CERTIFICATE OF COMPLIANCE

Ref No.: NEI-LVD-1-S1105005
Date of Issue: June 30, 2011

The product listed in follows is conformity with Low Voltage Directive 2006/95/EC in order to comply with the requirements in the Council Directive 2006/95/EC relating to electrical equipment designed for use within certain voltage limits.

Equipment	**1.3 Megapixel H. 264 Low Lux IR Bullet IP Camera**
Model No.	**GV-BL120D**
Trade Name	GeoVision
Applicant	**GeoVision Inc.**
Address	**9F., No.246, Sec.1, Neihu Rd., Neihu District, Taipei City 114, Taiwan (R.O.C.)**

For the safety evaluation of the compliance with this Directive 2006/95/EC, the following standard were applied:

IEC 60950-1:2005 (2nd Edition); Am 1:2009
EN 60950-1:2006+A11:2009+A1:2010

The test data, data evaluation and equipment configuration contained in our test report (Ref No.: **NEI-LVD-1-S1105005**) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TÜV and TAF according to the ISO-17025 quality assessment standard and technical standard(s). The test data contained in the referenced test report relate only to the EUT sample and item(s) tested.

Jackie Chiu
Authorized Signatory

Neutron Engineering Inc.
B1, No. 37, Lane 365, YangGuang St., NeiHu District 114., Taipei, Taiwan.
TEL：+886-2-26573299 FAX：+886-2-26573331

Testing Laboratory
0659

CE

EU Declaration of Conformity

Product	: 1.3 Megapixel H. 264 Low Lux IR Bullet IP Camera
Type Designation	: GV-BL120D
Manufacturer	: GeoVision Inc.
Manufacturer Address	: 9F., No.246, Sec.1, Neihu Rd., Neihu District, Taipei City 114, Taiwan (R.O.C.)

The product above is conformity with Low Voltage Directive 2006/95/EC in order to comply with the requirements in the Council Directive 2006/95/EC relating to electrical equipment designed for use within certain voltage limits.

For the safety evaluation of the compliance with this Directive 2006/95/EC, the following standard were applied:

IEC 60950-1:2005 (2nd Edition); Am 1:2009
EN 60950-1:2006+A11:2009+A1:2010

The following manufacturer / within Europe is responsible for this declaration:

Company Name: _____

Company Address: _____

_____

Name: _____

Position: _____

Legal Signature: _____

Place: _____ *Date:* _____

NEUTRON ENGINEERING INC.

TEST REPORT

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

Report Number. ..... :	NEI-LVD-1-S1105005
Tested by (+ signature) ..... :	Andrew Lin
Approved by (+ signature) ..... :	Ellie Lin
Date of issue ..... :	2011-06-17
Total number of pages	33
Testing Laboratory ..... :	**Neutron Engineering Inc.**
Address ..... :	B1, No. 37, Lane 365, YangGuang St., NeiHu District 114, Taipei, Chinese Taipei
Applicant's name ..... :	**GeoVision Inc.**
Address ..... :	9F., No.246, Sec.1, Neihu Rd., Neihu District, Taipei City 114, Taiwan (R.O.C.)
Manufacturer's name……..:	**GeoVision Inc.**
Address ..... :	9F., No.246, Sec.1, Neihu Rd., Neihu District, Taipei City 114, Taiwan (R.O.C.)
Test specification:	
Standard..... :	IEC 60950-1:2005 (2nd Edition); Am 1:2009 EN 60950-1:2006+A11:2009+A1:2010
Test procedure ..... :	Service of CE Marking in LVD
Non-standard test method……..:	N/A
Test Report Form No. ..... :	IEC60950_1B (LVD)
Master TRF ..... :	Dated 2010-04
Test item description .....:	1.3 Megapixel H. 264 Low Lux IR Bullet IP Camera
Trade Mark..... :	GeoVision
Manufacturer ..... :	**GeoVision Inc.** 7F., No.250, Sec.1, Neihu Rd., Neihu District, Taipei City 114, Taiwan (R.O.C.)
Model/Type reference ..... :	GV-BL120D
Ratings ..... :	i/p: 12 Vdc, 24 Vac or PoE (optional)

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

- European Group difference and nation differences (14 pages)
- Photos documentation (8 pages)

Summary of compliance with National Differences

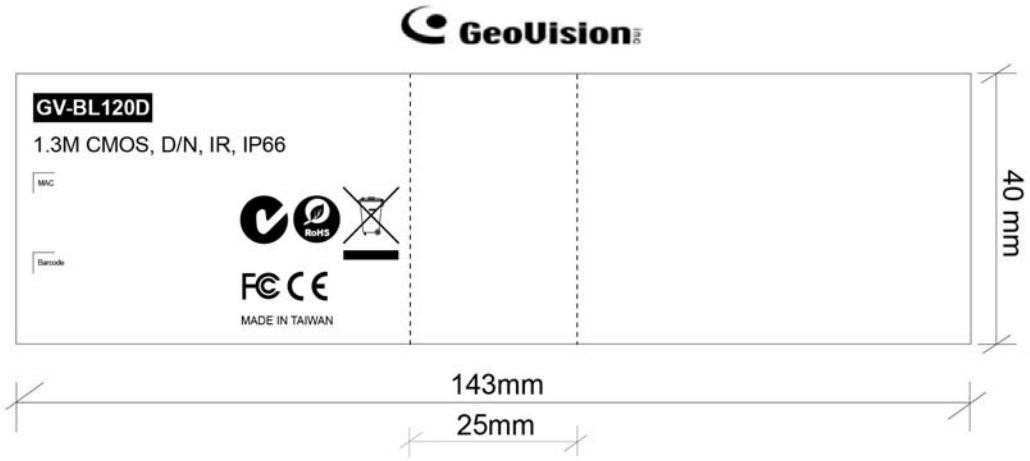
The sample(s) tested compliance with the requirements of IEC 60950-1: 2005 (2nd Edition); Am1: 2009 and all CENELEC members as listed in EN 60950-1: 2006 +A11: 2009+A1: 2010 and EN 60950-1: 2001 + A11: 2004.

For National Differences see corresponding Attachment.

Copy of marking plate

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

(Additional requirements for markings. See 1.7 NOTE)



Test item particulars ..... :	
Equipment mobility ..... :	[] movable [] hand-held [] transportable [X] stationary [] for building-in [] direct plug-in
Connection to the mains ..... :	[] pluggable equipment [] type A [] type B [] permanent connection [] detac hable power supply cord [] non-detachable power supply cord [X] not directly connected to the mains
Operating condition ..... :	[X] continuous [] rated operating / resting time:
Access location ..... :	[X] operator accessible [] restricted access location
Over voltage category (OVC) ..... :	[X] OVC I [] OVC II [] OVC III [] OVC IV [] other: Not directly connected to the mains
Mains supply tolerance (%) or absolute mains supply values ..... :	N.A.
Tested for IT power systems ..... :	[] Yes [X] No
IT testing, phase-phase voltage (V) ..... :	N.A.
Class of equipment ..... :	[] Class I [] Class II [X] Class III [] Not classified
Considered current rating of protective device as part of the building installlation (A) ..... :	Not directly connected to the mains
Pollution degree (PD) ..... :	[] PD 1 [X] PD 2 [] PD 3
IP protection class ..... :	IPX0
Altitude during operation (m) ..... :	Up to 2000 m
Altitude of test laboratory (m) ..... :	Not over 2000m
Mass of equipment (kg) ..... :	Approx 1.3
Possible test case verdicts:	
- test case does not apply to the test object ..... :	N/A (or N)
- test object does meet the requirement ..... :	P (Pass)
- test object does not meet the requirement ..... :	F (Fail)
Testing ..... :	
Date of receipt of test item ..... :	2011-05-09
Date(s) of performance of tests ..... :	2011-05-09 to 2011-06-09

General remarks:

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

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

Name and address of factory (ies) .....:	**GeoVision Inc.** 7F., No.250, Sec.1, Neihu Rd., Neihu District, Taipei City 114, 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 model GV-BL120D is a 1.3 Megapixel H. 264 Low Lux IR Bullet IP Camera of information technology equipment.
- Consists of power adapter and SELV circuitry of main board, housed in metal enclosure.

Model Differences
- N/A

Technical Considerations
- The product was submitted and tested for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 40 ºC
- The test samples were pre-production samples without serial numbers.
- Maximum normal load: Considered as a PC peripheral and electronic components mounted on PWB and housed with metal enclosure and operation continuously.

Abbreviations used in the report:

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

Indicate used abbreviations (if any)

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
1	**GENERAL**		**P**
1.5	**Components**		**P**
1.5.1	General		**P**
	Comply with IEC 60950-1 or relevant component standard	Components which were found to affect safety aspects comply with the requirements of this standard or within the safety aspects of the relevant IEC component standards. (see appended table 1.5.1)	**P**
1.5.2	Evaluation and testing of components	Components which are certified to IEC and /or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	**P**
1.5.3	Thermal controls		**N/A**
1.5.4	Transformers		**N/A**
1.5.5	Interconnecting cables	Interconnecting cables comply with the relevant requirements of this standard.	**P**
1.5.6	Capacitors bridging insulation		**N/A**
1.5.7	Resistors bridging insulation		**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 insulation by a VDR		**N/A**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
1.6	**Power interface**		**P**
1.6.1	AC power distribution systems		**N/A**
1.6.2	Input current	(see appended table 1.6.2)	**P**
1.6.3	Voltage limit of hand-held equipment		**N/A**
1.6.4	Neutral conductor		**N/A**
1.7	**Marking and instructions**		**P**
1.7.1	Power rating and identification markings		**P**
1.7.1.1	Power rating marking	See below.	**P**
	Multiple mains supply connections.....:		**P**
	Rated voltage(s) or voltage range(s) (V) .....:	12 Vdc, 24 Vac or PoE (optional)	**P**
	Symbol for nature of supply, for d.c. only.....:		**N/A**
	Rated frequency or rated frequency range (Hz) ....:		**N/A**
	Rated current (mA or A) .....:		**N/A**
1.7.1.2	Identification markings		**N/A**
	Manufacturer's name or trade-mark or identification mark .....:	GeoVision	**P**
	Model identification or type reference .....:	GV-BL120D	**P**
	Symbol for Class II equipment only .....:		**N/A**
	Other markings and symbols .....:	The additional marking does not give rise to misunderstandings.	**P**
1.7.2	Safety instructions and marking	Safety instruction provided.	**P**
1.7.2.1	General	See below.	**P**
1.7.2.2	Disconnect devices		**N/A**
1.7.2.3	Overcurrent protective device	Not for pluggable equipment type B or permanently connected equipment.	**N/A**
1.7.2.4	IT power distribution systems		**N/A**
1.7.2.5	Operator access with a tool		**N/A**
1.2.7.6	Ozone		**N/A**
1.7.3	Short duty cycles	Equipment is designed for continuous operation.	**N/A**
1.7.4	Supply voltage adjustment .....:	No adjustment provided.	**N/A**
	Methods and means of adjustment; reference to installation instructions .....:		**N/A**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5	Power outlets on the equipment .....:	No power outlets.	**N/A**
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) .....:		**N/A**
1.7.7	Wiring terminals	See below.	**N/A**
1.7.7.1	Protective earthing and bonding terminals .....:	Class III equipment.	**N/A**
1.7.7.2	Terminals for a.c. mains supply conductors	No direct connection to AC mains supply.	**N/A**
1.7.7.3	Terminals for d.c. mains supply conductors	No direct connection to DC mains supply.	**N/A**
1.7.8	Controls and indicators	See below.	**P**
1.7.8.1	Identification, location and marking .....:	The function of controls affecting safety is obvious without knowledge of language etc.	**P**
1.7.8.2	Colours .....:	Only functional indicators use colour.	**P**
1.7.8.3	Symbols according to IEC 60417.....:		**N/A**
1.7.8.4	Markings using figures .....:		**N/A**
1.7.9	Isolation of multiple power sources .....:		**N/A**
1.7.10	Thermostats and other regulating devices .....:		**N/A**
1.7.11	Durability	The label was subjected to the permanence of marking test. The label was rubbed with cloth soaked with water for 15 sec. and then again for 15 sec. with the cloth soaked with petroleum spirit. After this test there was no damage to the label. The marking on the label did not fade. There was no curling nor lifting of the label edge.	**P**
1.7.12	Removable parts	No removable part.	**N/A**
1.7.13	Replaceable batteries .....:		**N/A**
	Language(s) .....:		—
1.7.14	Equipment for restricted access locations.....:	Equipment not intended for installation in a RESTRICTED ACCESS LOCATION.	**N/A**

2	**PROTECTION FROM HAZARDS**	**P**
2.1	Protection from electric shock and energy hazards	**P**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
2.1.1	Protection in operator access areas	The equipment includes SELV circuits. For details see below.	**P**
2.1.1.1	Access to energized parts		**P**
	Test by inspection .....:	See below.	**P**
	Test with test finger (Figure 2A) .....:	The test finger was unable to contact bare hazardous parts, basic insulation, or ELV circuits.	**P**
	Test with test pin (Figure 2B) .....:	The test pin was unable to contact bare hazardous parts.	**P**
	Test with test probe (Figure 2C) .....:	TNV-1 circuits.	**P**
2.1.1.2	Battery compartments		**N/A**
2.1.1.3	Access to ELV wiring	No ELV wiring in operator accessible area.	**N/A**
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		**—**
2.1.1.4	Access to hazardous voltage circuit wiring		**N/A**
2.1.1.5	Energy hazards .....:	No energy hazardous parts in operator access area.	**P**
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 d.c. mains supply .....:		**N/A**
2.1.1.9	Audio amplifiers .....:		**N/A**
2.1.2	Protection in service access areas	No service access areas.	**N/A**
2.1.3	Protection in restricted access locations	The unit is not intended to be used in restricted locations.	**N/A**

2.2	**SELV circuits**		**P**
2.2.1	General requirements	See below.	**P**
2.2.2	Voltages under normal conditions (V) ..... :	All accessible voltages are less than 42.4 Vp or 60 V dc and are classified as SELV.	**P**
2.2.3	Voltages under fault conditions (V) ..... :		**N/A**
2.2.4	Connection of SELV circuits to other circuits .....:	SELV circuits only connected to other secondary circuits.	**P**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict

2.3	**TNV circuits**		**P**
2.3.1	Limits	See below.	**P**
	Type of TNV circuits ..... :	The PoE interface is considered to TNV-1 circuit.	**—**
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	See below.	**P**
	Insulation employed..... :	TNV circuit only connected to SELV circuit.	**—**
2.3.4	Connection of TNV circuits to other circuits	See below.	**P**
	Insulation employed..... :	TNV circuit only connected to SELV circuit.	**—**
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 µF)..... :		—
2.4.3	Connection of limited current circuits to other circuits		**N/A**

2.5	**Limited power sources**		**P**
	a) Inherently limited output	For all outputs only transmit data signal.	**P**
	b) Impedance limited output		**N/A**
	c) Regulating network limited output under normal operating and single fault condition		**N/A**
	d) Overcurrent protective device limited output		**N/A**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
	Max. output voltage (V), max. output current (A), max. apparent power (VA)..... :	Results see appended table 2.5.	—
	Current rating of overcurrent protective device (A) .:		—
	Use of integrated circuit (IC) current limiters		—

2.6	**Provisions for earthing and bonding**		**N/A**
2.6.1	Protective earthing	Class lll 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 ..... :		**N/A**
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min) ..... :		**N/A**
2.6.3.5	Colour of insulation..... :		**N/A**
2.6.4	Terminals		**N/A**
2.6.4.1	General		**N/A**
2.6.4.2	Protective earthing and bonding terminals		**N/A**
	Rated current (A), type, nominal thread diameter (mm) ..... :		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		**N/A**
2.6.5	Integrity of protective earthing		**N/A**
2.6.5.1	Interconnection of equipment		**N/A**
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		**N/A**
2.6.5.3	Disconnection of protective earth		**N/A**
2.6.5.4	Parts that can be removed by an operator		**N/A**
2.6.5.5	Parts removed during servicing		**N/A**
2.6.5.6	Corrosion resistance		**N/A**
2.6.5.7	Screws for protective bonding		**N/A**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
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		**N/A**
	Instructions when protection relies on building installation		**N/A**
2.7.2	Faults not simulated in 5.3.7		**N/A**
2.7.3	Short-circuit backup protection		**N/A**
2.7.4	Number and location of protective devices ..... :		**N/A**
2.7.5	Protection by several devices		**N/A**
2.7.6	Warning to service personnel..... :		**N/A**
2.8	**Safety interlocks**		**N/A**
2.8.1	General principles		**N/A**
2.8.2	Protection requirements		**N/A**
2.8.3	Inadvertent reactivation		**N/A**
2.8.4	Fail-safe operation		**N/A**
	Protection against extreme hazard		**N/A**
2.8.5	Moving parts		**N/A**
2.8.6	Overriding		**N/A**
2.8.7	Switches, relays and their related circuits		**N/A**
2.8.7.1	Separation distances for contact gaps and their related circuits (mm) .....:		**N/A**
2.8.7.2	Overload test		**N/A**
2.8.7.3	Endurance test		**N/A**
2.8.7.4	Electric strength test		**N/A**
2.8.8	Mechanical actuators		**N/A**
2.9	**Electrical insulation**		**P**
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic material is not used.	**P**
2.9.2	Humidity conditioning		**N/A**
	Relative humidity (%), temperature (°C) ..... :		—

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
2.9.3	Grade of insulation	The adequate levels of safety insulation is provided and maintained to comply with the requirements of this standard.	**P**
2.9.4	Separation from hazardous voltages		**N/A**
	Method(s) used ..... :		—

2.10	**Clearances, creepage distances and distances through insulation**		**P**
2.10.1	General	All circuits are SELV. Only functional insulation has been required.	**P**
2.10.1.1	Frequency .....:		**N/A**
2.10.1.2	Pollution degrees .....:		**N/A**
2.10.1.3	Reduced values for functional insualtion	See sub-clause 5.3.4(c).	**P**
2.10.1.4	Intervening unconnected conductive parts		**N/A**
2.10.1.5	Insulation with varying dimensions		**N/A**
2.10.1.6	Special separation requirements		**N/A**
2.10.1.7	Insulation in circuits generating starting pulses		**N/A**
2.10.2	Determination of working voltage		**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		**N/A**
2.10.3.1	General		**N/A**
2.10.3.2	Mains transient voltages		**N/A**
	a) AC mains supply .....:		**N/A**
	b) Earthed d.c. mains supplies .....:		**N/A**
	c) Unearthed d.c. mains supplies .....:		**N/A**
	d) Battery operation .....:		**N/A**
2.10.3.3	Clearances in primary circuits		**N/A**
2.10.3.4	Clearances in secondary circuits	See sub-clause 2.10.1.3.	**P**
2.10.3.5	Clearances in circuits having starting pulses		**N/A**
2.10.3.6	Transients from a.c. mains supply .....:		**N/A**
2.10.3.7	Transients from d.c. mains supply .....:		**N/A**
2.10.3.8	Transients from telecommunication networks and cable distribution systems .....:		**N/A**
2.10.3.9	Measurement of transient voltage levels		**N/A**

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict
	a) Transients from a mains suplply		**N/A**
	For an a.c. mains supply .....:		**N/A**
	For a d.c. mains supply .....:		**N/A**
	b) Transients from a telecommunication network :		**N/A**
2.10.4	Creepage distances		**N/A**
2.10.4.1	General		**N/A**
2.10.4.2	Material group and caomparative tracking index		**N/A**
	CTI tests .....:		—
2.10.4.3	Minimum creepage distances		**N/A**
2.10.5	Solid insulation		**N/A**
2.10.5.1	General		**N/A**
2.10.5.2	Distances through insulation		**N/A**
2.10.5.3	Insulating compound as solid insulation		**N/A**
2.10.5.4	Semiconductor devices		**N/A**
2.10.5.5.	Cemented joints		**N/A**
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, supplemetary, 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**

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Clause	Requirement + Test	Result - Remark	Verdict
	Working voltage .....:		**N/A**
	- Basic insulation not under stress .....:		**N/A**
	- Supplemetary, reinforced insulation .....:		**N/A**
2.10.6	Construction of printed boards		**N/A**
2.10.6.1	Uncoated printed boards		**N/A**
2.10.6.2	Coated printed boards		**N/A**
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		**N/A**
2.10.6.4	Insulation between conductors on different layers of a printed board		**N/A**
	Distance through insulation		**N/A**
	Number of insulation layers (pcs).....:		**N/A**
2.10.7	Component external terminations		**N/A**
2.10.8	Tests on coated printed boards and coated components		**N/A**
2.10.8.1	Sample preparation and preliminary inspection		**N/A**
2.10.8.2	Thermal conditioning		**N/A**
2.10.8.3	Electric strength test		**N/A**
2.10.8.4	Abrasion resistance test		**N/A**
2.10.9	Thermal cycling		**N/A**
2.10.10	Test for Pollution Degree 1 environment and insulating compound		**N/A**
2.10.11	Tests for semiconductor devices and cemented joints		**N/A**
2.10.12	Enclosed and sealed parts		**N/A**

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

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Clause	Requirement + Test	Result - Remark	Verdict
3.1.10	Sleeving on wiring		**N/A**
3.2	**Connection to a mains supply**		**N/A**
3.2.1	Means of connection		**N/A**
3.2.1.1	Connection to an a.c. mains supply		**N/A**
3.2.1.2	Connection to a d.c. mains supply		**N/A**
3.2.2	Multiple supply connections		**N/A**
3.2.3	Permanently connected equipment		**N/A**
	Number of conductors, diameter of cable and conduits (mm) ..... :		—
3.2.4	Appliance inlets		**N/A**
3.2.5	Power supply cords		**N/A**
3.2.5.1	AC power supply cords		**N/A**
	Type ..... :		—
	Rated current (A), cross-sectional area (mm^2), AWG ..... :		—
3.2.5.2	DC power supply cords		**N/A**
3.2.6	Cord anchorages and strain relief		**N/A**
	Mass of equipment (kg), pull (N) ..... :		—
	Longitudinal displacement (mm) ..... :		—
3.2.7	Protection against mechanical damage		**N/A**
3.2.8	Cord guards		**N/A**
	Diameter or minor dimension D (mm); test mass (g) ..... :		—
	Radius of curvature of cord (mm)..... :		—
3.2.9	Supply wiring space		**N/A**
3.3	**Wiring terminals for connection of external conductors**		**N/A**
3.3.1	Wiring terminals		**N/A**
3.3.2	Connection of non-detachable power supply cords		**N/A**
3.3.3	Screw terminals		**N/A**
3.3.4	Conductor sizes to be connected		**N/A**
	Rated current (A), cord/cable type, cross-sectional area (mm^2)..... :		—
3.3.5	Wiring terminal sizes		**N/A**
	Rated current (A), type, nominal thread diameter (mm) ..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
3.3.6	Wiring terminal 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		**N/A**
3.4.2	Disconnect devices		**N/A**
3.4.3	Permanently connected equipment		**N/A**
3.4.4	Parts which remain energized		**N/A**
3.4.5	Switches in flexible cords		**N/A**
3.4.6	Number of poles - single-phase and d.c. equipment		**N/A**
3.4.7	Number of poles - three-phase equipment		**N/A**
3.4.8	Switches as disconnect devices		**N/A**
3.4.9	Plugs as disconnect devices		**N/A**
3.4.10	Interconnected equipment		**N/A**
3.4.11	Multiple power sources		**N/A**
3.5	**Interconnection of equipment**		**P**
3.5.1	General requirements		**P**
3.5.2	Types of interconnection circuits ..... :	Interconnection circuits are SELV CIRCUITS.	**P**
3.5.3	ELV circuits as interconnection circuits		**N/A**
3.5.4	Data ports for additional equipment	See clause 2.5.	**P**
4	**PHYSICAL REQUIREMENTS**		**P**
4.1	Stability		**N/A**
	Angle of 10°		**N/A**
	Test force (N) .....:		**N/A**
4.2	**Mechanical strength**		**P**
4.2.1	General	No energy hazards and no hazardous voltage inside the equipment.	**P**
	Rack-mounted equipment.	(see Annex DD)	**N/A**
4.2.2	Steady force test, 10 N		**N/A**
4.2.3	Steady force test, 30 N		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
4.2.4	Steady force test, 250 N		**N/A**
4.2.5	Impact test		**N/A**
	Fall test		**N/A**
	Swing test		**N/A**
4.2.6	Drop test; height (mm) .....:		**N/A**
4.2.7	Stress relief test		**N/A**
4.2.8	Cathode ray tubes		**N/A**
	Picture tube separately certified .....:		**N/A**
4.2.9	High pressure lamps		**N/A**
4.2.10	Wall or ceiling mounted equipment; force (N) .....:	50 N applied for downward through the geometric centre. No damaged and no hazards.	**P**
4.2.11	Rotating solid media		**N/A**
	Test to cover on the door……:		**N/A**
4.3	**Design and construction**		**P**
4.3.1	Edges and corners	All edges and corners are judged to be sufficiently well rounded so as not to constitute a hazard.	**P**
4.3.2	Handles and manual controls; force (N)..... :		**N/A**
4.3.3	Adjustable controls		**N/A**
4.3.4	Securing of parts		**N/A**
4.3.5	Connection by plugs and sockets		**N/A**
4.3.6	Direct plug-in equipment		**N/A**
	Torque .....:		**—**
	Compliance with the relevant mains plug standard .....:		**N/A**
4.3.7	Heating elements in earthed equipment		**N/A**
4.3.8	Batteries		**P**
	- Overcharging of a rechargeable battery	See appended table 5.3.	**P**
	- Unintentional charging of a non-rechargeable battery		**N/A**
	- Reverse charging of a rechargeable battery	See appended table 5.3.	**P**
	- Excessive discharging rate for any battery	See appended table 5.3.	**P**
4.3.9	Oil and grease		**N/A**
4.3.10	Dust, powders, liquids and gases		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.11	Containers for liquids or gases		**N/A**
4.3.12	Flammable liquids .....:		**N/A**
	Quantity of liquid (l) .....:		**N/A**
	Flash point (°C) .....:		**N/A**
4.3.13	Radiation	See below.	**P**
4.3.13.1	General		**P**
4.3.13.2	Ionizing radiation		**N/A**
	Measured radiation (pA/kg) .....:		**—**
	Measured high-voltage (kV) .....:		**—**
	Measured focus voltage (kV) .....:		**—**
	CRT markings .....:		**—**
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		**N/A**
	Part, property, retention after test, flammability classification .....:		**N/A**
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....:		**N/A**
4.3.13.5	Lasers (including laser diodes) and LEDs		**N/A**
4.3.13.5.1	Lasers (including laser laser diodes)	The AEL of the indication LED used is far below the limit for LED Class 1 equipment.	**P**
	Laser class .....:	Laser Class 1.	**—**
4.3.13.5.2	Light emitting diodes (LEDs)		**N/A**
4.3.13.6	Other types .....:		**N/A**

4.4	**Protection against hazardous moving parts**		**N/A**
4.4.1	General		**N/A**
4.4.2	Protection in operator access areas .....:		**N/A**
	Household and home/office document/media shredders		**N/A**
4.4.3	Protection in restricted access locations .....:		**N/A**
4.4.4	Protection in service access areas		**N/A**
4.4.5	Protection against moving fan blades		**N/A**
4.4.5.1	General		**N/A**
	Not considered to cause pain or injury. a)……...:		**N/A**
	Is considered to cause pain, not injury. b) … . …….:		**N/A**
	Considered to cause injury. c) … . …….:		**N/A**
4.4.5.2	Protection for users		**N/A**
	Use of symbol or warning …… …….:		**N/A**

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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**		**P**
4.5.1	General		**P**
4.5.2	Temperature tests	See appended table 4.5.	**P**
	Normal load condition per Annex L .....:		—
4.5.3	Temperature limits for materials	See appended table 4.5.	**P**
4.5.4	Touch temperature limits	See appended table 4.5.	**P**
4.5.5	Resistance to abnormal heat .....:		**N/A**
4.6	**Openings in enclosures**		**P**
4.6.1	Top and side openings	No openings	**P**
	Dimensions (mm) .....:		—
4.6.2	Bottoms of fire enclosures	No openings	**P**
	Construction of the bottomm, dimensions (mm) ...:		—
4.6.3	Doors or covers in fire enclosures		**N/A**
4.6.4	Openings in transportable equipment		**N/A**
4.6.4.1	Constructional design measures		**N/A**
	Dimensions (mm) .....:		—
4.6.4.2	Evaluation measures for larger openings		**N/A**
4.6.4.3	Use of metallized parts		**N/A**
4.6.5	Adhesives for constructional purposes		**N/A**
	Conditioning temperature (°C), time (weeks).....:		—
4.7	**Resistance to fire**		**P**
4.7.1	Reducing the risk of ignition and spread of flame	See below.	**P**
	Method 1, selection and application of components wiring and materials	Use of materials with the required flammability classes.	**P**
	Method 2, application of all of simulated fault condition tests	Method 2 no used.	**N/A**
4.7.2	Conditions for a fire enclosure	See below.	**P**
4.7.2.1	Parts requiring a fire enclosure	See 4.7.2.2.	**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.2.2	Parts not requiring a fire enclosure	The appliance with: Supply of components in the secondary circuit by a limited power source. The components are mounted on PCB material of flammability rating V-1 min., the fire enclosure construction is not required.	**P**
4.7.3	Materials	See below.	**P**
4.7.3.1	General	See appended table 1.5.1 for PCB.	**P**
4.7.3.2	Materials for fire enclosures	See appended table 1.5.1 for enclosure material.	**P**
4.7.3.3	Materials for components and other parts outside fire enclosures	No such component.	**N/A**
4.7.3.4	Materials for components and other parts inside fire enclosures	Internal components except small parts are V-2, HF-2 or better.	**P**
4.7.3.5	Materials for air filter assemblies	No air filter assemblies.	**N/A**
4.7.3.6	Materials used in high-voltage components	No high voltage component.	**N/A**
5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		**P**
5.1	**Touch current and protective conductor current**		**N/A**
5.1.1	General	Class lll 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)....:		—
5.1.7	Equipment with touch current exceeding 3,5 mA		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
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 lll equipment.	**N/A**
5.2.2	Test procedure		**N/A**
5.3	**Abnormal operating and fault conditions**		**P**
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	**P**
5.3.2	Motors		**N/A**
5.3.3	Transformers		**N/A**
5.3.4	Functional insulation.....:	Functional insulation complies with the requirements (c).	**P**
5.3.5	Electromechanical components		**N/A**
5.3.6	Audio amplifiers in ITE .....:		**N/A**
5.3.7	Simulation of faults	(see appended table 5.3)	**P**
5.3.8	Unattended equipment	None of the listed components was provided.	**N/A**
5.3.9	Compliance criteria for abnormal operating and fault conditions	No fire occurred. No molten metal was emitted.	**P**
5.3.9.1	During the tests	No fire propagated beyond the equipment. No molten metal was emitted.	**P**
5.3.9.2	After the tests		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict

6	**CONNECTION TO TELECOMMUNICATION NETWORKS**		**P**
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**
6.1.2.1	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**		**P**
6.2.1	Separation requirements	Adequate electrical separation between TNV-1 to SELV.	**P**
6.2.2	Electric strength test procedure	See below.	**P**
6.2.2.1	Impulse test		**N/A**
6.2.2.2	Steady-state test	See appended table 6.2.2.	**P**
6.2.2.3	Compliance criteria	Complied.	**P**

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

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

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

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Clause	Requirement + Test	Result - Remark	Verdict
A.3.2	Test procedure		**N/A**
A.3.3	Compliance criterion		**N/A**
B	**ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)**		**N/A**
B.1	General requirements		**N/A**
	Position .....:		—
	Manufacturer .....:		—
	Type .....:		—
	Rated values .....:		—
B.2	Test conditions		**N/A**
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 .....:		—

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

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Clause	Requirement + Test	Result - Remark	Verdict
	For an a.c. mains supply		**N/A**
	For a d.c. mains supply		**N/A**
	b) Transients from a telecommunication network		**N/A**
G.6	Determination of minimum clearances .....:		**N/A**
H	**ANNEX H, IONIZING RADIATION (see 4.3.13)**		**N/A**
J	**ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)**		**N/A**
	Metal(s) used .....:		—
K	**ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)**		**N/A**
K.1	Making and breaking capacity		**N/A**
K.2	Thermostat reliability; operating voltage (V) .....:		**N/A**
K.3	Thermostat endurance test; operating voltage (V) :		**N/A**
K.4	Temperature limiter endurance; operating voltage (V) .....:		**N/A**
K.5	Thermal cut-out reliability		**N/A**
K.6	Stability of operation		**N/A**
L	**ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)**		**P**
L.1	Typewriters		**N/A**
L.2	Adding machines and cash registers		**N/A**
L.3	Erasers		**N/A**
L.4	Pencil sharpeners		**N/A**
L.5	Duplicators and copy machines		**N/A**
L.6	Motor-operated files		**N/A**
L.7	Other business equipment		**P**
M	**ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)**		**N/A**
M.1	Introduction		**N/A**
M.2	Method A		**N/A**
M.3	Method B		**N/A**
M.3.1	Ringing signal		**N/A**
M.3.1.1	Frequency (Hz) .....:		—
M.3.1.2	Voltage (V) .....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
M.3.1.3	Cadence; time (s), voltage (V) .....:		—
M.3.1.4	Single fault current (mA) .....:		—
M.3.2	Tripping device and monitoring voltage .....:		**N/A**
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		**N/A**
M.3.2.2	Tripping device		**N/A**
M.3.2.3	Monitoring voltage (V) .....:		**N/A**
N	**ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)**		**N/A**
N.1	ITU-T impulse test generators		**N/A**
N.2	IEC 60065 impulse test generator		**N/A**
P	**ANNEX P, NORMATIVE REFERENCES**		—
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**
		See separate test report	—
U	**ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict
		See separate test report	—

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**
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)**	**N/A**

AA	**ANNEX AA, MANDREL TEST (see 2.10.5.8)**	**N/A**

BB	**ANNEX BB, CHANGES IN THE SECOND EDITION**	—

CC	**ANNEX CC, Evaluation of integrated circuit (IC) current limiters**		**N/A**
CC.1	General		**N/A**
CC.2	Test program 1……..:		**N/A**
CC.3	Test program 2……..:		**N/A**

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Clause	Requirement + Test	Result - Remark	Verdict

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

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

IEC60950_1B			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	**TABLE: List of critical components**				**P**
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
Metal Enclosure	--	--	Metal, minimum 1.5 mm thickness.	--	--
PCB	Various	Various	V-1 or better, 105 ºC	UL 796	UL
RTC Battery	SEIKO INSTRUMENTS INC MICRO-ENERGY DIV	MS412FE	Rated 3.0 V, maximum charging voltage/current 3.4Vdc/300mA	UL 1642	UL
Switching Power Adapter	JENTEC TECHNOLOGY CO., LTD	CH1812-B	I/P: 100-240Vac, 0.4A, 50-60Hz O/P: 12Vdc, 1.25A, LPS, 40°C	EN 60950-1:2006	TÜV
	ENG Electric Co., Ltd	3A-163WP12	I/P: 100-240Vac, 50-60Hz, 0.6A O/P: 12Vdc, 1.25A, LPS, 40°C	EN 60950-1:2006	Intertek
Supplementary information:					

1.6.2	**TABLE: Electrical data (in normal conditions)**					**P**
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
12Vdc	0.35	--	4.20	--	--	Maximum normal load
21.6Vac/ 50Hz	0.336	--	4.75	--	--	Maximum normal load
24.0Vac/ 50Hz	0.312	--	4.79	--	--	Maximum normal load
26.4Vac/ 50Hz	0.293	--	4.85	--	--	Maximum normal load
PoE	0.1	--	4.80	--	--	Maximum normal load
Supplementary information:						

2.5	**TABLE: limited power sources**		**P**
	Limits	Measured	Verdict
1. According to Table 2B (normal condition), Audio-IN, Pin 1,2 to return, Uoc = 0 V			
current (in A)	< 8A	--	P
apparent power (in VA)	< 100	--	P
2. According to Table 2B (normal condition), Audio-OUT, Pin 1,2 to return, Uoc = 0 V			

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Clause	Requirement + Test	Result - Remark	Verdict

current (in A)	< 8A	--	P
apparent power (in VA)	< 100	--	P
3. According to Table 2B (normal condition), LAN/ PoE , Pin 1-8 to return, Uoc = 0 V			
current (in A)	< 8A	--	P
apparent power (in VA)	< 100	--	P
Supplementary information:			

4.5	**TABLE: Thermal requirements**						**P**
	Supply voltage (V) ..... :	See below.	See below.	See below.	See below.	--	—
	Ambient T_{min} (°C) ..... :	--	--	--	--	--	—
	Ambient T_{max} (°C) ..... :	--	--	--	--	--	—
Maximum measured temperature T of part/at::		T (°C)					Allowed T_{max} (°C)
Test voltage		21.6Vac-unit on flat surface	Shift to 40	21.6Vac- unit install to the wall	Shift to 40	--	--
01. PWB near U9 (GV-BL110D_IO V1.00)		49.7	66.3	54.2	69.8	--	105
02. L97 coil (GV-BL110D_IO V1.00)		57.3	73.9	62.1	77.7	--	105
03. PWB near U4 (Main board)		54.9	71.5	60.1	75.7	--	105
04. BAT1 (Main board)		54.6	71.2	59.7	75.3	--	100
05. T1 coil (Power board)		56.0	72.6	56.9	72.5	--	105
06. Metal enclosure near T1		33.2	49.8	34.0	49.6	--	70
07. Ambient		23.4	40	24.4	40	--	--
Test voltage		26.4Vac-unit install to the wall	Shift to 40	12Vdc-unit install to the wall	Shift to 40	--	--
01. PWB near U9 (GV-BL110D_IO V1.00)		53.9	70.2	54.4	68.1	--	105
02. L97 coil (GV-BL110D_IO V1.00)		64.9	81.2	50.9	64.6	--	105
03. PWB near U4 (Main board)		60.1	76.4	59.0	72.7	--	105
04. BAT1 (Main board)		59.7	76.0	58.7	72.4	--	100
05. T1 coil (Power board)		56.8	73.1	55.1	68.8	--	105
06. Metal enclosure near T1		35.6	51.9	36.9	50.6	--	70

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Clause	Requirement + Test	Result - Remark	Verdict

07. Ambient	23.7	40	26.3	40	--	--
Test voltage	PoE-unit install to the wall	Shift to 40	--	--	--	--
01. PWB near U9 (GV-BL110D_IO V1.00)	48.4	64.2	--	--	--	105
02. L97 coil (GV-BL110D_IO V1.00)	48.4	64.2	--	--	--	105
03. PWB near U4 (Main board)	60.1	75.9	--	--	--	105
04. BAT1 (Main board)	60.4	76.2	--	--	--	100
05. T1 coil (Power board)	73.0	88.8	--	--	--	105
06. Metal enclosure near T1	35.2	51.0	--	--	--	70
07. Ambient	24.2	40	--	--	--	--

Supplementary information:

1. The temperatures were measured under the worst case of normal mode defined in sub-clause 1.2.2.1 and as described in sub-clause 1.6.2 at voltages as described above.
2. With a specified ambient temperature of + 40 °C. Therefore the maximum temperatures measured are recalculated as follows: T + (40 – T_{amb}), where T is the maximum temperature measured during test and Tamb is the ambient temperature during the test.
3. The maximum temperatures are calculated as follows:
   Winding components (with safety isolation):
   - PWB: 105 °C: Tmax = 105 °C

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

Supplementary information:

5.3	**TABLE: Fault condition tests**		**P**
	Ambient temperature (°C) .....:	See below.	—
	Power source for EUT: Manufacturer, model/type, output rating .....:	See table 1.5.1 for details.	—

Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
RTC battery	Normal	12Vdc	--	--	--	Charging current = 2.0 uA, no hazards.
RTC battery (R160)	Short	12Vdc	--	--	--	Charging current = 0.2 mA, no hazards.

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Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

6.2.2	TABLE: Electric strength tests, impulse tests and voltage surge tests		**P**
Test voltage applied between:	Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No // Ins.Res (MΩ) Value
LAN to metal enclosure	AC	1500	No // 500
LAN to SELV	AC	1500	No // 500
supplementary information			
- The insulation resistance is less than 2 M ohm after impulse test.			

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

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

Information technology equipment – Safety –

Part 1: General requirements

Differences according to.....:	EN 60950-1:2006/A11:2009/A1:2010
Attachment Form No. .....:	EU_GD_IEC60950_1B
Attachment Originator.....:	SGS Fimko Ltd
Master Attachment.....:	Date (2010-04)

EN 60950-1:2006/A11:2009/A1:2010 – 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		P
General	Delete all the “country” notes in the reference document (IEC 60950-1:2005) according to the following list: 1.4.8 Note 2; 1.5.1 Note 2 & 3; 1.5.7.1 Note 1.5.8 Note 2; 1.5.9.4 Note; 1.7.2.1 Note 4, 5 & 6 2.2.3 Note; 2.2.4 Note; 2.3.2 Note 2.3.2.1 Note 2; 2.3.4 Note 2; 2.6.3.3 Note 2 & 3 2.7.1 Note; 2.10.3.2 Note 2; 2.10.5.13 Note 3 3.2.1.1 Note; 3.2.4 Note 3.; 2.5.1 Note 2 4.3.6 Note 1 & 2; 4.7 Note 4; 4.7.2.2 Note 4.7.3.1Note 2; 5.1.7.1 Note 3 & 4; 5.3.7 Note 1 6 Note 2 & 5; 6.1.2.1 Note 2; 6.1.2.2 Note 6.2.2 Note; 6.2.2.1 Note 2; 6.2.2.2 Note 7.1 Note 3; 7.2 Note; 7.3 Note 1 & 2 G.2.1 Note 2; Annex H Note 2		P
General (A1:2010)	Delete all the “country” notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list: 1.5.7.1 Note; 6.1.2.1 Note 2 6.2.2.1 Note 2; EE.3 Note		P

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for "one package equipment", and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.	Added.	N/A
1.5.1	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC	Added.	P
1.7.2.1 (A1:2010)	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.	Added.	N/A
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation;	Replaced.	N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		
2.7.2	This subclause has been declared 'void'.	Declared.	N/A
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.	Delete.	N/A
3.2.5.1	Replace "60245 IEC 53" by "H05 RR-F"; "60227 IEC 52" by "H03 VV-F or H03 VVH2-F"; "60227 IEC 53" by "H05 VV-F or H05 VVH2-F2". In Table 3B, replace the first four lines by the following: Up to and including 6 | 0,75 [a] | Over 6 up to and including 10| (0,75) [b] 1,0 | Over 10 up to and including 16| (1,0) [c] 1,5 | In the conditions applicable to Table 3B delete the words "in some countries" in condition [a]. In NOTE 1, applicable to Table 3B, delete the second sentence.	Replaced.	N/A
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: Over 10 up to and including 16 | 1,5 to 2,5 | 1,5 to 4 | Delete the fifth line: conductor sizes for 13 to 16 A	Delete.	N/A
4.3.13.6 (A1:2010)	Replace the existing NOTE by the following: NOTE Z1 Attention is drawn to: 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz, and 2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artifical optical radiation).	Replaced.	N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	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.	Replaced.	N/A
Bibliography	Additional EN standards.	Added.	—

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

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
1.2.4.1	In **Denmark**, certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.	No power supply cord provided.	N/A
1.2.13.14	In **Norway** and **Sweden**, for requirements see 1.7.2.1 and 7.3 of this annex.	The equipment is not connected to the cable distribution systems.	N/A
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.	No such resistors.	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).	Considered.	P
1.5.9.4	In **Finland**, **Norway** and **Sweden**, the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1	In **Finland**, **Norway** and **Sweden**, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In Finland: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In Norway: “Apparatet må tilkoples jordet stikkontakt” In Sweden: “Apparaten skall anslutas till jordat uttag” In **Norway** and **Sweden**, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: “Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11).”		N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
	NOTE In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min. Translation to Norwegian (the Swedish text will also be accepted in Norway): “Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel- TV nettet.” Translation to Swedish: ”Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”		
1.7.5	In **Denmark**, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a. For **CLASS II EQUIPMENT** the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.	No socket-outlets provided.	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

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

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.	The equipment is not direct plug-in equipment.	N/A
2.10.5.13	In **Finland**, **Norway** and **Sweden**, there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A
3.2.1.1	In **Switzerland**, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets: SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998: SEV 5932-2.1998: Plug Type 25 , 3L+N+PE 230/400 V, 16 A SEV 5933-2.1998:Plug Type 21, L+N, 250 V, 16A SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V, 16 A	No power supply cord provided.	N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In **Denmark**, supply cords of single-phase equipment having a rated current not exceeding13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.	No power supply cord provided.	N/A
3.2.1.1	In **Spain**, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994. Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994. If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.	No power supply cord provided.	N/A
3.2.1.1	In the **United Kingdom**, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.	No power supply cord provided.	N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

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.	No power supply cord provided.	N/A
3.2.4	In **Switzerland**, for requirements see 3.2.1.1 of this annex.	Shall be evaluated during the national approval.	N/A
3.2.5.1	In the **United Kingdom**, a power supply cord with conductor of 1,25 mm2 is allowed for equipment with a rated current over 10 A and up to and including 13 A.	No power supply cord provided.	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.	No power supply cord provided.	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.	The equipment is not direct plug-in equipment.	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.	The equipment is not direct plug-in equipment.	N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	In **Finland**, **Norway** and **Sweden** TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.	The equipment is not such equipment.	N/A
6.1.2.1 (A1:2010)	In **Finland**, **Norway** and **Sweden**, add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. Alternatively for components, there is no distance through insulation requirements for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric		N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
	strength during manufacturing, using a test voltage of 1,5 kV. It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 60384-14; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		
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.	The equipment is not connected to the distribution systems.	N/A
7.3	In **Norway** and **Sweden**, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.		N/A
7.3	In **Norway**, for installation conditions see EN 60728-11:2005.		N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

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

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

Attachment Form No..... : FI_ND_IEC60950_1B

Attachment Originator ..... : SGS Fimko Ltd

Master Attachment..... : Date (2010-04)

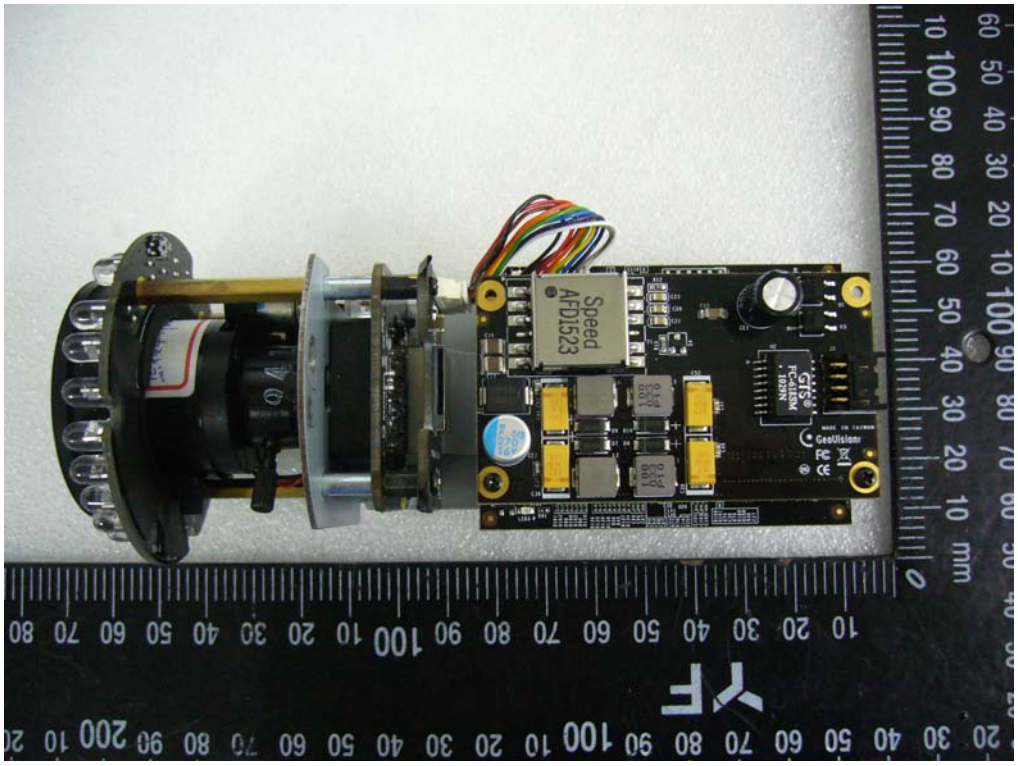
	National Differences		P
General	See also Group Differences (EN 60950-1:2006/A11/A1)		P
1.5.7.1	In **Finland** resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.	No such resistors.	N/A
1.5.9.4	In **Finland,** the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A
1.7.2.1	In **Finland**,CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in in Finland shall be as follows: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"		N/A
2.3.2	In **Finland,** there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.10.5.13	In **Finland,** there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.		N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	In **Finland,** TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that - is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and - has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and - is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.	The equipment is not such equipment.	N/A
6.1.2.1 (A1:2010)	In **Finland,** add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. Alternatively for components, there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.		N/A

IEC60950_1B - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14:2005 which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 60384-14:2005; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14:2005, in the sequence of tests as described in EN 60384-14:2005.		
6.1.2.2	In **Finland,** the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N/A
7.2	In **Finland,** for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.	The equipment is not connected to the distribution systems.	N/A

PHOTOS

PHOTOS



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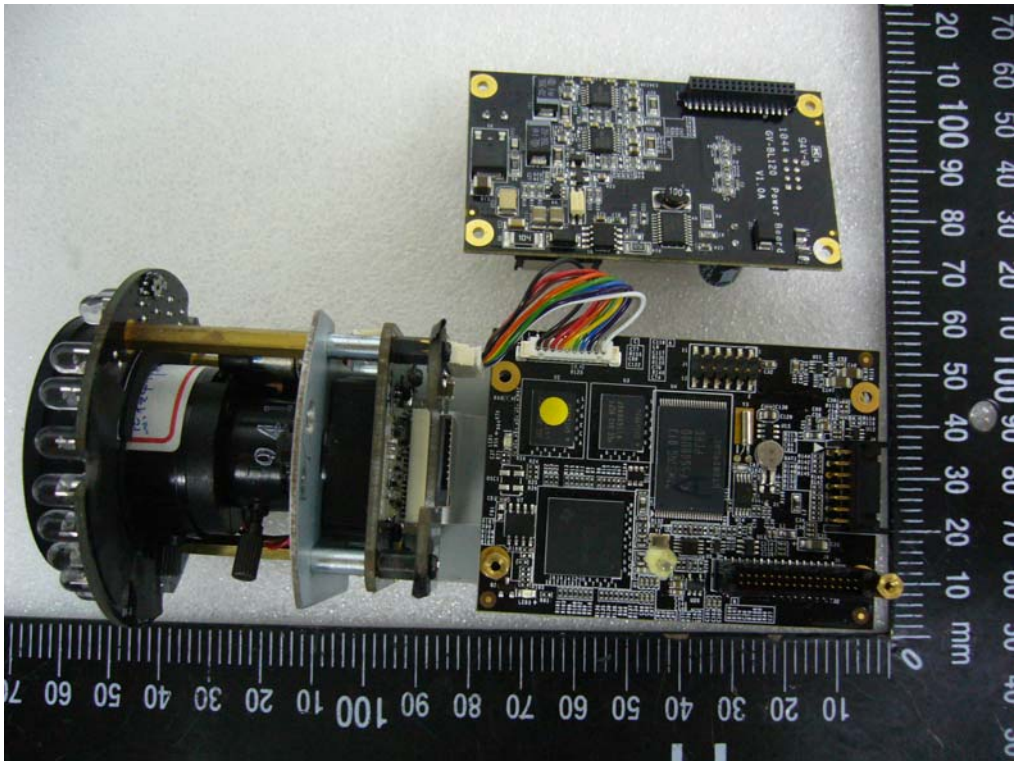

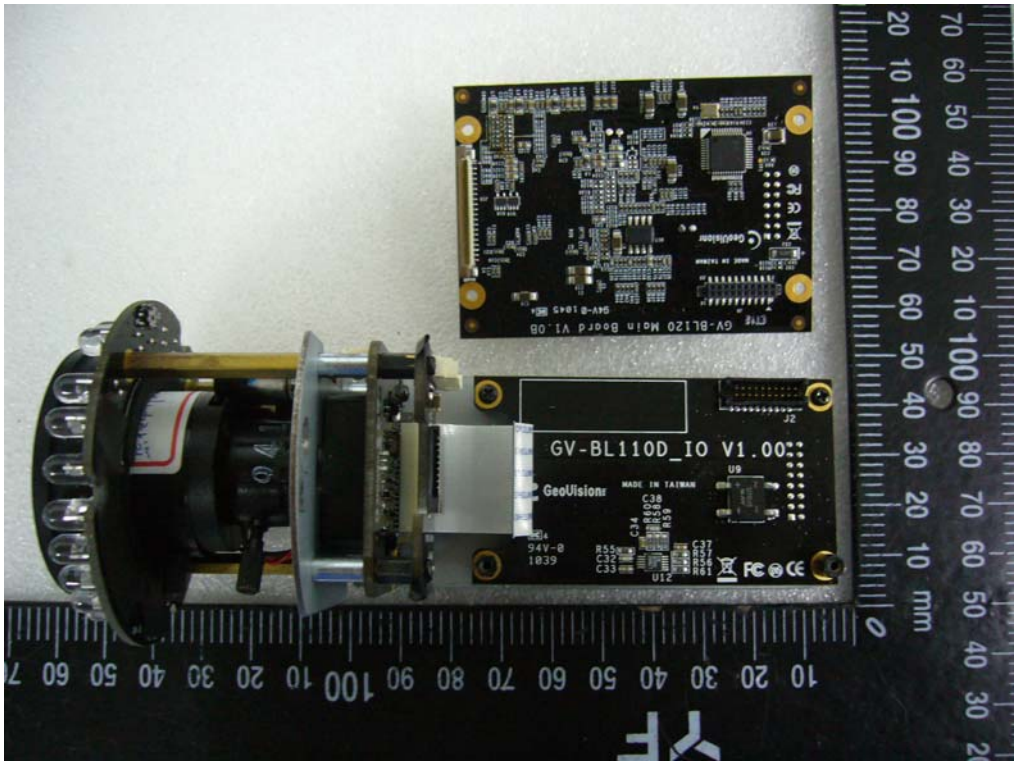

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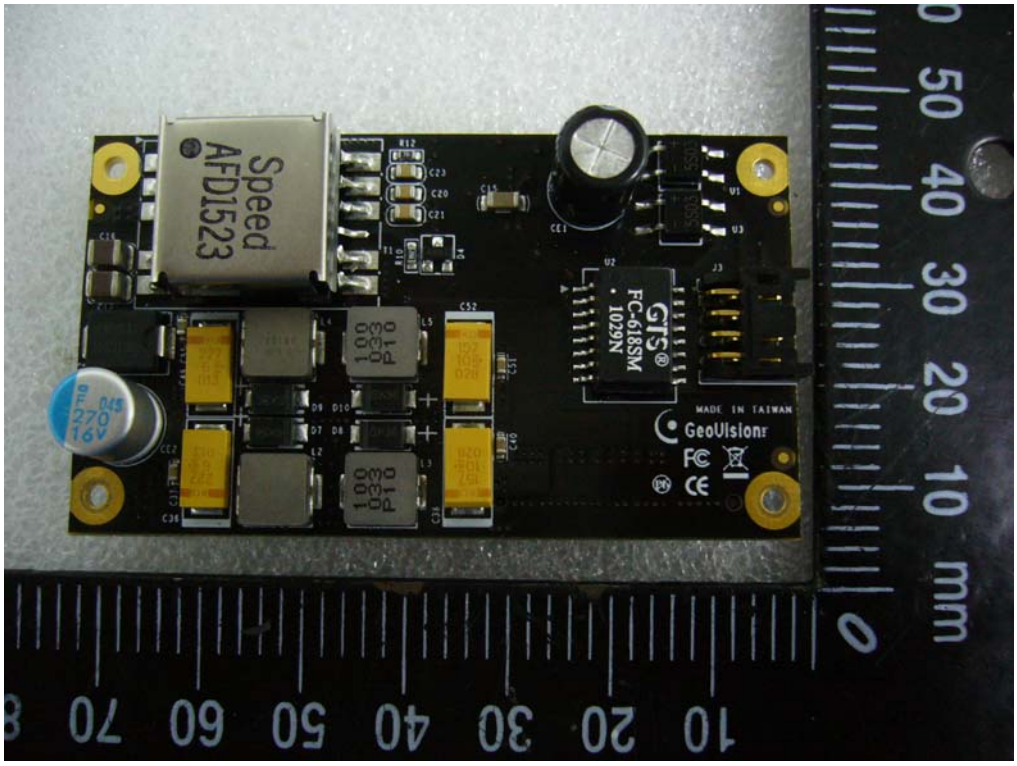
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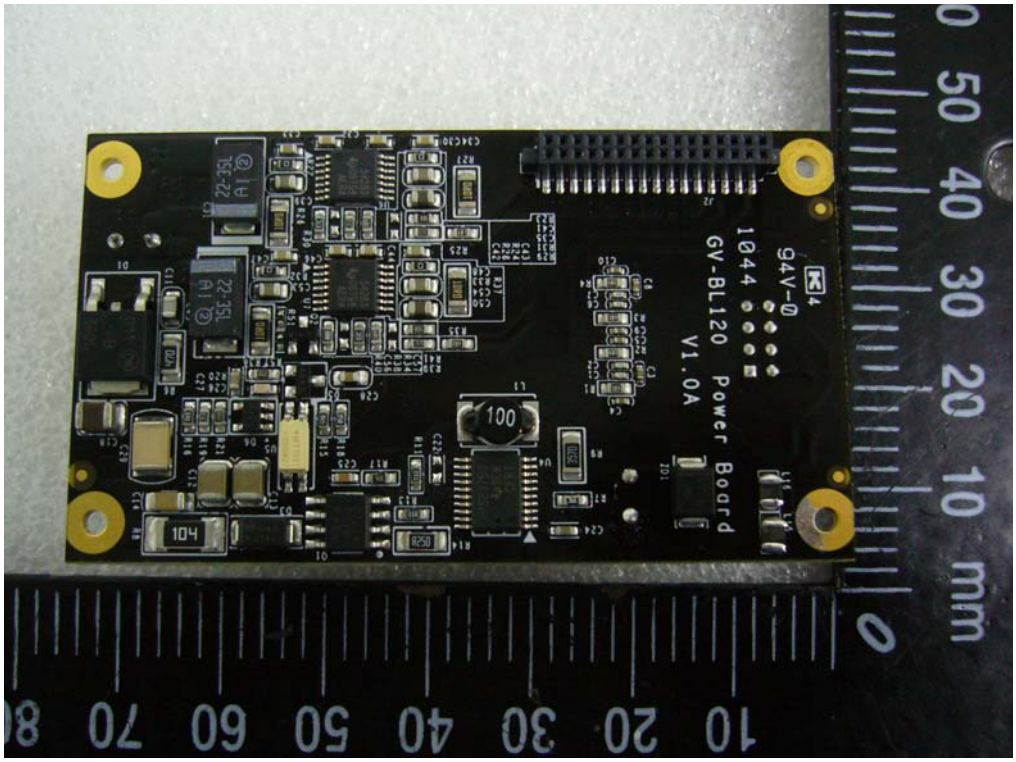
GeoVision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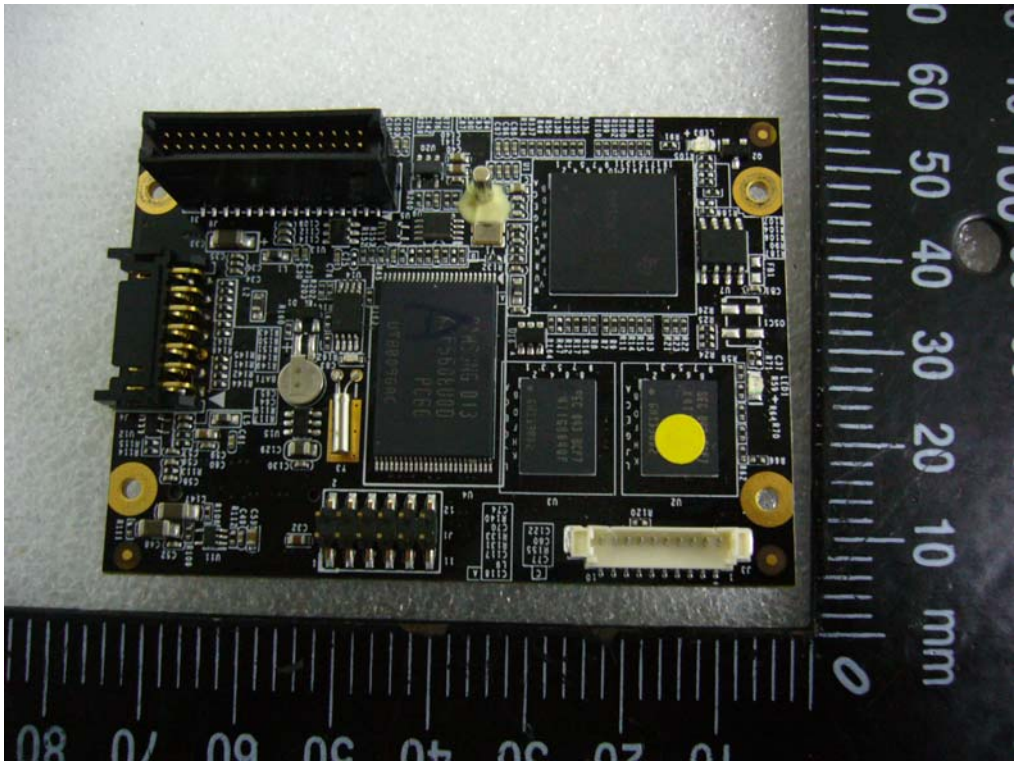
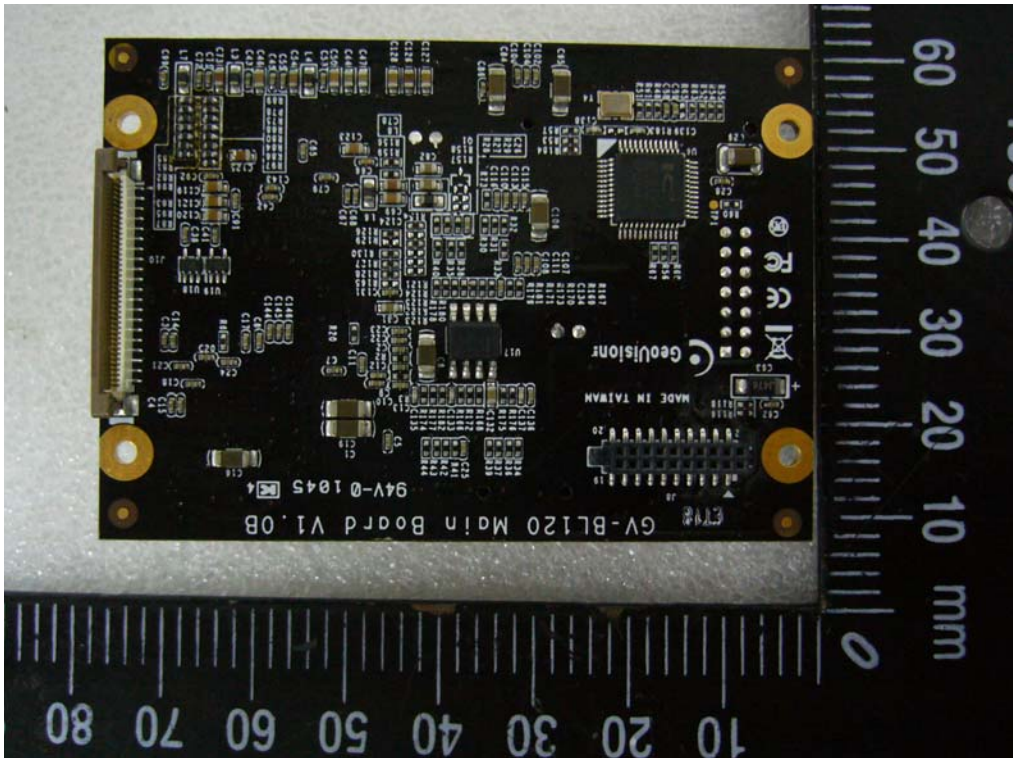
1044

PHOTOS





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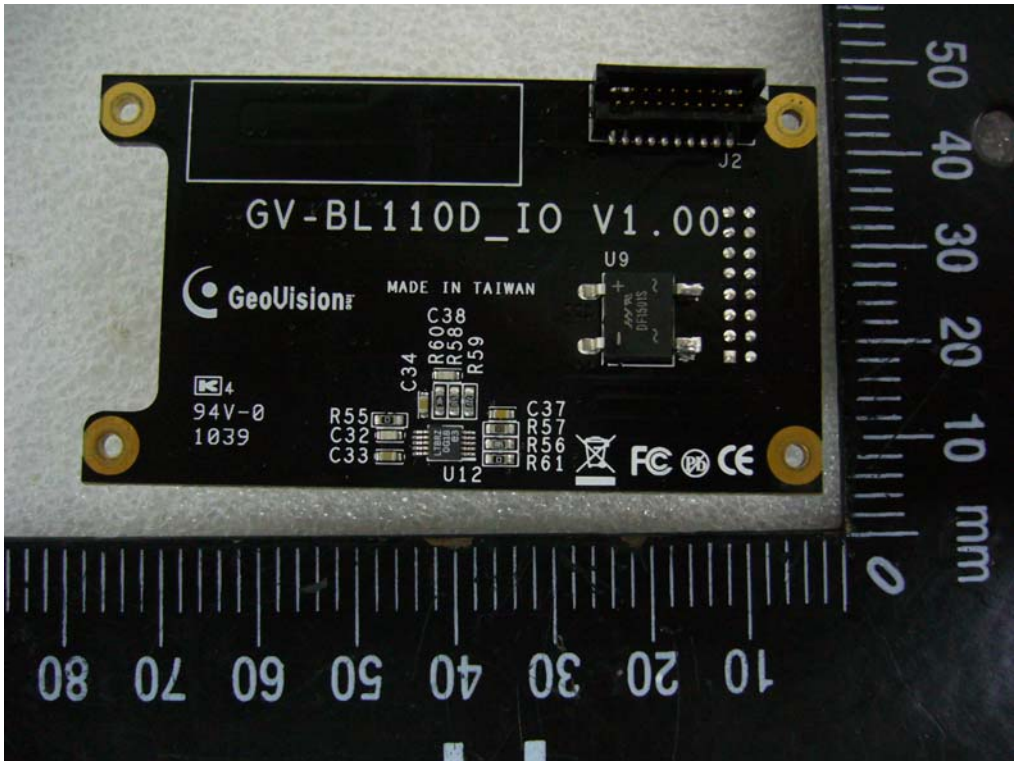
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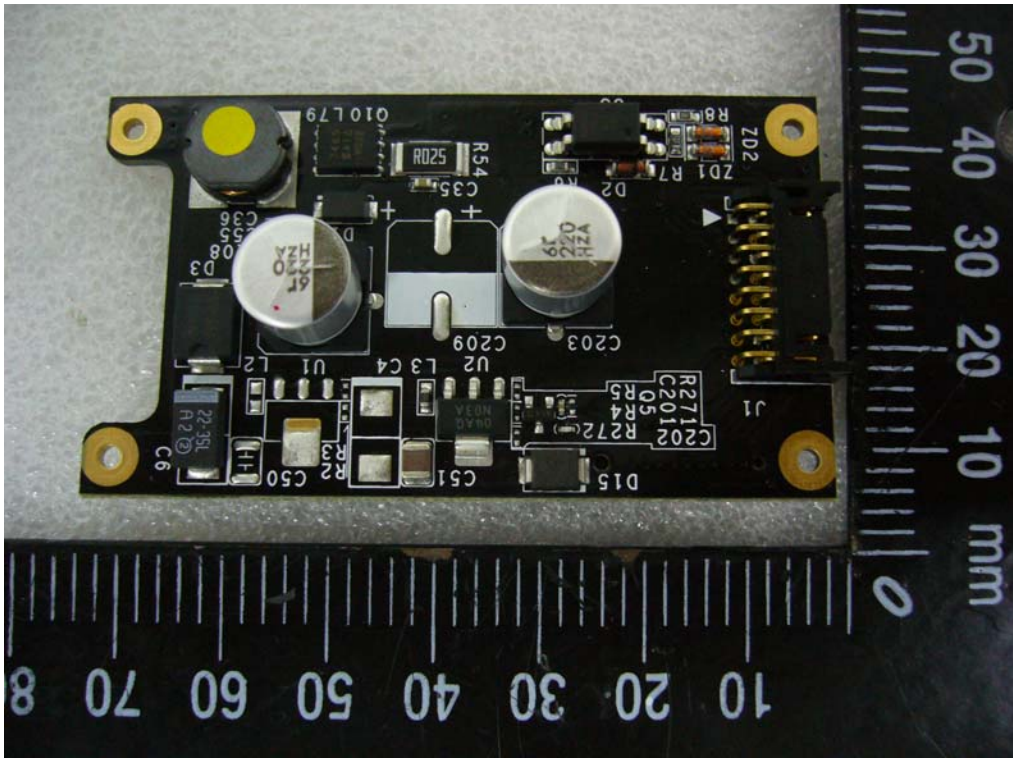

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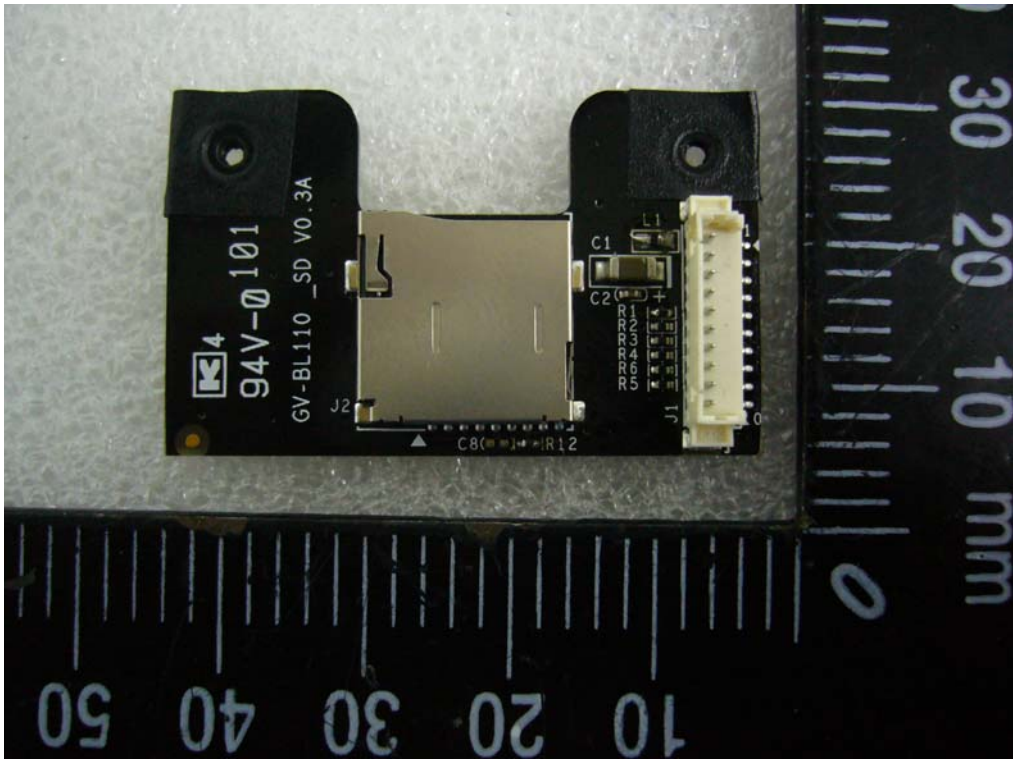

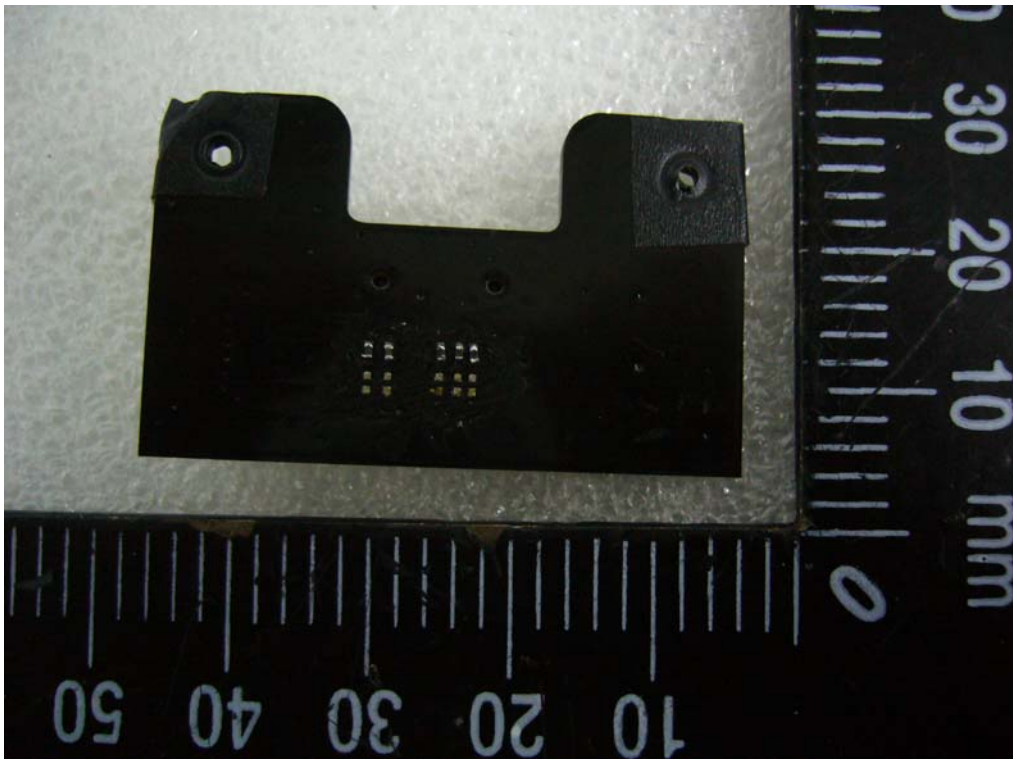

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