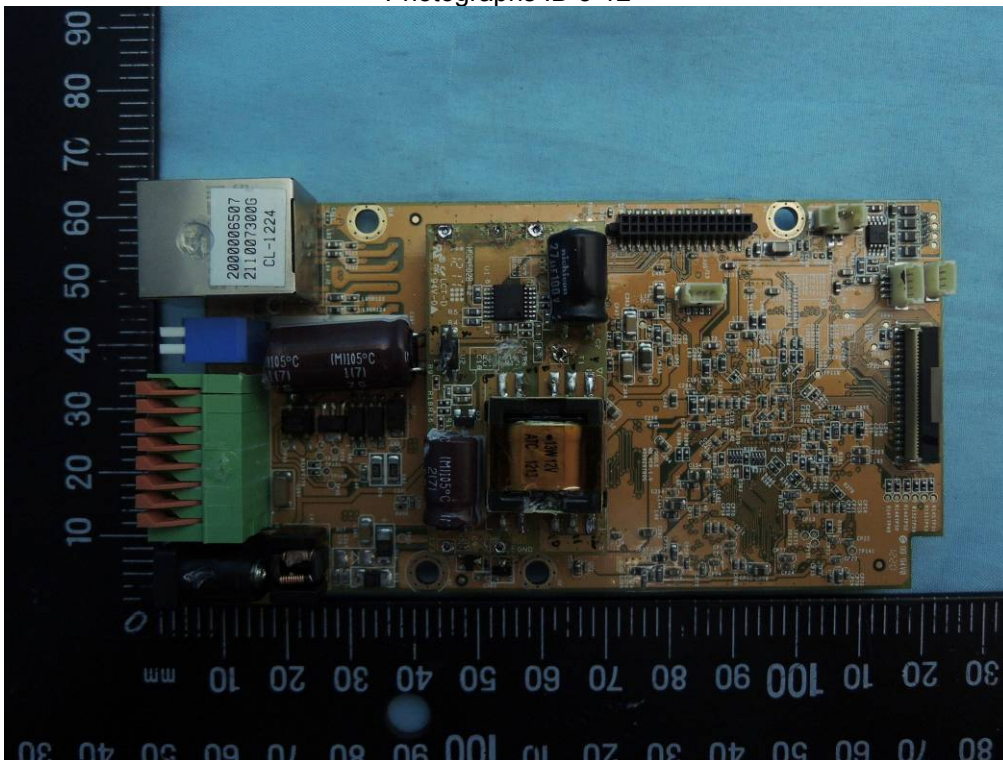




Photographs ID 3-11

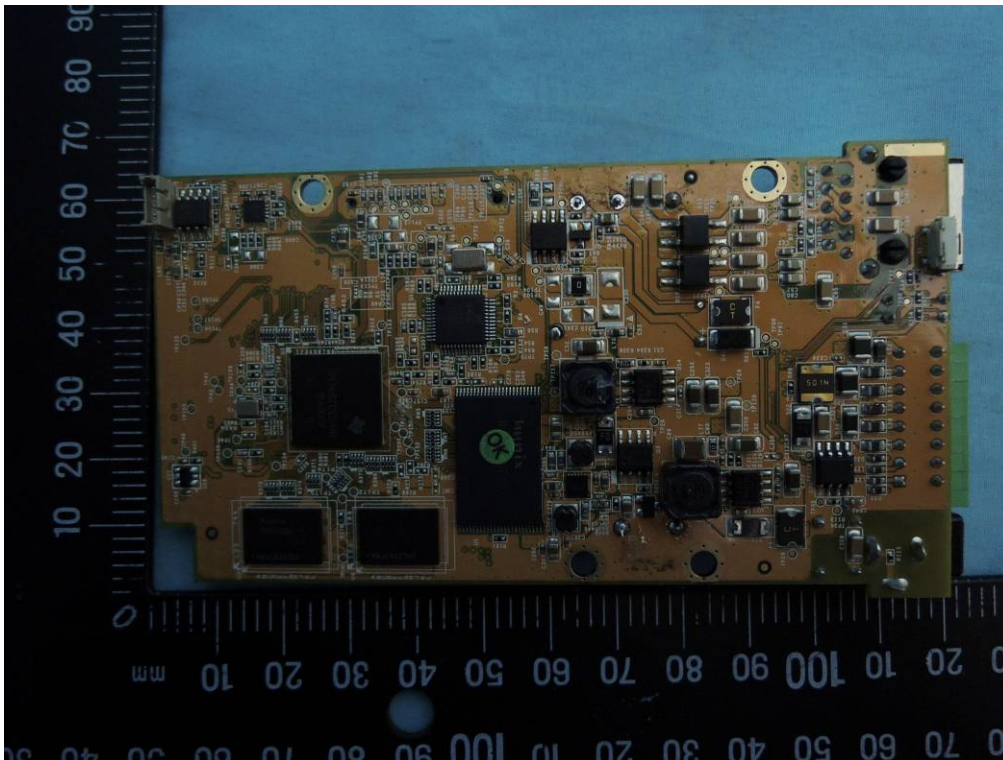
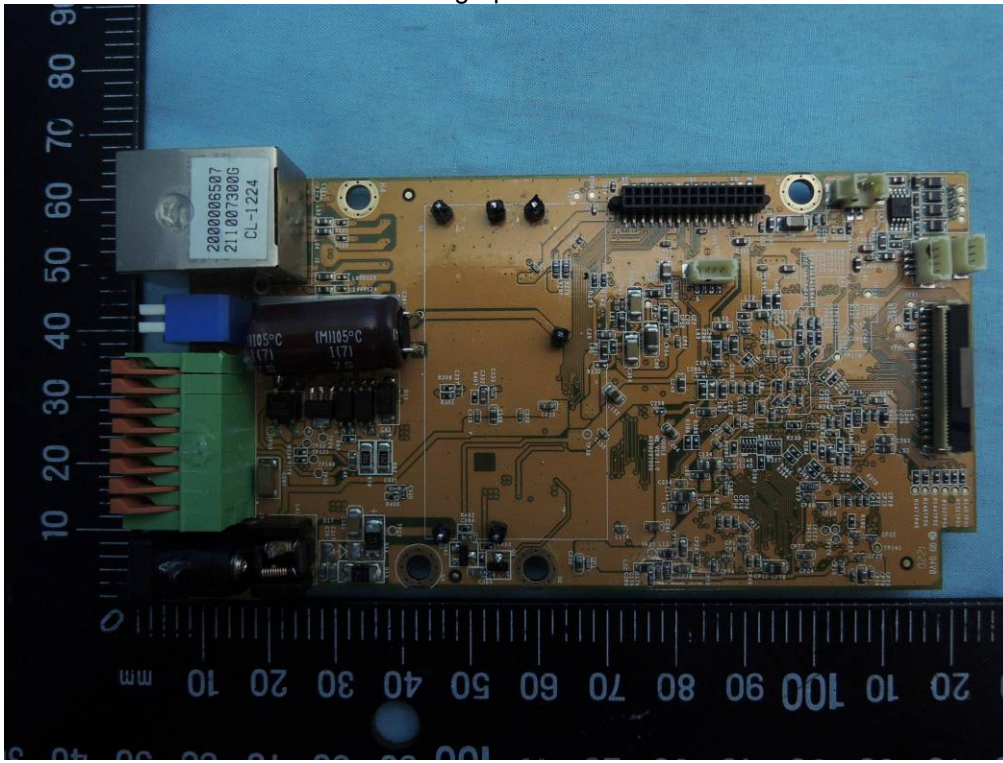


Photographs ID 3-12



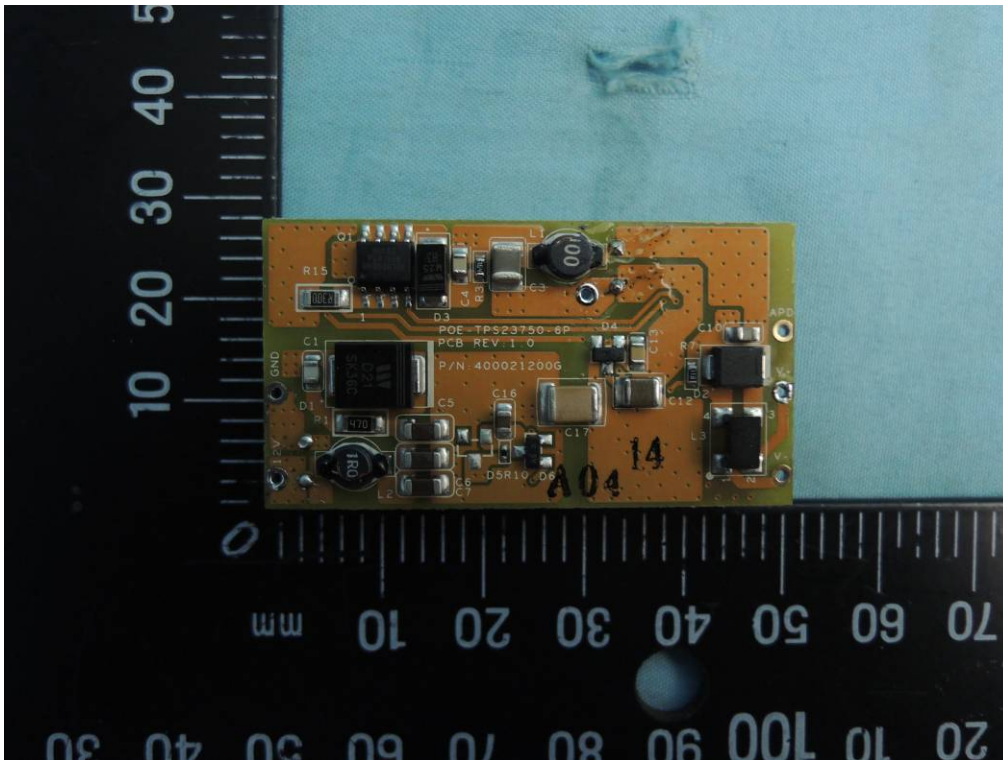
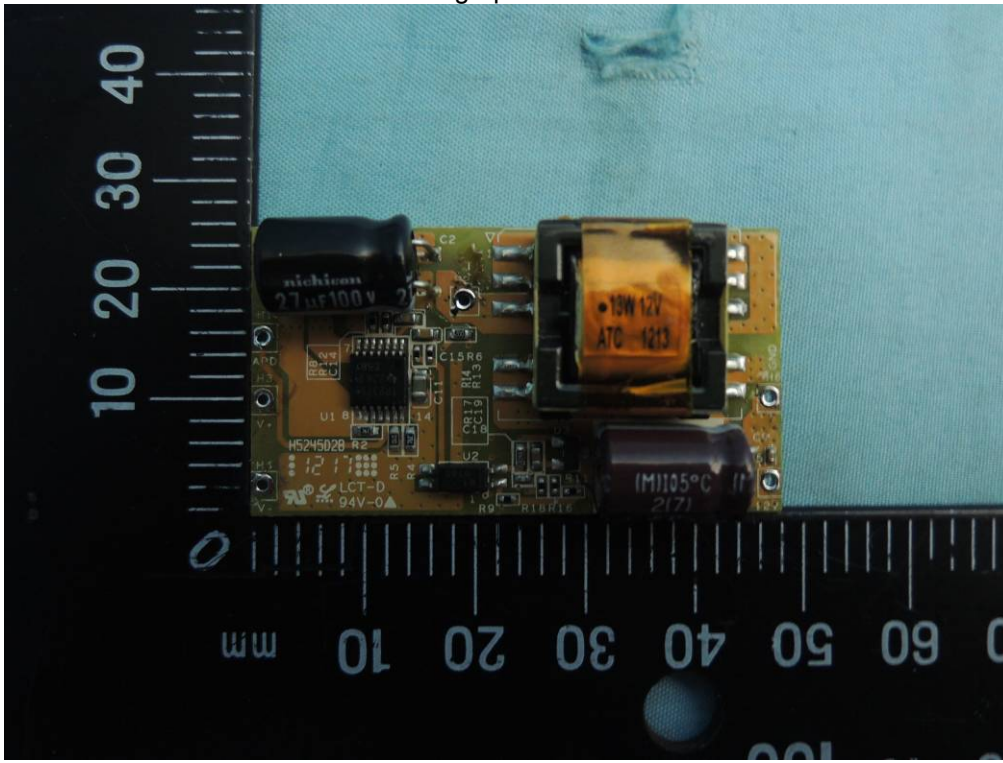


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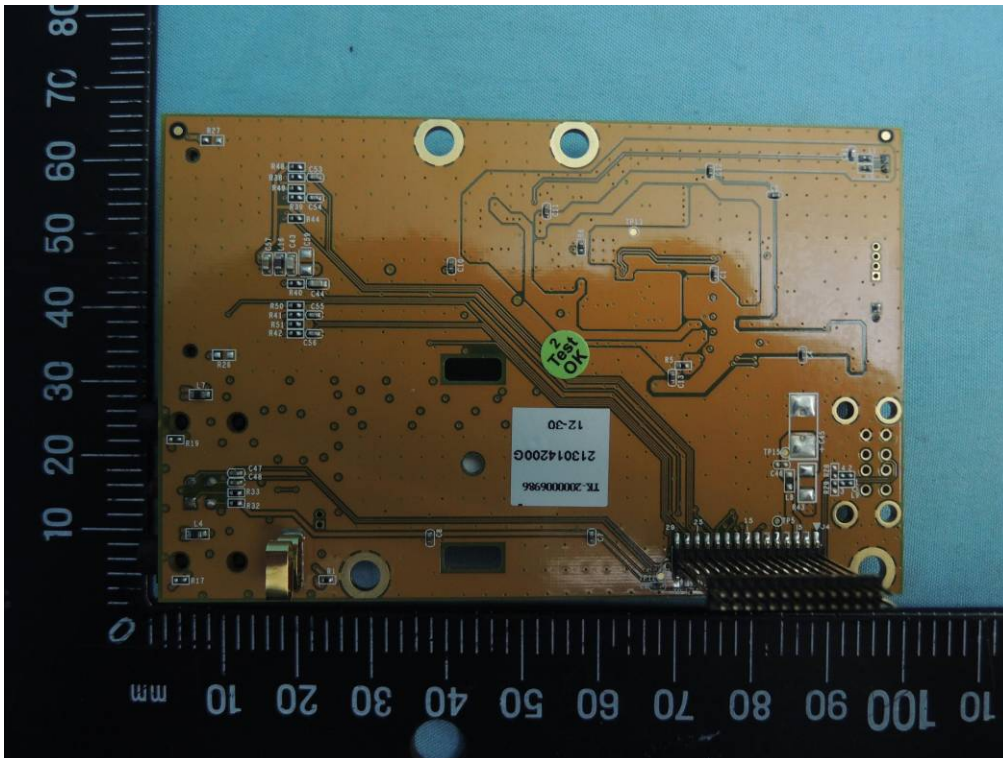
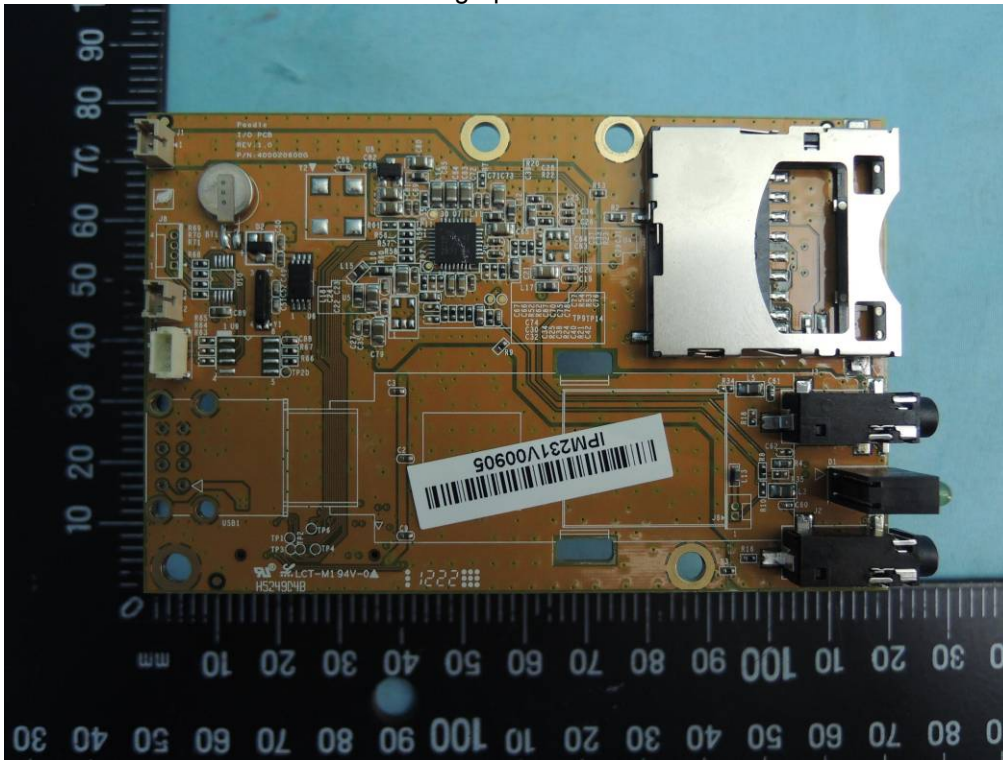


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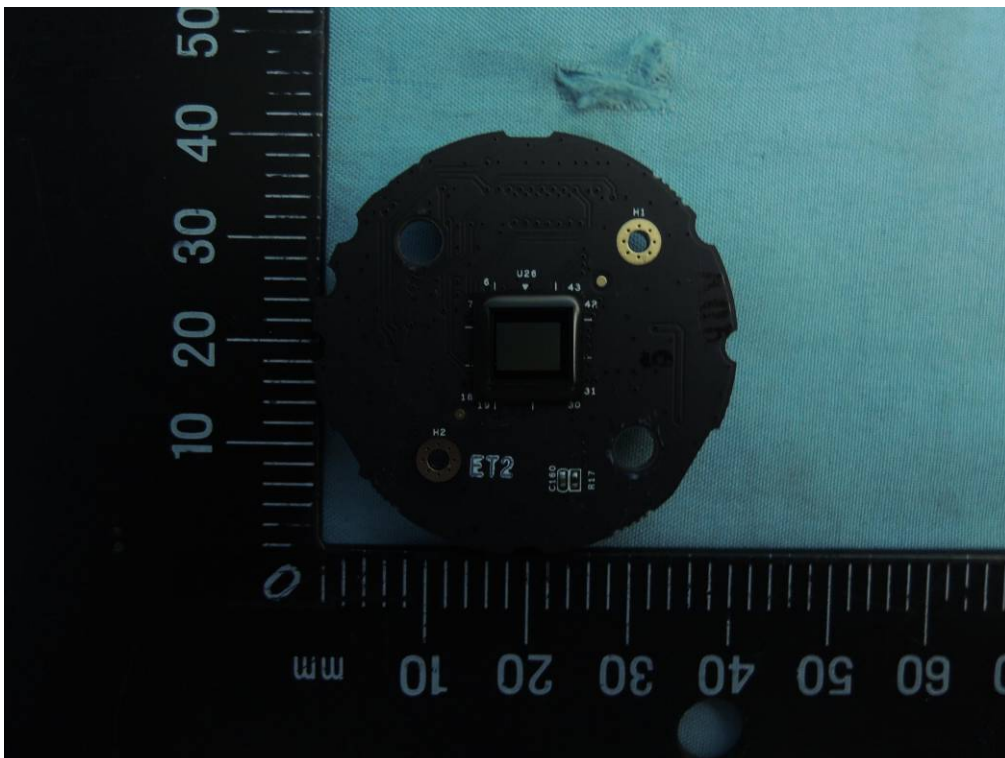
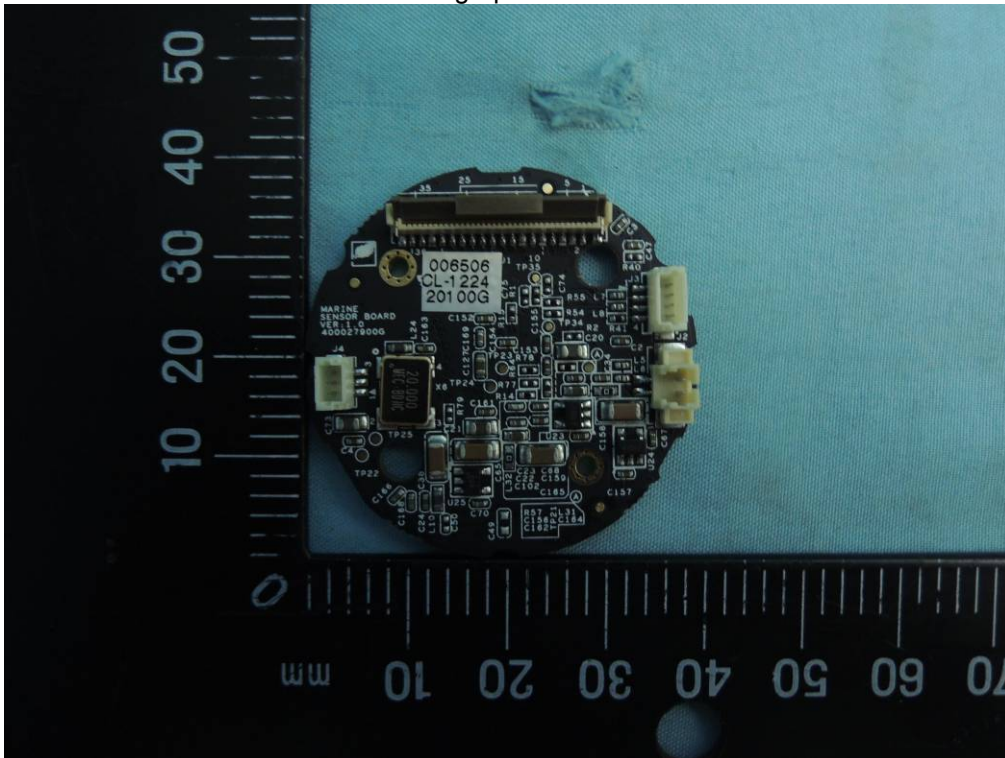


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Photographs ID 3-16



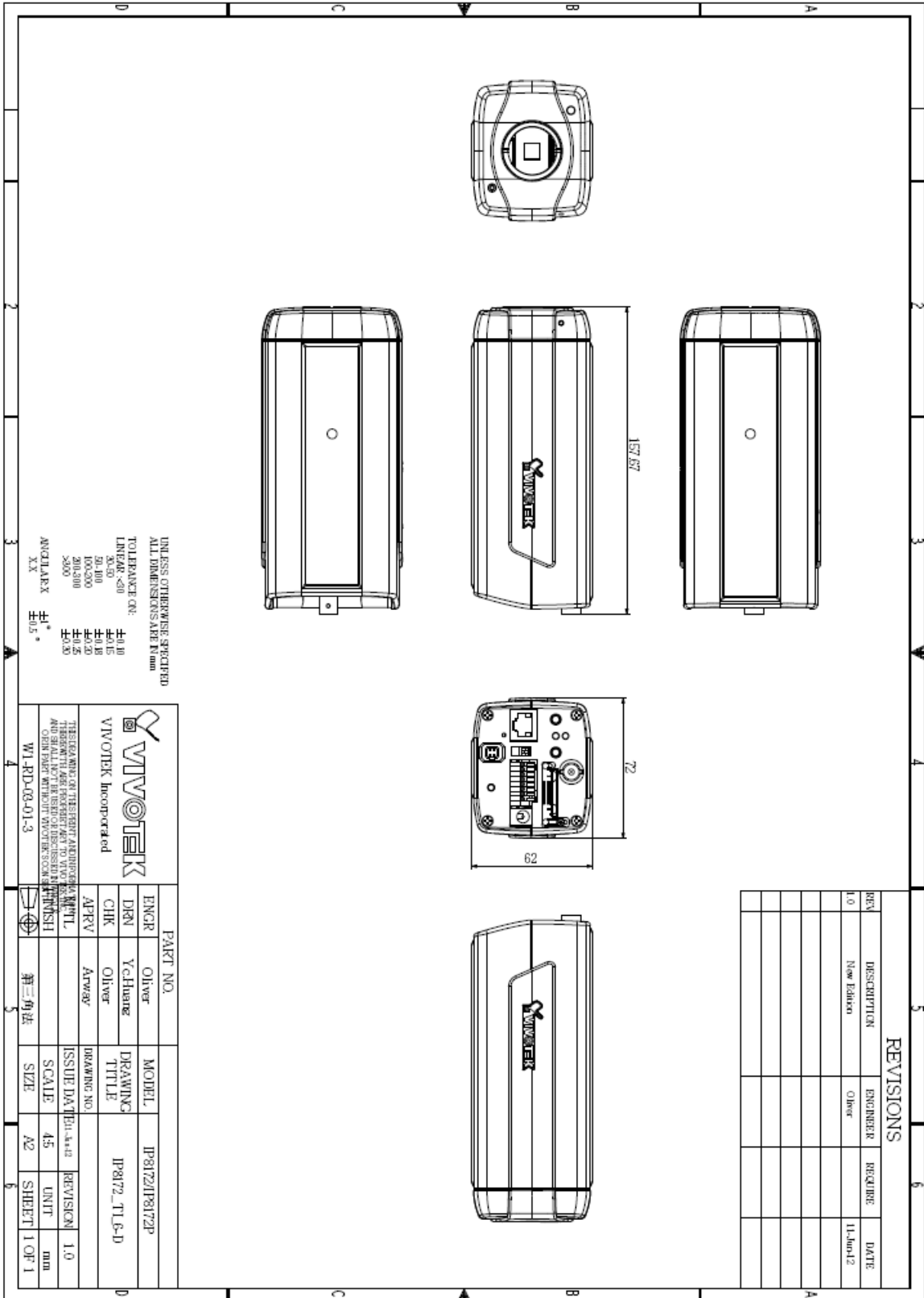


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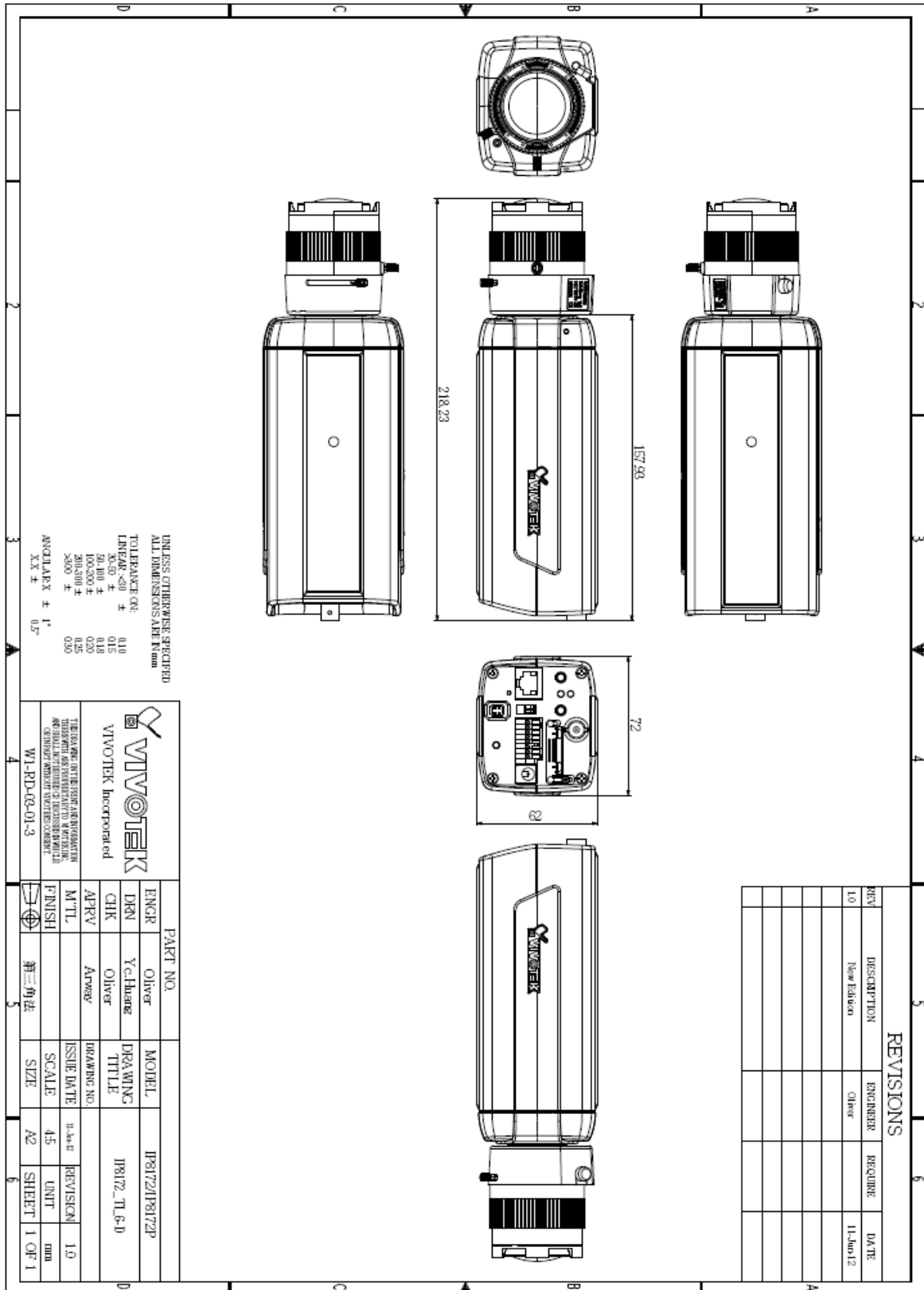


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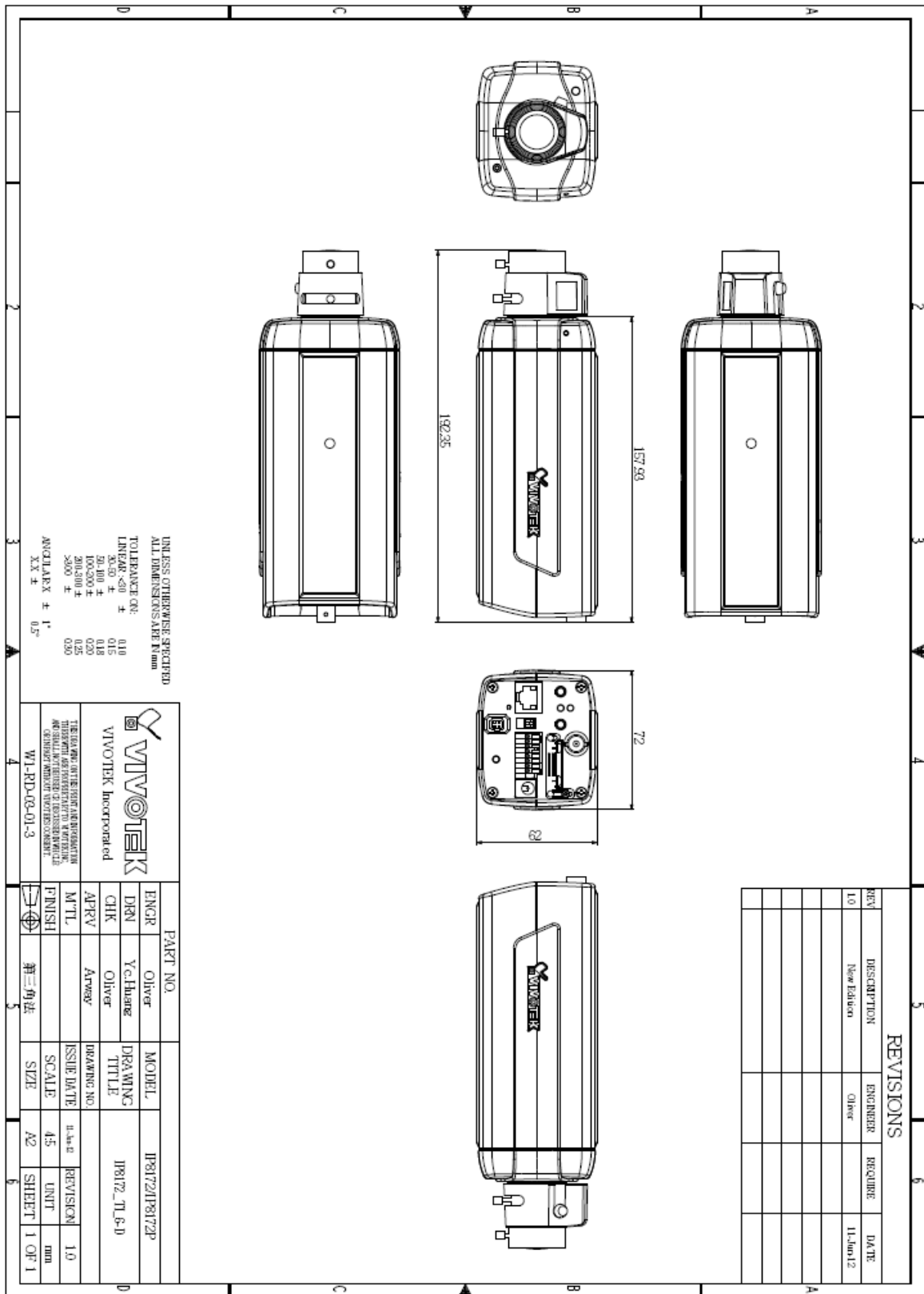


Diagrams ID 4-01





Diagrams ID 4-01





Diagrams ID 4-03



碩哲科技股份有限公司
ISO9001 ACROPARTS TECHNOLOGY CO.,LTD.

SPECIFICATION FOR APPROVAL

CUSTOMER : 晶睿通訊股份有限公司
CUSTOMER P/N : 350016200G
ATC P/N : 13W12V
SW-FD15SH-5201-10035A
QUANTITY : 5 PCS
DATE : 2011.06.01

Please confirm your acceptance of this approval sheet by return fax.

APPROVED

REJECTED



DRAWN BY	CHECKED BY	APPROVED BY
林月霞 Alice	張德名 Richard	葉任銘 J.M.Yeh

Acroparts Technology Co., Ltd.

1F No.16 Tze Chiang St. Yangmei, Taoyuan, Taiwan
TEL : +886-3-4881133 FAX : +886-3-4881177



碩哲科技股份有限公司

ISO9001 ACROPARTS TECHNOLOGY CO.,LTD.

13W12V Series Specification

DEVIATION REQUEST

DEVIATION REQUEST 變更承認書

DATE : JUN.01.2011

CUSTOMER: 晶睿通訊股份有限公司 CUSTOMER PT/NO. : 13W12V

TYPE DESCRIPTION: EFD-15 / POWER TRANSFORMER MF PT/NO. : SW-FD15SH-5200-10035A

According to cust. drawing required or our improvement, herewith we submit the sample or approval sheet which we made some deviation. hope that will be accepted after your evaluation.

DEVIATION DESCRIPTIONS:

ITEM	CUSTOMER SPEC. or CURRENT SPEC.	MF STD SPEC. or SUGGESTED SPEC.
1. <u>OUTSIDE TAPE</u>	<u>NO</u>	<u>POLYIMIDE FILM (2.5 Turns)</u>
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____

THE REASONS ARE: AUTOMATION STANDARDIZATION PROCESS CAPABILITY

STOCK DISPOSITION: USE EXHAUST REWORK SCRAP

DEVIATION AFFECTS: APPERARANCE DIMENSION CHARACTERISTICS

REMARKS:

1. Revision or Mark: Δ
2. 變更原因: PCB打件設備需自動吸取零件, 插件工程改善.
3. 電氣特性 & 作業工法維持不變, 現行承認書參照!

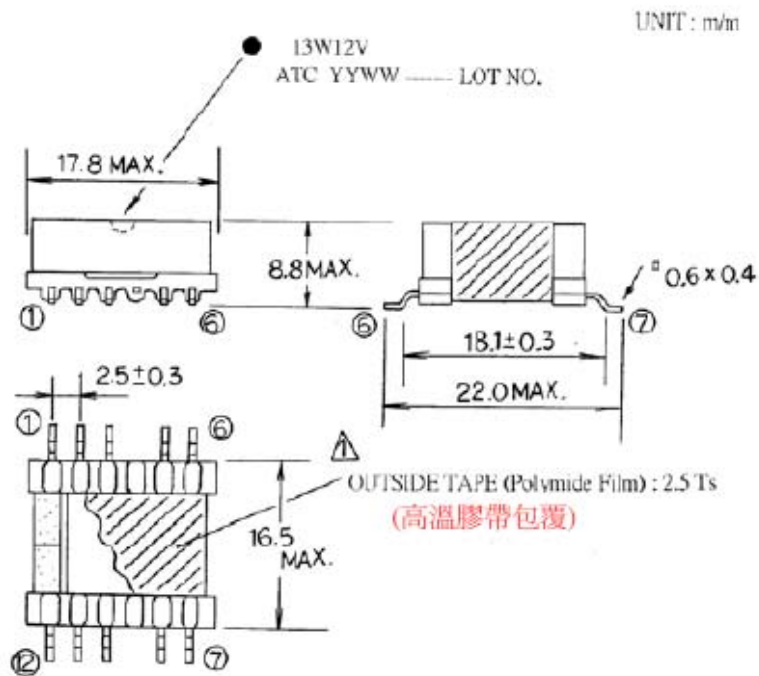


碩哲科技股份有限公司

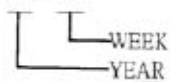
ISO9001 ACROPARTS TECHNOLOGY CO.,LTD.

13W12V Series Specification

6 Configuration and Dimensions:



- REMARKS:
1. PIN 4,9 CUT OFF.
 2. LABEL ON TOP SIDE.
 3. FIXING TAPE FOR CORE: 1 mil, 2 Ts MIN.
 4. LOT NO.: YY WW



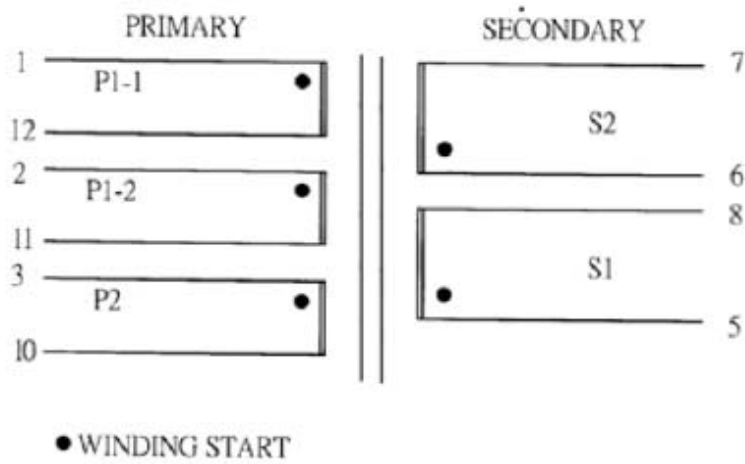


碩哲科技股份有限公司

ISO9001 ACROPARTS TECHNOLOGY CO.,LTD.

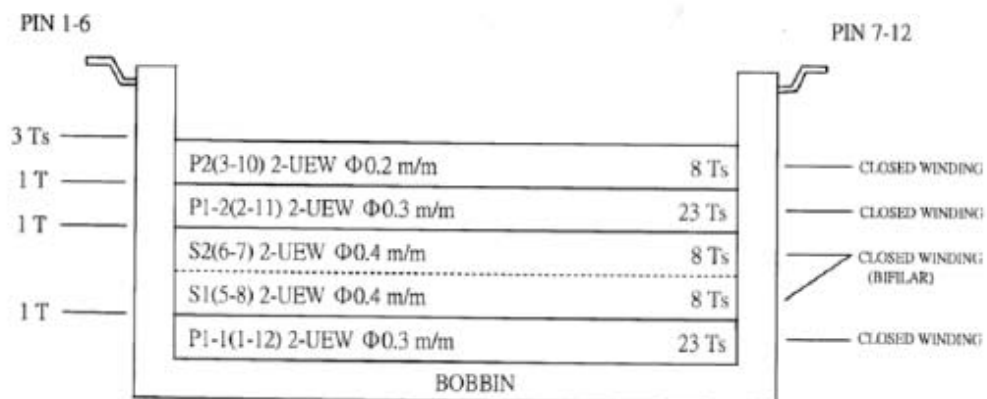
13W12V Series Specification

8 SCHEMATIC



8 WINDING CONSTRUCTION

INSULATION TAPE: 1 mil x 9.0 m/m





Diagrams ID 4-04



XiYang Town, MeiXian City
GuangDong Province
514768 P.R. China
广东省梅州市梅县西阳镇

Ph: 0753-2882830/2882831
Fax: 0753-2884267
www.coilcraft.com

COILCRAFT SPECIFICATION FOR APPROVAL

CUSTOMER: Vivotek

DESCRIPTION: Flyback Transformers

CUSTOMER PART NO: POE13F-12L

COILCRAFT SAMPLE NO: POE13F-12L

APPROVED BY: Holly Wen DATE: 2012-05-25

PREPARED BY: Jim Wang DATE: 2012-05-25

CUSTOMER APPROVAL SIGNATURE

DISPOSITION:

APPROVED

REJECTED

OTHERS

AUTHORIZED SIGNATURE:

DATE: _____



1. ELECTRICAL SPECIFICATION



Part number ¹ <i>Click for samples</i>	Power (W)	L at 0 A ±10% ² (µH)	L at Ipk ±10% ³ (µH)	DCR (Ohms)			Leakage L max ⁴ (µH)	Turns ratio		Ipk ³ (A)	Secondary output ⁵
				pri	sec	bias		pri : sec	pri : bias		
<u>POE13F-12L</u>	13	35.0	31.5	0.095	0.017	0.150	0.6	1 : 0.35	1 : 0.35	2.1	12 V, 1.1 A

¹ When ordering, please specify **packaging** code: e.g. POE13F-12LD

Packaging:

- D = 13" machine-ready reel
- EIA 481 embossed plastic tape (200 parts per full reel).
- B = Less than full reel
- In tape, but not machine-ready. To have a leader and trailer added (\$25 charge), use code letter D instead.

² Inductance tested at 250 kHz, 0.3 Vrms, 0 Adc

³ Peak primary current drawn at minimum input voltage.

⁴ Leakage inductance is for the primary winding with the secondary winding shorted.

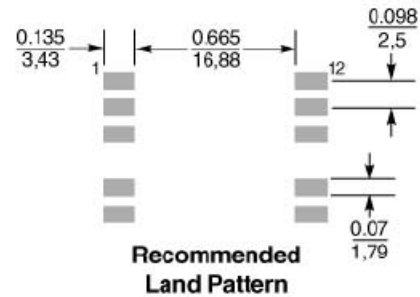
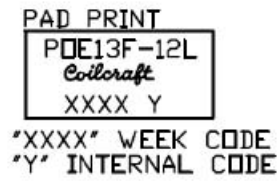
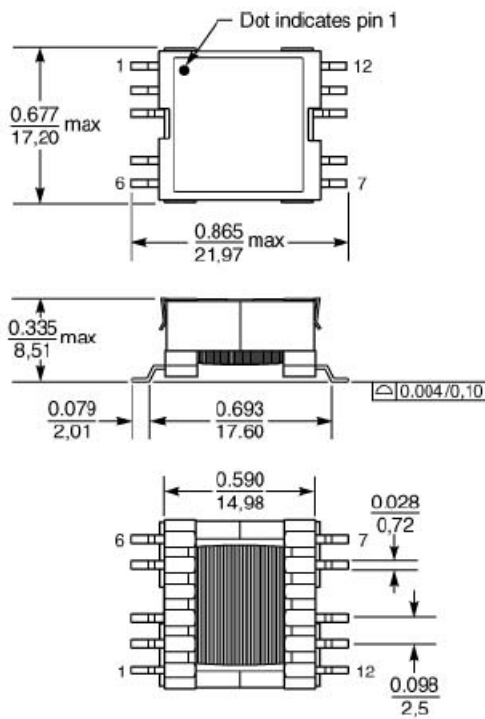
⁵ Bias winding output: 12 V, 0.2 A.

⁶ Operating temperature range -40°C to +125°C.

⁷ Electrical specifications at 25°C.

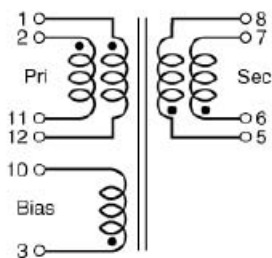


2. MECHANICAL SPECIFICATIONS



Weight: 5.0 – 5.6 g

SCHEMATIC



Primary windings and secondary windings to be connected in parallel on PC board.



6. UL DATASHEET



2012/05/25

UL rated insulating material list **Coilcraft POE13F-12L**

MATERIAL TYPE

Magnet Wire	Heavy Polyurethane w/Polyamide overcoat Rated 180°C per NEMA spec. MW82 Elektrisola P180 UL File E63382
Bobbin	Phenolic(PF)designated "Sumikon" Rated UL94V-0 (Sumitomo Bakelite PM-9630) UL File E41429
Insulation Tape	Polyester film 0.0022" thick,130°C,white 5000Vrms (P.Leo#1P801) UL File E126174

Holly Wen
Coilcraft China Engineering

CONSTRUCTION DETAIL

WINDING5 N3-10	INSULATED TAPE
WINDING4 N2-11	INSULATED TAPE
WINDING3 N5-8	INSULATED TAPE
WINDING2 N6-7	INSULATED TAPE
WINDING1 N1-12	INSULATED TAPE

WARNING! THIS DRAWING AND ALL INFORMATION CONTAINED WITHIN IS PROPRIETARY TO COILCRAFT & SHALL NOT BE DIVULGED WITHOUT PRIOR ENGINEERING CONSENT