IEC IECEE CB SCHEME

Ref. Certif. No.

AT 2056

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

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC

Product Produit	**Industrial Wireless Communication System**
Name and address of the applicant Nom et adresse du demandeur	**Pilz GmbH & Co. KG Felix-Wankel-Straße 2, 73760 Ostfildern, Germany**
Name and address of the manufacturer Nom et adresse du fabricant	**Pilz GmbH & Co. KG Felix-Wankel-Straße 2, 73760 Ostfildern, Germany**
Name and address of the factory Nom et adresse de l'usine Note: *When more than one factory, please report on page 2* Note: *Lorsque il y plus d'une usine, veuillez utiliser la 2ème page*	**Pilz GmbH & Co. KG Felix-Wankel-Straße 2, 73760 Ostfildern, Germany** ☐ Additional Information on page 2
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	**24V (PSSu); Cl.III**
Trademark (if any) Marque de fabrique (si elle existe)	**Pilz**
Model / Type Ref. Ref. De type	**PSSu WB S IDN, PSSu WR S IDN, PSS ANT 1 IDN, PSS ANT 2 IDN**
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire,, peuvent être indiqués sur la 2ème page	**Considered national deviations see page 3 of test report** ☐ Additional Information on page 2
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la	**IEC 60950-1(ed.1)**
As shown in the Test Report Ref. No. which forms part of this Certificate Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat	**2-4790-1-8/07-CB-a**

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

OVE

AUSTRIAN ELECTROTECHNICAL ASSOCIATION
Kahlenberger Str. 2A
1190 Wien, Austria

Digitally signed by W. Martin
Email=w.martin@ove.at

Date: **2008-06-26**

Signature: **Dipl.-Ing. W. Martin**

ZVR: 327279890 DVR: 1055887

TEST REPORT

IEC 60950-1 and/or EN 60950-1

Information technology equipment – Safety – Part 1: General requirements

Report reference No	2-4790-1-8/07-CB-a
Tested by (printed name and signature)	Sébastien Scheidler
Approved by (printed name and signature)	Jürgen Sanetra
Date of issue	18.06.2008

Testing Laboratory Name	CETECOM ICT Services GmbH
Address	Untertürkheimerstr. 6-10 D-66117 Saarbrücken
Testing location	CBTL ☒ CCATL ☐ SMT ☐ TMP ☐
Address	as above

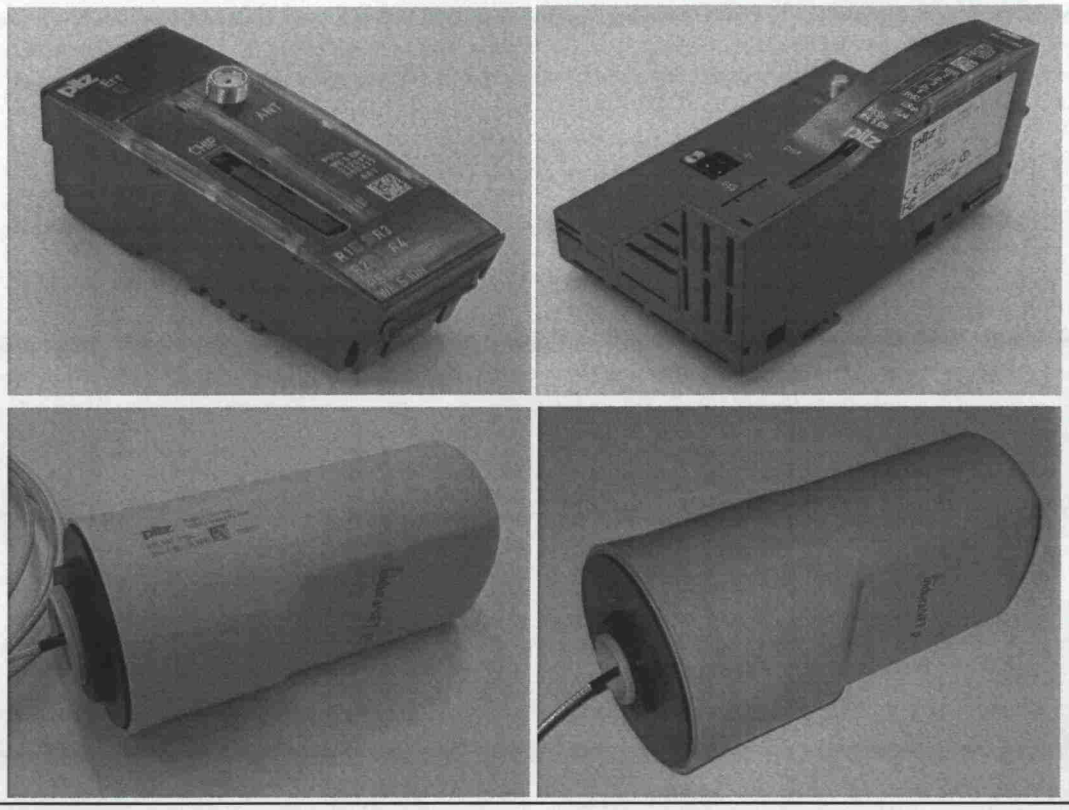
Applicant's Name	Pilz GmbH & Co KG
Address	Felix-Wankel-Straße 2 73760 Ostfildern, Germany

Test specification	
Standard	IEC 60950-1:2001 (1st Edition) and/or EN 60950-1:2001
Test procedure	CB – Scheme
Non-standard test method	None

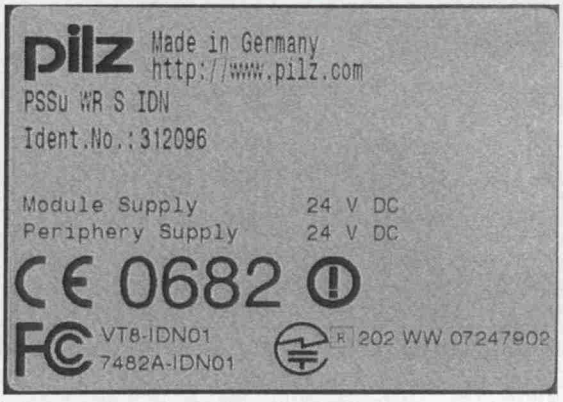
Test Report Form No.	IECEN60950_1B
TRF originator	SGS Fimko Ltd
Master TRF	dated 2003-03

Test item description	Industrial Wireless Communication System
Trademark	Pilz
Manufacturer	Same as applicant
Model and/or type reference	PSSu WB S IDN PSSu WR S IDN PSS ANT 1 IDN PSS ANT 2 IDN
Serial Number	--
Rating(s)	24Vdc

Photos:



Copy of marking plates:



Summary of testing:

The sample(s) tested complies with the requirements of IEC 60950-1:2001 (First edition) and EN 60950-1:2001 +A11: 2004 . Compliance with National Differences, Special National Conditions, Annex ZB, and A – Deviations, Annex ZC (EN 60950-1:2001 + A11)and National Deviation according Bulletin No. 112A: 2006 (IEC 60950-1:2001 First Edition), are recorded at the end of this report.

Summary of compliance with National Differences:

The following group and/or national deviations were considered according to Bulletin No. 112A:

CH, DE, DK, FI, GB, NO, SE, CA, US

Particulars: test item vs. test requirements

Rated input voltage and current..... :	24Vdc
Mains supply tolerance ..... :	+20%, -15%
Tested for IT power systems ..... :	--
IT testing, phase-phase voltage ..... :	--
Rated atmospheric humidity ..... :	--
Rated temperature range..... :	-20C – 75°C
Overvoltage category..... :	--
Equipment mobility ..... :	Movable/fixed
Accessibility ..... :	Operator access area
Operating condition..... :	Continuous
Class of equipment ..... :	Class III
Mass of PSSu WB S IDN ..... :	213g
Mass of PSSu WR S IDN ..... :	308g
Mass of PSSu ANT 1 IDN..... :	213g
Mass of PSSu ANT 2 IDN..... :	213g
Insulation ..... :	Functional insulation
Operation height over sea:	max. 2000m
Test case verdicts	
Test case does not apply to the test object :	N/A
Test item does meet the requirement ..... :	P(ass)
Test item does not meet the requirement ... :	F(ail)
Testing	
Date of receipt of test item ..... :	06.12.2007
Date(s) of performance of test :	06.12.2007 – 14.05.2008

General remarks

"This report is not valid as a CB Test Report unless appended by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02".

The test result presented in this report relate only to the object(s) 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.

General product information:

The EUT is an industrial wireless communication system

The following Attachments are integral part of this test report:
- Annex 1: Photo documentation
- Annex 2: National deviation according to IEC60950-1: 2001

The following abbreviations were used in this test report:

AC	: Alternating Current	PS	: Power Supply/Travel Adaptor
DC	: Direct Current	GND	: Ground
PE	: Protective earth	PCB	: Printed circuit board
PRI	: Primary circuit	BAT	: Battery
SEC	: Secondary circuit	EUT	: Equipment under Test

Country abbreviations:

AL	: Albania	GB	: United Kingdom	NZ	: New Zealand
AR	: Argentina	GR:	: Greece	OM	: Oman
AT	: Austria	HK:	: Hong Kong	PE	: Peru
AU	: Australia	HR	: Croatia	PL	: Poland
BE	: Belgium	HU	: Hungary	PT	: Portugal
BG	: Bulgaria	ID	: Indonesia	QA	: Quatar
BH	: Bahrain	IE	: Ireland	RO	: Rumania
BR	: Brazil	IL	: Israel	RS	: Serbia
CA	: Canada	IT	: Italy	RU	: Russia
CL	: Chile	IN	: India	SE	: Sweden
CH	: Switzerland	JP	: Japan	SG	: Singapore
CN	: China	KR	: Rep. of Korea	SK	: Slovakia
CS	: Serbia	KW	: Kuweit	SI	: Slovenia
CZ	: The Czech Republic	LB	: Lebanon	TR	: Turkey
DE	: Germany	LV	: Latvia	UA	: Ukraine
DK	: Denmark	MA	: Morocco	UAE	: United Arab Emirates
EE	: Estonia	MK	: Macedonia	US	: United States of America
EG	: Egypt	MU	: Mauritius	VN	: Vietnam
ES	: Spain	MY:	: Malaysia	ZA	: South Africa
FI	: Finland	NL	: Netherlands		
FR	: France	NO	: Norway		

IEC 60950-1 and/or EN 60950-1			
Cl.:	**Requirement – Test:**	**Result:**	**Verdict:**
1	**GENERAL**		P
1.5	**Components**		P
1.5.1	General		P
	Comply with IEC 60950 or relevant component standard	(see appended table 1.5.1)	P
1.5.2	Evaluation and testing of components	Certified components are used in accordance with their ratings, certifications and comply with applicable parts of this standard. Not certified components are used in accordance with their ratings and comply with applicable parts of this standard and the relevant component standard. Other components have been tested under conditions occurring in the EUT, using applicable parts of this standard.	P
1.5.3	Thermal controls	No thermal controls	N/A
1.5.4	Transformers	No transformers	N/A
1.5.5	Interconnecting cables	No interconnecting cables	N/A
1.5.6	Capacitors in primary circuits .....:	Class III equipment	N/A
1.5.7	Double insulation or reinforced insulation bridged by components	Class III equipment, no double or reinforced insulation	N/A
1.5.7.1	General		N/A
1.5.7.2	Bridging capacitors		N/A
1.5.7.3	Bridging resistors		N/A
1.5.7.4	Accessible parts		N/A
1.5.8	Components in equipment for IT power systems	Class III equipment	N/A

1.6	**Power interface**		P
1.6.1	AC power distribution systems	Class III equipment	N/A
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment	Not hand-held	N/A
1.6.4	Neutral conductor	Class III equipment	N/A

1.7	**Marking and instructions**		P
1.7.1	Power rating	See "Copy of name plates"	P
	Rated voltage(s) or voltage range(s) (V) .....:	See "Copy of name plates"	P
	Symbol for nature of supply, for DC. only.....:		N/A
	Rated frequency or rated frequency range (Hz) .:		N/A
	Rated power (W)		N/A

IEC 60950-1 and/or EN 60950-1			
Cl.:	**Requirement – Test:**	**Result:**	**Verdict:**
	Manufacturer's name or trademark or identification mark .....:	See "Copy of name plates"	P
	Type/model or type reference.....:	See "Copy of name plates"	P
	Symbol for Class II equipment only.....:		N/A
	Other symbols .....:		N/A
	Certification marks .....:	See "Copy of name plates"	P
1.7.2	Safety instructions	Not required	N/A
1.7.3	Short duty cycles	For continuous operation	N/A
1.7.4	Supply voltage adjustment .....:	No adjustment	N/A
1.7.5	Power outlets on the equipment .....:	No power outlets	N/A
1.7.6	Fuse identification .....:	No fuses	N/A
1.7.7	Wiring terminals	No wiring terminals	N/A
1.7.7.1	Protective earthing and bonding terminals .....:	Class III equipment	N/A
1.7.7.2	Terminal for AC. mains supply conductors	Class III equipment	N/A
1.7.7.3	Terminals for DC. mains supply conductors	Terminals not used	N/A
1.7.8	Controls and indicators	No safety relevant 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 .....:	One power source only	N/A
1.7.10	IT power distribution systems	Class III equipment	N/A
1.7.11	Thermostats and other regulating devices	No thermostats and other regulating devices	N/A
1.7.12	Language (safety relevant instructions and markings).....:	English	P
1.7.13	Durability - Water (Test time: 15 s): - Marking - Housing/enclosure Hexane ($CH_3(CH_2)_4CH_3$ M = 86,18g/mol, dry point 65-69°C) (Test time:15 s): - Marking - Housing/enclosure		 P P
1.7.14	Removable parts		N/A
1.7.15	Replaceable batteries	No batteries	N/A
	Language.....:		—
1.7.16	Operator access with a tool.....:	No hazardous parts	N/A
1.7.17	Equipment for restricted access locations.....:	Not for restricted access locations	N/A

2	**PROTECTION FROM HAZARDS**	P

IEC 60950-1 and/or EN 60950-1			
Cl.:	**Requirement – Test:**	**Result:**	**Verdict:**
2.1	**Protection from electric shock and energy hazards**		P
2.1.1	Protection in operator access areas	Only SELV circuits used	P
2.1.1.1	Access to energized parts	Access to SELV circuits only	P
	Test by inspection .....:		P
	Test with test finger .....:		P
	Test with test pin .....:		P
	Test with test probe .....:	No TNV circuits	N/A
2.1.1.2	Battery compartments	No battery compartment	N/A
2.1.1.3	Access to ELV wiring	No ELV circuits	N/A
	Working voltage (V); minimum distance (mm) through insulation	(see appended table 2.10.5)	—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage	N/A
2.1.1.5	Energy hazards .....:	No energy hazards in user access area	N/A
2.1.1.6	Manual controls	No manual controls	N/A
2.1.1.7	Discharge of capacitors in equipment	Class III equipment	N/A
	Time-constant (s); measured voltage (V).....:		—
2.1.2	Protection in service access areas	No service access area	N/A
2.1.3	Protection in restricted access locations	Not for restricted access locations	N/A

2.2	**SELV circuits**		P
2.2.1	General requirements		P
2.2.2	Voltages under normal conditions (V) .....:	28.8Vdc	P
2.2.3	Voltages under fault conditions (V).....:	No voltages exceed SELV limits	P
2.2.3.1	Separation by double insulation or reinforced insulation (method 1)	Class III equipment	N/A
2.2.3.2	Separation by earthed screen (method 2)	Class III equipment	N/A
2.2.3.3	Protection by earthing of the SELV circuit (method 3)	Class III equipment	N/A
2.2.4	Connection of SELV circuits to other circuits .....:	SELV to SELV only	P

2.3	**TNV circuits**		N/A
2.3.1	Limits	No TNV circuits	N/A
	Type of TNV circuits .....:		—
2.3.2	Separation from other circuits and from accessible parts	No TNV circuits	N/A
	Insulation employed.....:		—
2.3.3	Separation from hazardous voltages	No TNV circuits	N/A
	Insulation employed.....:		—
2.3.4	Connection of TNV circuits to other circuits	No TNV circuits	N/A
	Insulation employed.....:		—

IEC 60950-1 and/or EN 60950-1			
Cl.:	**Requirement – Test:**	**Result:**	**Verdict:**
2.3.5	Test for operating voltages generated externally	No TNV circuits	N/A

2.4	**Limited current circuits**		N/A
2.4.1	General requirements	No limited current circuits	N/A
2.4.2	Limit values		N/A
	Frequency (Hz) ..... :		—
	Measured current (mA) ..... :		—
	Measured voltage (V) ..... :		—
	Measured capacitance (µF) ..... :		—
2.4.3	Connection of limited current circuits to other circuits		N/A

2.5	**Limited power sources**		N/A
	Inherently limited output		N/A
	Impedance limited output		N/A
	Overcurrent protective device limited output		N/A
	Regulating network limited output under normal operating and single fault condition		N/A
	Regulating network limited output under normal operating conditions and overcurrent protective device limited output under single fault condition		N/A
	Output voltage (V), output current (A), apparent power (VA) ..... :		—
	Current rating of overcurrent protective device (A)		—

2.6	**Provisions for earthing and bonding**		N/A
2.6.1	Protective earthing	No protective earthing and bonding	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 ..... :		—
2.6.3.4	Resistance (Ω) of earthing conductors and their terminations, test current (A) ..... :		N/A
2.6.3.5	Colour of insulation ..... :		N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A

IEC 60950-1 and/or EN 60950-1			
Cl.:	**Requirement – Test:**	**Result:**	**Verdict:**
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type and 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	No connection to AC mains supply	N/A
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not covered in 5.3		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 interlocks	N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches and relays		N/A
2.8.7.1	Contact gaps (mm) .....:		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

IEC 60950-1 and/or EN 60950-1			
Cl.:	**Requirement – Test:**	**Result:**	**Verdict:**
2.9	**Electrical insulation**		
2.9.1	Properties of insulating materials	Neither natural rubber, materials containing asbestos no hygroscopic material are used as insulation	P
2.9.2	Humidity conditioning	Regarding clause 2.9.1, 2.10.6.5 and 2.10.7 there is no humidity treatment necessary	N/A
	Humidity (%) .....:		—
	Temperature (°C) .....:		—
2.9.3	Grade of insulation	SELV: Functional insulation	P

2.10	**Clearances, creepage distances and distances through insulation**		
2.10.1	General	For functional insulation creepage distances and clearances smaller than those specified in clause 2.10 are permitted subject to the requirements of clause 5.3.4 b) or 5.3.4 c)	P
2.10.2	Determination of working voltage	The requirements are applied for the determination of the working voltages: 28.8Vdc	P
2.10.3	Clearances	(see 2.10.1)	P
2.10.3.1	General		P
2.10.3.2	Clearances in primary circuit	No connection to AC mains supply	N/A
2.10.3.3	Clearances in secondary circuits		N/A
2.10.3.4	Measurement of transient voltage levels		N/A
2.10.4	Creepage distances		N/A
	CTI tests .....:		—
2.10.5	Solid insulation		N/A
2.10.5.1	Minimum distance through insulation		N/A
2.10.5.2	Thin sheet material		N/A
	Number of layers (pcs) .....:		—
	Electric strength test		—
2.10.5.3	Printed boards	Function insulation only	N/A
	Distance through insulation		N/A
	Electric strength test for thin sheet insulating material		—
	Number of layers (pcs) .....:		N/A
2.10.5.4	Wound components		N/A
	Number of layers (pcs) .....:		N/A
	Two wires in contact inside wound component; angle between 45° and 90° ..... :		N/A

IEC 60950-1 and/or EN 60950-1			
Cl.:	**Requirement – Test:**	**Result:**	**Verdict:**
2.10.6	Coated printed boards	No special coating in order to reduce distances	N/A
2.10.6.1	General		N/A
2.10.6.2	Sample preparation and preliminary inspection		N/A
2.10.6.3	Thermal cycling		N/A
2.10.6.4	Thermal ageing (°C) ..... :		N/A
2.10.6.5	Electric strength test		—
2.10.6.6	Abrasion resistance test		N/A
	Electric strength test		—
2.10.7	Enclosed and sealed parts ..... :		N/A
	Temperature $T_1=T_2 = T_{ma} - T_{amb} +10K$ (°C) ..... :		N/A
2.10.8	Spacings filled by insulating compound..... :	No spacings filled by insulating compound	N/A
	Electric strength test		—
2.10.9	Component external terminations		N/A
2.10.10	Insulation with varying dimensions		N/A

3	**WIRING, CONNECTIONS AND SUPPLY**		P
3.1	**General**		P
3.1.1	Current rating and overcurrent protection	Adequate cross sectional areas on PCB tracks	P
3.1.2	Protection against mechanical damage	No internal wiring	P
3.1.3	Securing of internal wiring	No internal wiring	P
3.1.4	Insulation of conductors	(see table 5.2)	P
3.1.5	Beads and ceramic insulators	Not used	N/A
3.1.6	Screws for electrical contact pressure	No electrical screw connection	N/A
3.1.7	Insulating materials in electrical connections	No contact pressure through insulating material	P
3.1.8	Self-tapping and spaced thread screws	No electrical screw connection	N/A
3.1.9	Termination of conductors	No internal wiring	P
	10 N pull test		P
3.1.10	Sleeving on wiring	No sleeving used as supplementary insulation	N/A

3.2	**Connection to an AC mains supply or a DC mains supply**		P
3.2.1	Means of connection .....:	No connection to AC or DC mains	P
3.2.1.1	Connection to an AC mains supply		N/A
3.2.1.2	Connection to a DC mains supply	Coded plugs	N/A
3.2.2	Multiple supply connections	No multiple connection	N/A
3.2.3	Permanently connected equipment	Not permanently connected	N/A

IEC 60950-1 and/or EN 60950-1			
Cl.:	**Requirement – Test:**	**Result:**	**Verdict:**
	Number of conductors, diameter (mm) of cable and conduits .....:		—
3.2.4	Appliance inlets	No 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
	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	No 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 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	No direct connection to the mains	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	Single-phase equipment and DC. equipment		N/A
3.4.7	Three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A

IEC 60950-1 and/or EN 60950-1			
Cl.:	**Requirement – Test:**	**Result:**	**Verdict:**
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 .....:	SELV to SELV	P
3.5.3	ELV circuits as interconnection circuits	No ELV circuits	N/A

4	**PHYSICAL REQUIREMENTS**		P
4.1	Stability		P
	Angle of 10°	EUT is stable	P
	Test: force (N) .....:		N/A

4.2	**Mechanical strength**		P
4.2.1	General	See 4.2.2 - 4.2.10	P
4.2.2	Steady force test, 10 N	Applied	P
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N		P
4.2.5	Impact test	Fixed installation	N/A
	Fall test Swing test		N/A N/A
4.2.6	Drop test	3 x 1.0 m	P
4.2.7	Stress relief test	No hazardous parts	N/A
4.2.8	Cathode ray tubes	No cathode ray tubes	N/A
	Picture tube separately certified .....:		N/A
4.2.9	High pressure lamps	No high pressure lamps	N/A
4.2.10	Wall or ceiling mounted equipment; force (N) ....:	No wall or ceiling mounted equipment	N/A

4.3	**Design and construction**		P
4.3.1	Edges and corners	No sharp edges and corners	P
4.3.2	Handles and manual controls; force (N)..... :	No handles and manual controls	N/A
4.3.3	Adjustable controls	No adjustable controls	N/A
4.3.4	Securing of parts	All parts secured	P
4.3.5	Connection of plugs and sockets	IEC 60083 and IEC 60320 connectors not in SELV, ELV and TNV-Circuits	P
4.3.6	Direct plug-in equipment	No direct plug-in equipment	N/A
	Dimensions (mm) of mains plug for direct plug-in .....:		N/A

IEC 60950-1 and/or EN 60950-1			
Cl.:	**Requirement – Test:**	**Result:**	**Verdict:**
	Torque and pull test of mains plug for direct plug-in; torque (Nm); pull (N) ..... :		N/A
4.3.7	Heating elements in earthed equipment	No heating elements	N/A
4.3.8	Batteries	No batteries	N/A
4.3.9	Oil and grease	No exposure to oil or grease	N/A
4.3.10	Dust, powders, liquids and gases	Not produced	N/A
4.3.11	Containers for liquids or gases	No liquids or gases in the EUT	N/A
4.3.12	Flammable liquids ..... :	No flammable liquids	N/A
	Quantity of liquid (l) ..... :		N/A
	Flash point (°C) ..... :		N/A
4.3.13	Radiation; type of radiation ..... :	No laser; LED with diffuse light	N/A
4.3.13.1	General		N/A
4.3.13.2	Ionizing radiation	No ionizing radiation	N/A
	Measured radiation (pA/kg) ..... :		—
	Measured high-voltage (kV) ..... :		—
	Measured focus voltage (kV) ..... :		—
	CRT markings ..... :		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	No ultraviolet (UV) radiation	N/A
	Part, property, retention after test, flammability classification ..... :		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation ..... :	No ultraviolet (UV) radiation	N/A
4.3.13.5	Laser (including LED's)	No laser	N/A
	Laser class ..... :		—
4.3.13.6	Other types ..... :	No other radiation	N/A

4.4	**Protection against hazardous moving parts**		N/A
4.4.1	General	No moving parts	N/A
4.4.2	Protection in operator access areas		N/A
4.4.3	Protection in restricted access locations		N/A
4.4.4	Protection in service access areas		N/A

4.5	**Thermal requirements**		P
4.5.1	Maximum temperatures	(see appended table 4.5)	P
	Normal load condition per Annex L ..... :	L.7	P
4.5.2	Resistance to abnormal heat	No such part	N/A

4.6	**Openings in enclosures**		P
4.6.1	Top and side openings		P
	Dimensions (mm) ..... :		—
4.6.2	Bottoms of fire enclosures	No fire enclosure	N/A
	Construction of the bottom ..... :		—

IEC 60950-1 and/or EN 60950-1			
Cl.:	**Requirement – Test:**	**Result:**	**Verdict:**
4.6.3	Doors or covers in fire enclosures	No doors or covers	N/A
4.6.4	Openings in transportable equipment	No transportable equipment	N/A
4.6.5	Adhesives for constructional purposes	No adhesives used in construction	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	Method 2 used	P
	Method 1, selection and application of components wiring and materials	(see appended table 1.5.1)	N/A
	Method 2, application of all of simulated fault condition tests	(see appended table 5.3)	P
4.7.2	**Conditions for a fire enclosure**		P
4.7.2.1	Parts requiring a fire enclosure	No fire enclosure required	N/A
4.7.2.2	Parts not requiring a fire enclosure		P
4.7.3	**Materials**		P
4.7.3.1	General	Considered	P
4.7.3.2	Materials for fire enclosures	No fire enclosure	N/A
4.7.3.3	Materials for components and other parts outside fire enclosures		N/A
4.7.3.4	Materials for components and other parts inside fire enclosures		N/A
4.7.3.5	Materials for air filter assemblies	No air filter	N/A
4.7.3.6	Materials used in high-voltage components	No high-voltage components	N/A

5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		N/A
5.1	**Touch current and protective conductor current**		N/A
5.1.1	General	No mains	N/A
5.1.2	Equipment under test (EUT)		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
	Test voltage (V) ..... :		—
	Measured touch current (mA) ..... :		—
	Max. allowed touch current (mA) ..... :		—
	Measured protective conductor current (mA) .... :		—
	Max. allowed protective conductor current (mA) :		—
5.1.7	Equipment with touch current exceeding 3.5 mA ..... :		N/A
5.1.8	Touch currents to and from telecommunication networks and cable distribution systems and from telecommunication networks	No connection to a telecommunication network or a cable distribution system	N/A

IEC 60950-1 and/or EN 60950-1			
Cl.:	**Requirement – Test:**	**Result:**	**Verdict:**
5.1.8.1	Limitation of the touch current to a telecommunication network and a cable distribution system		N/A
	Test voltage (V) ..... :		—
	Measured touch current (mA) ..... :		—
	Max. allowed touch current (mA) ..... :		—
5.1.8.2	Summation of touch currents from telecommunication networks ..... :		N/A

5.2	**Electric strength**		N/A
5.2.1	General	SELV circuits only	N/A
5.2.2	Test procedure		N/A

5.3	**Abnormal operating and fault conditions**		P
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P
5.3.2	Motors	No motors	N/A
5.3.3	Transformers	No transformers	N/A
5.3.4	Functional insulation ..... :	c); can be short circuit	P
5.3.5	Electromechanical components	No electromechanical components	N/A
5.3.6	Simulation of faults	(see appended table 5.3)	P
5.3.7	Unattended equipment	No temperature control devices	N/A
5.3.8	Compliance criteria for abnormal operating and fault conditions	No fire, no abnormal temperatures, the equipment does not emit molten metal, enclosure not deformed	P

6	**CONNECTION TO TELECOMMUNICATION NETWORKS**		N/A
6.1	**Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment**		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements	No connection to telecommunication networks	N/A
	Test 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

IEC 60950-1 and/or EN 60950-1			
Cl.:	**Requirement – Test:**	**Result:**	**Verdict:**
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	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment	No connection to cable distribution systems	N/A
7.2	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.3	Insulation between primary circuits and cable distribution systems		N/A
7.3.1	General		N/A
7.3.2	Voltage surge test		N/A
7.3.3	Impulse test		N/A

A	**ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE**		N/A
A.1	**Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)**		N/A
A.1.1	Samples.....:		—
	Wall thickness (mm).....:		—
A.1.2	Conditioning of samples; temperature (°C) .....:		N/A
A.1.3	Mounting of samples .....:		N/A
A.1.4	Test flame		N/A
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A

A.2	**Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)**		N/A
A.2.1	Samples, material.....:		—
	Wall thickness (mm).....:		—
A.2.2	Conditioning of samples		N/A
A.2.3	Mounting of samples		N/A
A.2.4	Test flame		N/A
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A

IEC 60950-1 and/or EN 60950-1			
Cl.:	**Requirement – Test:**	**Result:**	**Verdict:**
A.2.7	Alternative test acc. to IEC 60695-2-2, cl. 4, 8		N/A

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	No motors	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 DC. motors in secondary circuits		N/A
B.7	Locked-rotor overload test for DC. motors in secondary circuits		N/A
B.7.1	Test procedure		N/A
B.7.2	Alternative test procedure; test time (h) .....:		N/A
B.7.3	Electric strength test		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

IEC 60950-1 and/or EN 60950-1			
Cl.:	**Requirement – Test:**	**Result:**	**Verdict:**
D	**ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS**		N/A
D.1	Measuring instrument		N/A
D.2	Alternative measuring instrument		N/A

E	**ANNEX E, TEMPERATURE RISE OF A WINDING**	N/A

F	**ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10)**	N/A

G	**ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES**		N/A
G.1	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	DC mains supply		N/A
G.3	Determination of telecommunication network transient voltage (V) .....:		N/A
G.4	Determination of required withstand voltage (V) .:		N/A
G.5	Measurement of transient levels (V).....:		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 used .....:		—

K	**ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.7)**		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 4.5.1)**		P
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A

IEC 60950-1 and/or EN 60950-1			
Cl.:	**Requirement – Test:**	**Result:**	**Verdict:**
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) .....:		N/A
M.3.1.2	Voltage (V) .....:		N/A
M.3.1.3	Cadence; time (s), voltage (V) .....:		N/A
M.3.1.4	Single fault current (mA).....:		N/A
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 2.10.3.4, 6.2.2.1, 7.3.2 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**		N/A
Q	**ANNEX Q, BIBLIOGRAPHY**		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)		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

IEC 60950-1 and/or EN 60950-1			
Cl.:	**Requirement – Test:**	**Result:**	**Verdict:**
			—

U	**ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		N/A

1.5.1	TABLE: list of critical components			P
Part	manufacturer of material	type of material	thickness (mm)	flammability class
PCB	Fela	3	1.5	V-0 UL File E76332
	Ruwel	U4	1.5	V-0 UL File E48403
	AT&S	M, MI	1.5	V-0 UL File E67138
Enclosure plastic materials	Rotec	ABS 1001	1.5	V-0 UL File E148878
	Weidmüller	PA66	1.5	V-2 UL File E63957
		2405, 1260	1.5	V-2 UL File E41613
supplementary information				

1.6.2	TABLE: electrical data (in normal conditions):				P
I rated (A)	U (V)	F (Hz)	I (mA)	P (W)	condition/status
---	20.4	DC	49.5	1.00	PSSu WB S IDN
---	24	DC	44.7	1.07	
---	28.8	DC	40.0	1.15	
---	20.4	DC	80.5	1.64	PSSu WR S IDN
---	24	DC	69.3	1.66	
---	28.8	DC	59.4	1.71	
supplementary information					

2.4	TABLE: limited current circuit measurement					N/A
Location	Capacity (µF)	Voltage (V)	Current (mA)	Freq. (kHz)	Limit (mA)	Command
supplementary information						
Output measured with a 2kΩ resistor load.						

2.10.3 and 2.10.4	TABLE: clearance and creepage distance measurements					N/A
clearance cl and creepage distance dcr at/of:	Up (V)	U r.m.s. (V)	required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)
supplementary information						
See 5.3.4						

2.10.5	TABLE: distance through insulation measurements			N/A
distance through insulation di at/of:	Up	test voltage	required di	di
supplementary information				

4.5	TABLE: maximum temperatures		P
	Object..... :	PSSu H WB IDN	—
	test voltage (V) ..... :	28.8Vdc	—
	t_{amb1} (°C) ..... :	20.5	—
	t_{amb2} (°C) ..... :	221.1	—
	Rated ambient temperature(°C)..... :	-20°C – 75°C	—
	Operation mode ..... :	Normal operation	—
maximum temperature T of part/at::		T (°C)	allowed T_{max} (°C)
PSSu E F Enclosure top		28.5	95
PSSu E F Enclosure rear		28.6	95
PSSu H WB IDN Enclosure top		26.9	95
PSSu H WB IDN Enclosure top		27.4	95
supplementary information			

4.5	TABLE: maximum temperatures		P
	Object..... :	PSSu WR S IDN	—
	test voltage (V) ..... :	28.8Vdc	—
	t_{amb1} (°C) ..... :	20.5	—
	t_{amb2} (°C) ..... :	221.1	—
	Rated ambient temperature(℃)..... :	-20℃ – 75℃	—
	Operation mode ..... :	Normal operation	—

maximum temperature T of part/at::	T (°C)	allowed T_{max} (°C)
Enclosure top	28.3	95
Enclosure rear	28.7	95
Enclosure X1	26.8	95
supplementary information		

4.5.2	TABLE: ball pressure test of thermoplastic parts		N/A
	allowed impression diameter (mm) ..... :	≤ 2 mm	—
	Test Time..... :	1h	—

part	test temperature (°C)	impression diameter (mm)
	125	
supplementary information		
Class III		

5.1	TABLE: Touch current and protective conductor current		N/A
	Adapter..... :		—
	Measurement point ..... :		—
	Limit (mA)..... :		—

U[V]:	f[Hz]:	L[mA]:	N[mA]:
supplementary information			

5.2	TABLE: electric strength tests, impulse tests and voltage surge tests		N/A

test voltage applied between:	test voltage (V) AC	breakdown Yes / No
supplementary information		

5.3	TABLE: fault condition tests					P
	ambient temperature ..... :			23℃		—
	model/type of power supply ..... :			LD50/10GB		—
	manufacturer of power supply ..... :			Zentro		—
	rated markings of power supply ..... :			50Vdc, 10A		—
component No.	fault	test voltage (V)	test time	current (A)	result	
C619	Short circuit	28.8Vdc	5min	Max 0.5	No hazard, no fire	
C618	Short circuit	28.8Vdc	5min	0.15	No hazard, no fire	
C6	Short circuit	28.8Vdc	15min	Max 10	No hazard, no fire	
Output	Short circuit	28.8Vdc	15min	Max 10	No hazard, no fire	
supplementary information						

6.1 6.2	TABLE: electric strength tests, impulse tests and voltage surge tests	N/A
test voltage applied between:	test voltage (V)	breakdown Yes / No
		No
supplementary information		

Test according to picture 6A	test voltage (VAC)	Measured (mA)	Limit (mA)
Protected Earth and			10
supplementary information			

6.3	TABLE: Protection of the telecommunication wiring system from overheating	N/A
Line	Measured (A)	Limit (A)
		1.3

Line	Supply voltage (VAC)	Uoc (V)	Measured (A) after 60s	Limit (A)
				1000/Uoc
supplementary information				
No over-current protective devices used				

7.3.2	TABLE: Voltage surge test		N/A
test voltage applied between:	Number of pulses	Uc (kV)	breakdown Yes / No
	50	10	
supplementary information			
50 pulses with 12 pulses/min repetition time			

7.3.3	TABLE: Impulse test		N/A
test voltage applied between:	Number of pulses [1)]	Uc (kV)	breakdown Yes / No
	10	5	
supplementary information			
1) 10 impulses with alternating polarity and 60s pause between the pulses			

A.2.6	TABLE: flammability test for classifying materials V-0, V-1 or V-2	N/A
sample No. / ref.	afterflame time (s) t_1 or t_2	afterflame + afterglow (s) after 2nd flame application $t_2 + t_3$
1/A		
2/A		
3/A		
supplementary information:		
Total afterflame time (s) for any condition set $t_1 + t_2$ for five (5) specimens:		
Conditioning "A" designates 7 days at 70 °C ± 1 °C		

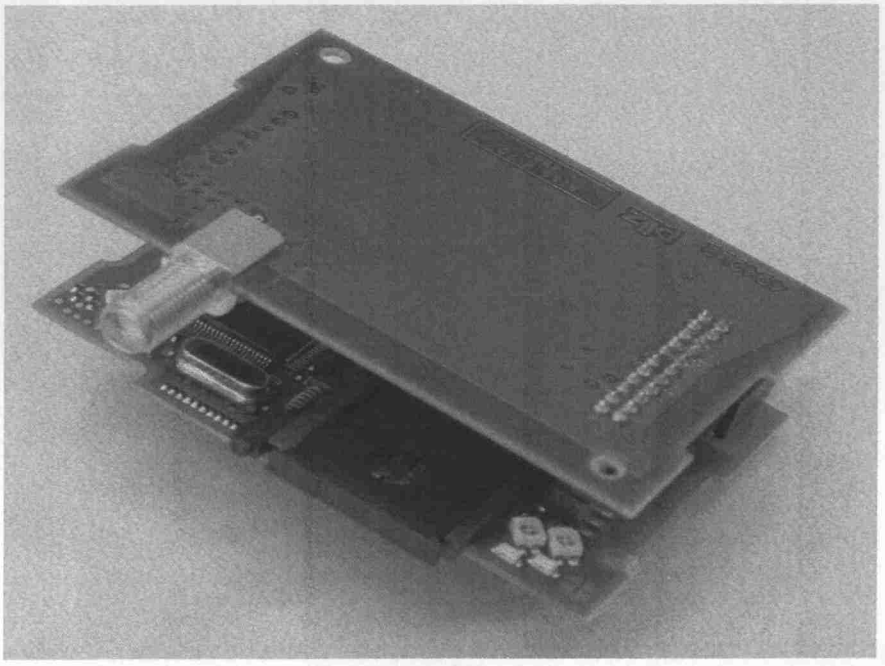
A.2 7	TABLE: flammability re-test for classifying materials HB		N/A
sample	Test temperature	Result	Flame
supplementary information:			

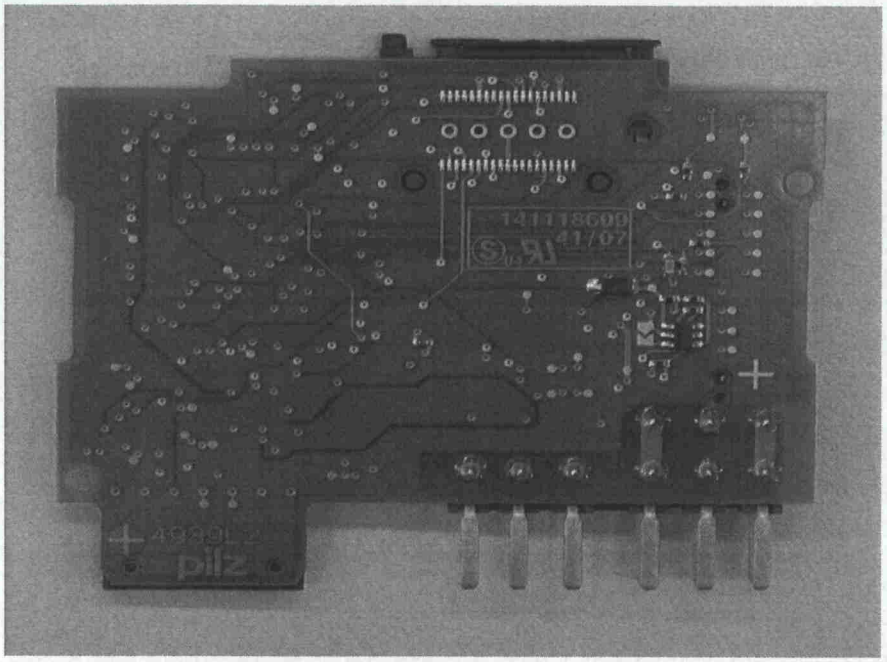
List of test equipment

Number	Equipment	Manufacturer	Type	Serial number	Calibration [Y/N]	Calibration next
SAF-0012	Multimeter	HP	3457A	2505A00166	Y	09.11.08
SAF-0021	Digital caliper	Mitutoyo	CD-6"C	052844	Y	07.04.08
SAF-0023	Digitizing oscilloscope	Tektronix	THS 720 P	B052759	Y	26.11.08
SAF-0024	Micro meter caliper	RS	0-25 mm	2609	Y	07.04.08
SAF-0025	Push & pull dynamometer	PTL	P 10.34	9908313.1	Y	17.12.08
SAF-0035	Test finger	PTL	P 10.14	9908304.3	Y	21.04.08
SAF-0036	Push & pull dynamometer lin.	PTL	P 10.36	9908313.2	Y	17.12.08
SAF-0037	Push & pull dynamometer lin.	PTL	P 10.37	9909324	Y	17.12.08
SAF-0038	Test finger with dyn.met. lin.	PTL	P 10.48	9908304.4	Y	10.08.08
SAF-0066	Multimeter	HP	3457A	2703a03056	Y	04.12.08
SAF-0083	Temperature recorder	HuDe	TC300	4181/01	Y	21.02.08
SAF-0099	Multimeter	HP	3478A	2619A32223	Y	19.04.08
SAF-0100	Multimeter	HP	3478A	2911A61622	Y	15.03.08
SAF-0104	DC Power Supply	Zentro-Elektrik	ZPS3/96/35	90107325-00	N	---
SAF-0183	DC Power Supply	Zentro-Elektrik	LD50/10 GB	9010610403	N	---

Annex 1: Photo documentation

PSSu WB S IDN

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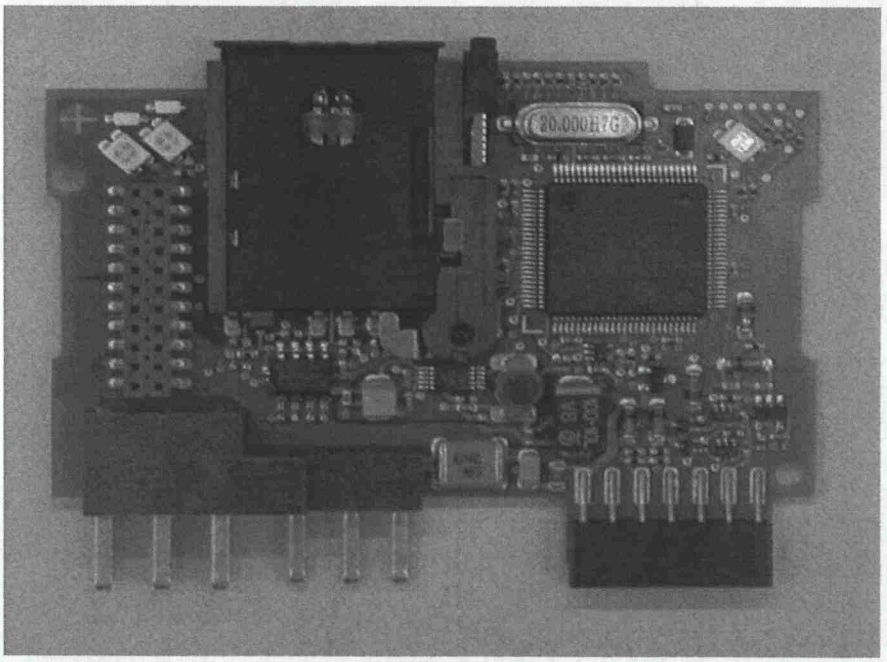
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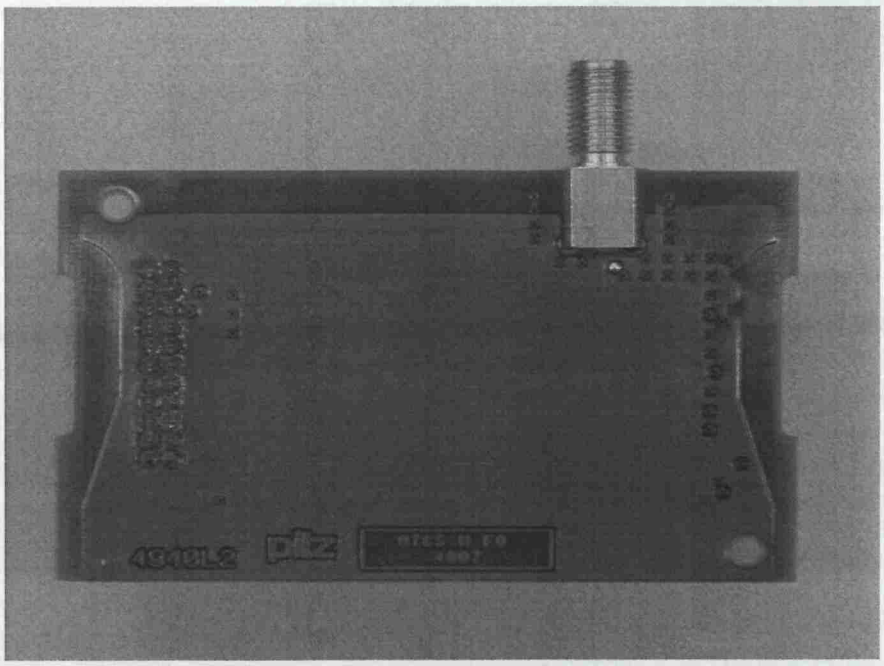
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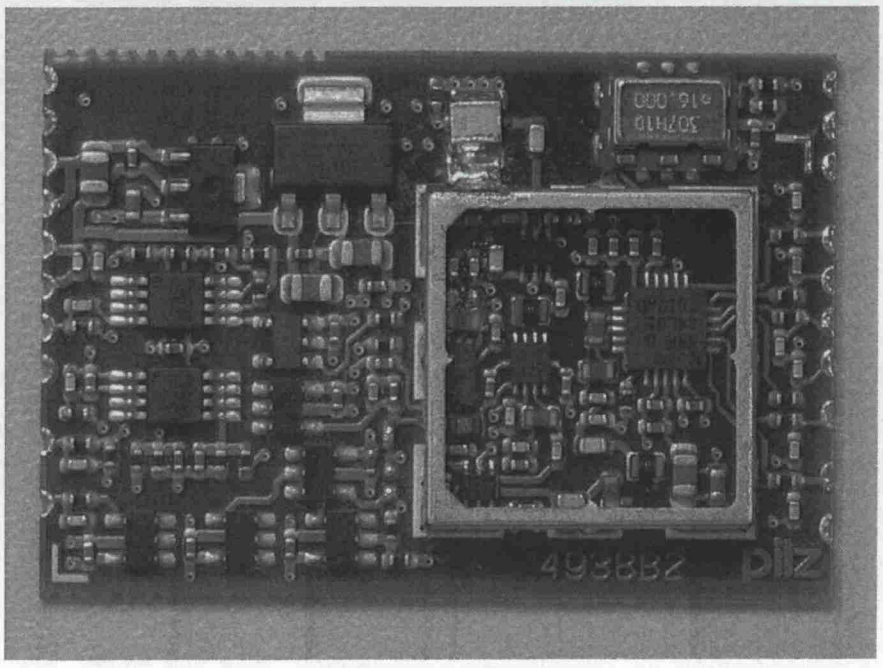
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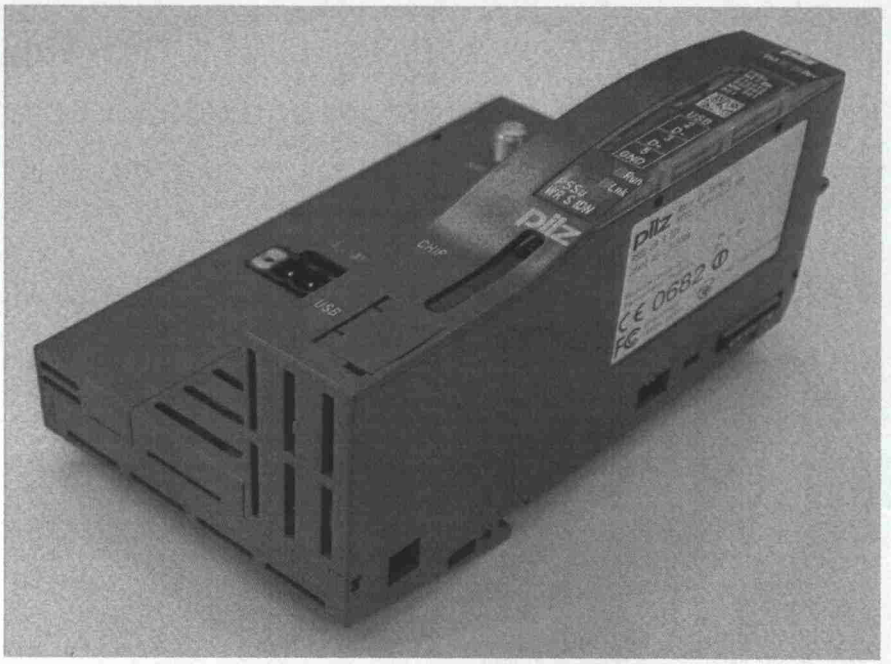

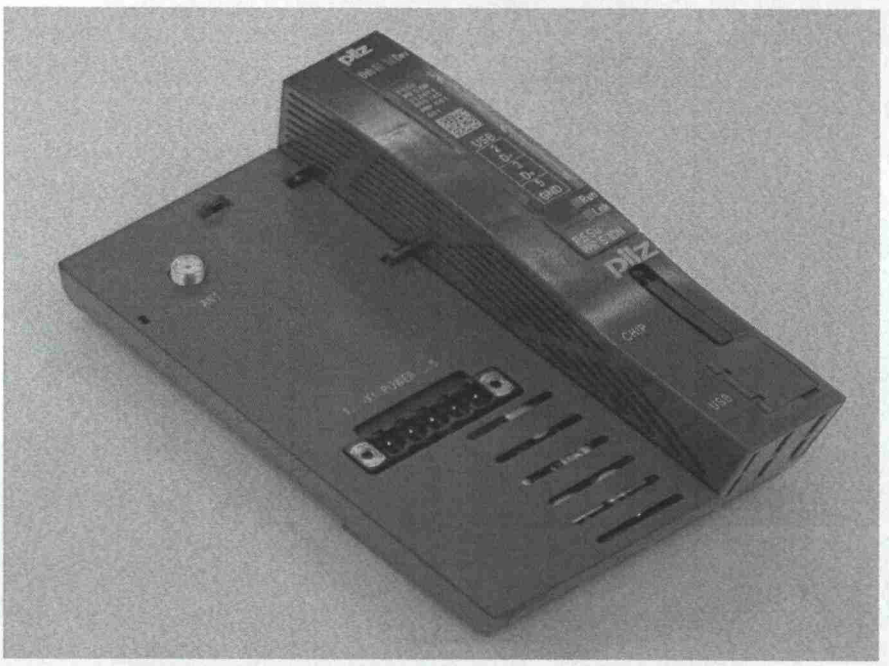

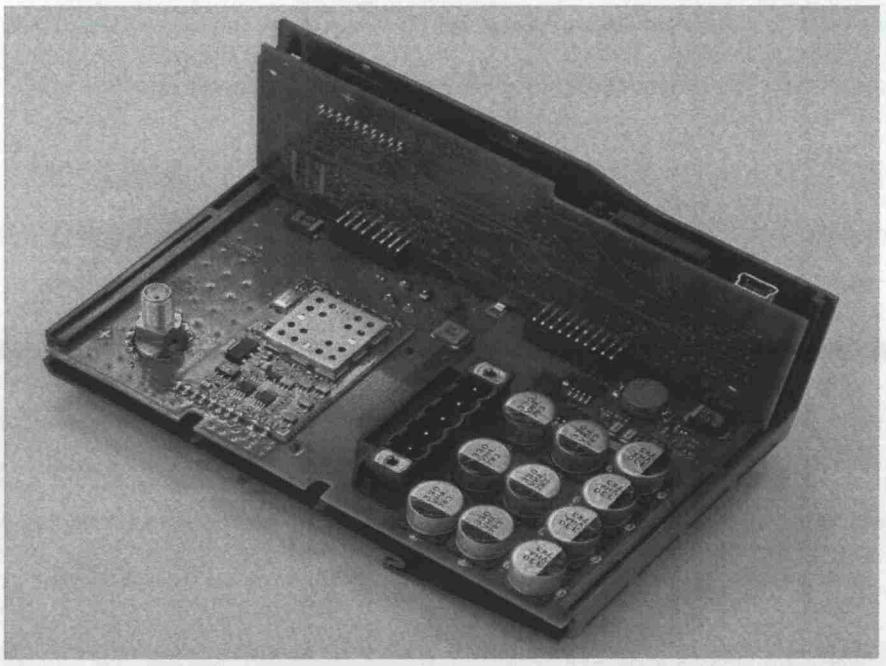

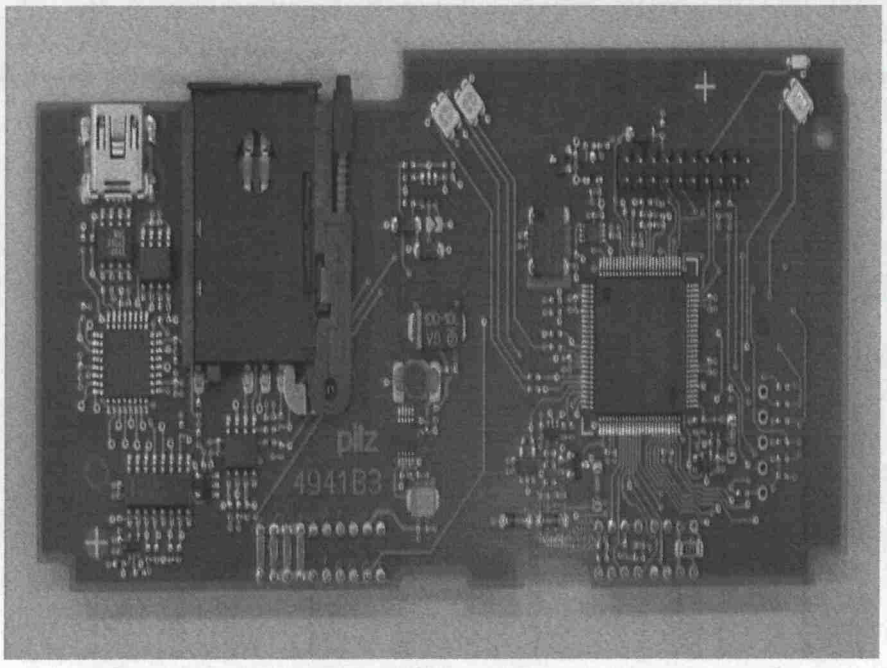
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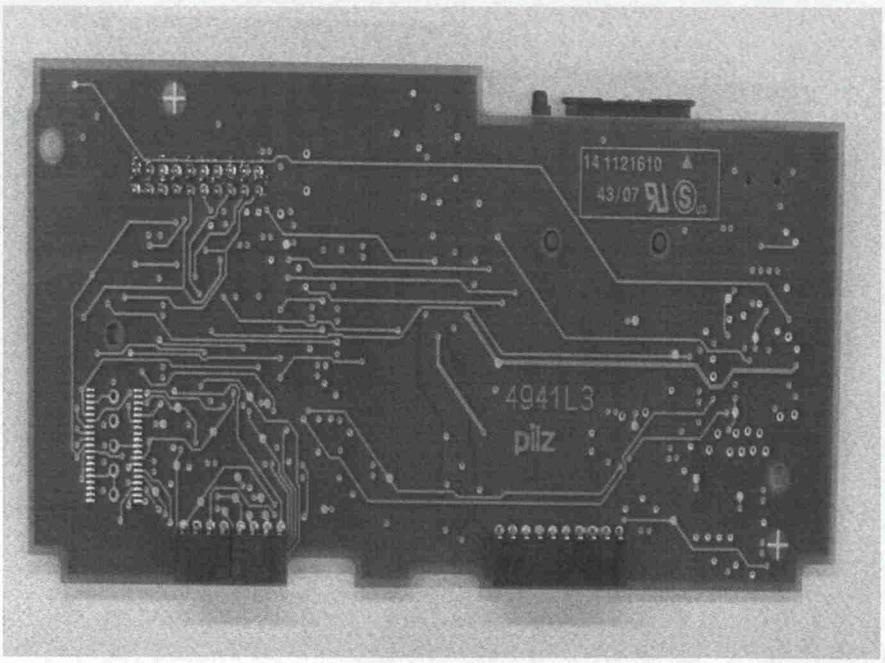
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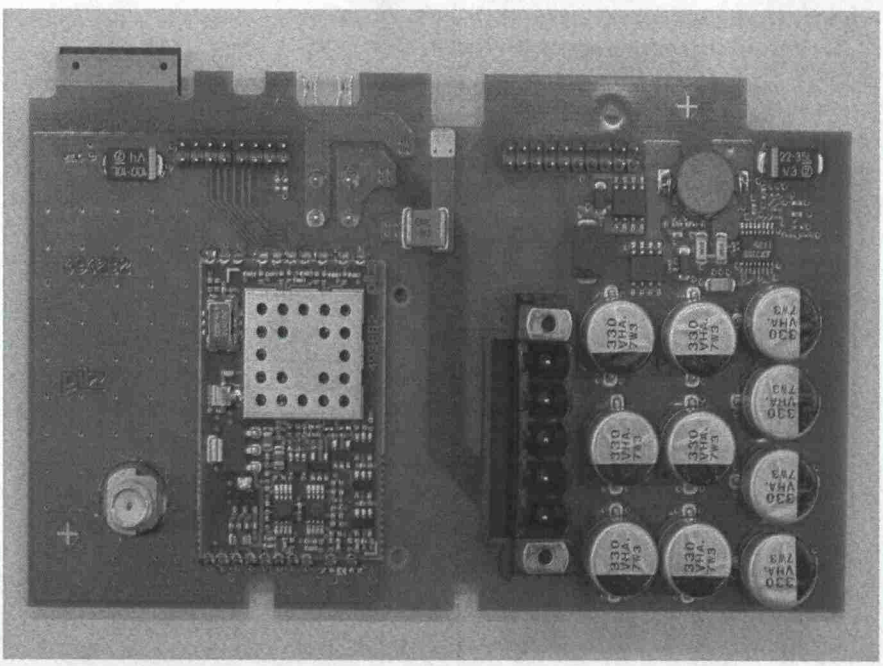
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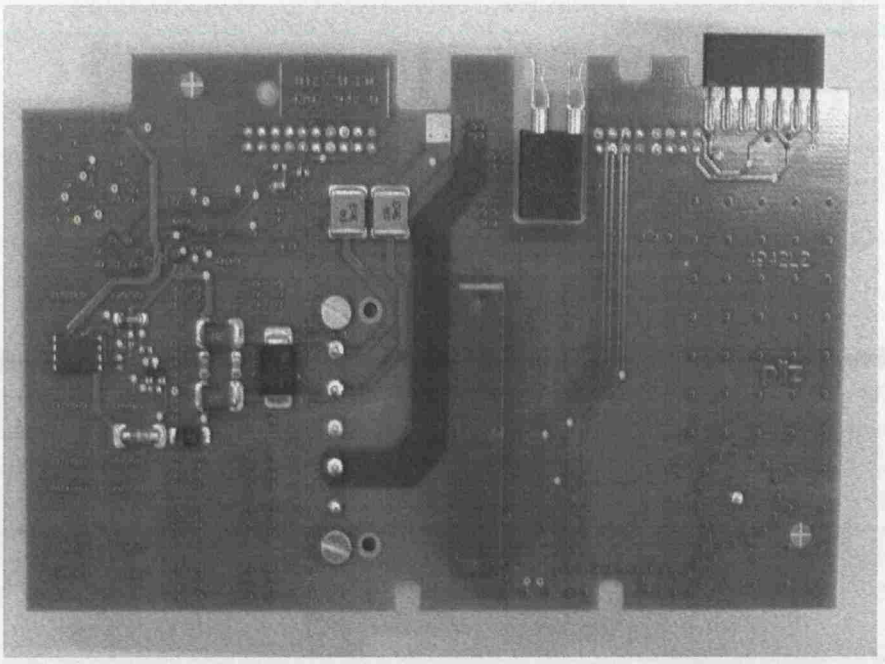

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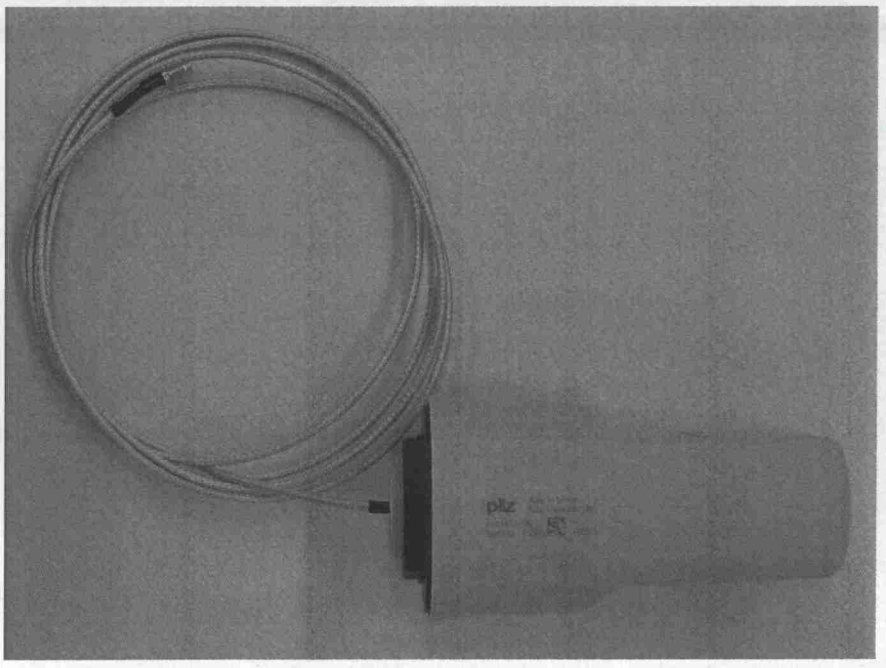

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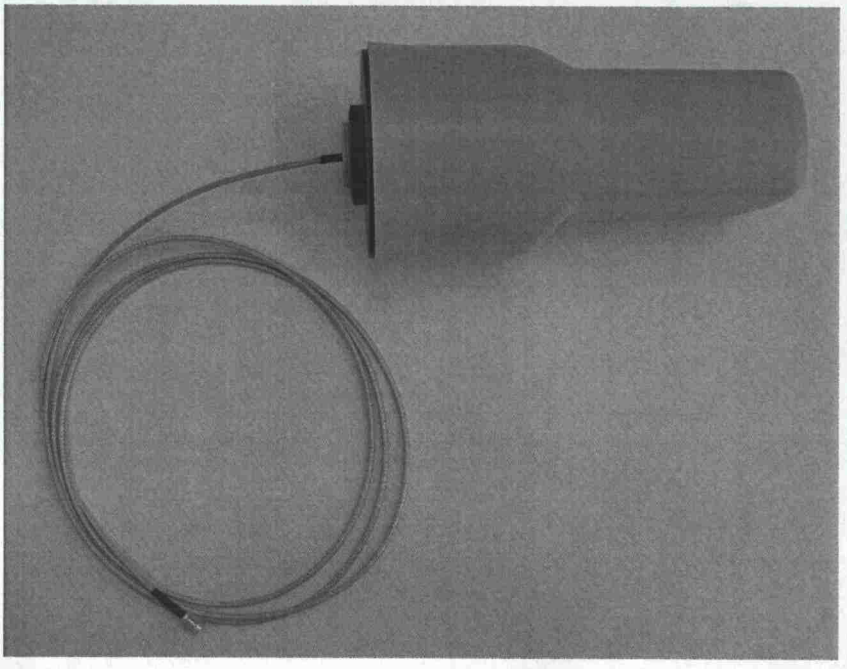

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in Canada (CA) **CB Bulletin No. 112A December 2006**			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	Considered	P
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	No pluggable equipment	N/A
1.5.1	Components of equipment must be suitable for the application, and must comply with the requirements of the equipment standard and the applicable national (Canadian and/or U.S.) component or material standards, as far as they may apply. The acceptance will be based on the following: I) A component Certified by a Canadian or U.S. National Certification Body (NCB) to a Canadian or U.S. component standard will be checked for correct application and use in accordance with its specified rating. Where necessary, it will also be subject to the applicable tests of the equipment standard. J) A component, which has a CB Test Certificate for compliance with a relevant IEC component standard, will be checked for correct application and use in accordance with ist specified ratings. Where necessary, it will also be subject to the applicable tests of the equipment standard, and to the applicable tests of the Canadian and/or U.S. component or material standard, under the conditions occurring in the equipment. K) A component, which has no approval as in A) or B) above or which is used not in accordance with its specified ratings, will be subject to the applicable tests of the equipment standard, and to the applicable tests of the Canadian and/or U.S. component or material standard, under the conditions occurring in the equipment. L) Some components may require annual re-testing, which may be carried out by the manufacturer, CSA International or another laboratory		P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g. DP, CL2) specified in the NEC. For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC are required to have special construction features and identification markings.	No interconnecting cables	N/A
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings. A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and if it is part of a range that extends into the Table 2 "Normal Operating Conditions." Likewise, a voltage rating shall not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."	No connection to AC mains supply	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in Canada (CA) CB Bulletin No. 112A December 2006			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vpeak or 60 Vd.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.	No TNV-2 and TNV-3 circuits	N/A
2.3.2	In the event of a single fault, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.	Considered	P
2.5	Where a fuse is used to provide Class 2, Limited Power Source, or TNV current limiting, it shall not be operator-accessible unless it is not interchangeable.	No fuse	N/A
2.6.3.3	When subject to impedance testing, protective earthing and bonding are required to be subjected to the additional test conditions specified.	Class III equipment	N/A
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets, receptacles and medium-base or smaller lampholders if the supply branch circuit protection is not suitable. Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require transformer overcurrent protection.	No primary circuit	N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains shall be in accordance with the NEC/CEC.	No connection to AC mains supply	N/A
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.	Power supply cords are not a part of EUT	N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instructions requirements.	No connection to a centralized DC power system	N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not permitted, except for certain equipment, such as ATMs.	Not permanently connected to mains supply	N/A
3.2.5	Power supply cords are required to be no longer than 4.5 m in length. Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.	No power supply cord	N/A
3.2.9	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.	Not permanently connected	N/A
3.3	Wiring terminals and associated spacings for field wiring connections shall comply with CSA C22.2 No. 0.	No power supply cord	
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm^2).	No binding screws	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in Canada (CA) CB Bulletin No. 112A December 2006			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for US /Canadian wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).	Considered	P
3.4.2	Motor control devices are required for cord-connected equipment with a motor if the equipment is rated more than 12 A, or if the motor has a nominal voltage rating greater than 120 V, or is rated more than 1/3 hp (locked rotor current over 43 A).	No motors	N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position.	No such parts	N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the computer room remote power-off circuit.	No batteries	N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more are required to reduce the risk of injury due to the implosion of the CRT.	No CRT	N/A
4.3.2	Equipment with handles is required to comply with special loading tests.	No handles	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.	No flammable liquid	N/A
4.3.13	Equipment with lasers is required to meet the Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No lasers	N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 27 cubic feet are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.	No such parts	N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m2 or a single dimension greater than 1.8 m are required to have a flame spread rating of 50 or less. For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.	No such parts	N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.	No connection to telecommunication networks	N/A
6.2.1	Enamel coating on winding wire not considered electrical separation unless subjected to special investigation.	No such parts	N/A
6.4	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.	No connection to telecommunication network	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in Canada (CA) CB Bulletin No. 112A December 2006			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
6.5	Equipment connected to a telecommunications network and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure tests.	No connection to telecommunication network	N/A
M.2	Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.	No telephone ringing signals	N/A
Annex H	Equipment that produces ionizing radiation is required to comply with the Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No equipment that produces ionizing radiations	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in Germany (DE) CB Bulletin No. 112A December 2006			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
1.7.12	(Gesetz über technische Arbeitsmittel (Gerätesicherheitsgesetz) [Law on technical labour equipment {Equipment safety law}], of 23 rd October 1992, Article 3, 3 rd paragraph, 2 nd sentence, together with the "Allgemeine Verwaltungsvorschrift zur Durchführung des Zweiten Abschnitts des Gerätesicherheitsgesetzes" [General administrative regulation on the execution of the Second Section of the Equipment safety law], of 10 th January 1996, article 2, th paragraph, item 2). Directions for use with rules to prevent certain hazards for (among others) maintenance of the technical labour equipment, also for imported technical labour equipment shall be written in the German language. NOTE Of this requirement, rules for use even only by service personnel are not exempted.	In service manual	P
Annex H	Regulation on protection against hazards by X-ray, of 8 th January 1987, Article 5 [Operation of X-ray emission source], clauses 1 to 4) a) A licence is required by those who operate an X-ray emission source. b) A licence in accordance with clause 1 is not required by those who operate an X-ray emission source on which the electron acceleration voltage does not exceed 20 kV if 1) the local dose rate at a distance of 0,1 m from the surface does not exceed 1 _ Sv/h, and 2) it is adequately indicated on the X-ray emission source that	No radiation	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in Germany (DE) CB Bulletin No. 112A December 2006			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
	i) X-rays are generated, and ii) the electron acceleration voltage must not exceed the maximum value stipulated by the manufacturer or importer. c) A licence in accordance with clause 1 is also not required by persons who operate an X-ray emission source on which the electron acceleration voltage exceeds 20 kV if		
	1) the X-ray emission source has been granted a type approval, and 2) it is adequately indicated on the X-ray emission source that i) X-rays are generated, ii) the device stipulated by the manufacturer or importer guarantees that the maximum permissible local dose rate in accordance with the type approval is not exceeded, and iii) the electron acceleration voltage must not exceed the maximum value stipulated by the manufacturer or importer. d) Furthermore, a licence in accordance with clause 1 is also not required by persons who operate X-ray emission sources on which the electron acceleration voltage does not exceed 30 kV if 1) the X-rays are generated only by intrinsically safe CRTs complying with Enclosure III, No. 6, 2) the values stipulated in accordance with Enclosure III, No. 6.2 are limited by technical measures and specified in the device, and 3) it is adequately indicated on the X-ray emission source that the X-rays generated are adequately screened by the intrinsically safe CRT.	No radiation	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in Denmark (DK) CB Bulletin No. 112A December 2006			
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.	Class III equipment	N/A
1.7.2	Denmark (Heavy Current Regulations) Supply cords of CLASS I EQUIPMENT, which is delivered without a plug, must be provided with a visible tag with the following text: If essential for the safety of the equipment, the tag must in addition be provided with a diagram, which shows the connection of the other conductors, or be provided with the following text: "For tilslutning af de øvrige ledere, se medfølgende installationsvejledning."	Class III equipment	N/A
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.	No socket-outlet for providing power to other equipment	N/A
	Denmark (Heavy Current Regulations) CLASS II EQUIPMENT shall not be fitted with socket-outlets for providing power to other equipment.	No socket-outlet for providing power to other equipment	N/A
3.2.1.1	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. 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.	Class III equipment	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in Finland (FI) CB Bulletin No. 112A December 2006			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
1.7.2	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 the applicable countries shall be as follows: "Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan "	Class III equipment	N/A
6.1.2.1	In Finland, add the following text between the first and second paragraph: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.7 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2. A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950:2000, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 132400; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400, in the sequence of tests as described in EN 132400.	Class III equipment	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in Finland (FI) CB Bulletin No. 112A December 2006			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
6.1.2.2	In Finland, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a service person.	Class III equipment	N/A
7.1	In Finland, requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply with the term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.	No connection to cable distribution systems	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in Great Britain (GB) CB Bulletin No. 112A December 2007			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
2.6.3.3	In the United Kingdom, the current rating of the circuit shall be taken as 13 A, not 16 A.	Class III equipment	N/A
2.7.1	In the United Kingdom, to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUGIN EQUIPMENT, protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT. 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.	Considered	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.	Considered	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 mm2 nominal cross-sectional area.	Class III equipment	N/A
4.3.6	In the United Kingdom, the torque test is performed using a socket outlet complying with BS 1363 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, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125°C.	Class III equipment	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in Norway (NO) CB Bulletin No. 112A December 2006			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
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).	Class III equipment	N/A
1.7.2	In Norway, 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: "Apparatet må tilkoples jordet stikkontakt"	Class III equipment	N/A
2.2.4	In Norway, requirements according to this annex, 1.7.2 and 6.1.2.1 apply.	Class III equipment	N/A
2.3.2	In Norway, requirements according to this annex, 6.1.2.1 apply.	Class III equipment	N/A
2.3.3	In Norway, requirements according to this annex, 1.7.2 and 6.1.2.1 apply.	Class III equipment	N/A
2.3.4	In Norway, requirements according to this annex, 1.7.2 and 6.1.2.1 apply.	Class III equipment	N/A
2.10.3.1	In Norway, due to the IT power distribution system used (see annex V, Figure V.7), the A.C. MAINS SUPPLY voltage is considered to be equal to the line-to-line voltage and will remain at 230 V in case of a single earth fault.	No connection to AC mains supply	N/A
6.1.2.1	In Norway, add the following text between the first and second paragraph: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition	Class III equipment	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in Norway (NO) CB Bulletin No. 112A December 2006			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
	- passes the tests and inspection criteria of 2.10.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.7 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.		
	It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2. A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950:2000, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 132400; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400, in the sequence of tests as described in EN 132400.		
6.1.2.2	In Norway, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a service person.	Class III equipment	N/A
7.1	In Norway, requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply with the term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.	No connection to cable distribution systems	N/A
G.2.1	In Norway, due to the IT power distribution system used (see annex V, Figure V.7), the A.C. MAINS SUPPLY voltage is considered to be equal to the line-to-line voltage, and will remain at 230 V in case of a single earth fault.	Considered	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in Sweden (SE) CB Bulletin No. 112A December 2006			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
1.5.1	The following is added: (Ordinance (1990:944) NOTE - In Sweden, switches containing mercury such as thermostates, relays and level controllers are not allowed.	No switches containing mercury such as thermostats, relays and level controllers	P
1.7.2	The following text is added: - In 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 shall be in Swedish and as follows: "Apparaten skall anslutas till jordat uttag."	Class III equipment	N/A
6.1.2.1	The following text is added: - In Sweden the following text is added between the first and second paragraph: In Sweden, if this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that clearances and creepage distances do not exist, if the component passes the electric strength test in the accordance with the compliance clause below and in addition: - passes the test and inspection criteria of IEC 60950-1, 2.10.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of IEC 60950-1, 2.10.7 shall be performed using 1,5 kV); and - is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5 kV. It is permitted to bridge this insulation with a capacitor complying with IEC 60384-14:1993, subclass Y2. A capacitor classified Y3 according to IEC 60384-14:1993, may bridge this insulation under the following conditions: The insulation requirements are satisfied by having a capacitor classified Y3 as defined by IEC 60384-14, which in addition to the Y3 testing, is tested with an Impulse test of 2.5kV defined in IEC 60950-1, subclause 6.2.2.1. The additional testing shall be performed on all the test specimens as described in IEC 60384 -14. The Impulse test of 2.5kV is to be performed before the Endurance Test in IEC 60384 -14 in the sequence of tests as described in IEC 60384-14.	Class III equipment	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in Sweden (SE) CB Bulletin No. 112A December 2006			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
6.1.2.2	The following text is added: In Sweden the exclusions are applicable only 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 SERVICE PERSON.	Class III equipment	N/A
7.1	In Sweden requirements according to the Swedish deviations to 6.1.2.1 and 6.1.2.2 apply. The term "TELECOMMUNICATION NETWORK" in 6.1.2 is replaced by "CABLE DISTRIBUTION SYSTEM".	No connection to cable distribution systems	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in the United States of America (US) CB Bulletin No. 112A December 2006			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
1.1.1	All equipment is to be designed to allow installation in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, the Canadian Electrical Code (CEC), Part I, CAN/CSA C22.1, and when applicable, the National Electrical Safety Code, IEEE C2. Also, unless marked or otherwise identified, installation is allowed per the Standard for the Protection of Electronic Computer/Data-Processing Equipment, ANSI/NFPA 75.	Considered	P
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20A.	No plug-in equipment	N/A
1.5.1	Some components and materials associated with the risk of fire, electric shock, or personal injury are required to have component or material ratings in accordance with the applicable national (U.S. and Canadian) component or material requirements. These components include: attachment plugs, battery packs (rechargeable type, used with transportable equipment), cathode ray tubes, circuit breakers, communication circuit accessories, connectors (used for current interruption of non-LPS circuits), cord sets and power supply cords, direct plug-in equipment, enclosures (outdoor), flexible cords and cables, fuses (branch circuit), fuseholders, ground-fault current interrupters, industrial control equipment, insulating tape, interconnecting cables, lampholders, limit controls, printed wiring, protectors for communications circuits, receptacles, solid state controls, supplementary protectors, surge suppressors, switches (including interlock switches), thermal cutoffs, thermostats, multi-layer transformer winding wire, tubing, wire connectors, and wire and cables.	Considered	P
1.5.5	For lengths exceeding 3.05 m, external interconnecting flexible cord and cable assemblies are required to be a suitable cable type (e.g. DP, CL2) specified in the NEC. For lengths 3.05 m or less, external interconnecting flexible cord and cable assemblies that are not types specified in the NEC are required to have special construction features and identification markings.	No interconnecting cables	N/A
1.7.1	Equipment for use on a.c. mains supply systems with a neutral and more than one phase conductor (e.g. 120/240 V, 3-wire) require a special marking format for electrical ratings. A voltage rating that exceeds an attachment plug cap rating is only permitted if it does not exceed the extreme operating conditions in Table 2 of CAN/CSA C22.2 No. 235, and if it is part of a range that extends into the Table 2 "Normal Operating Conditions." Likewise, a voltage rating shall not be lower than the specified "Normal Operating Conditions," unless it is part of a range that extends into the "Normal Operating Conditions."	No connection to AC mains supply	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in the United States of America (US) CB Bulletin No. 112A December 2006			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
2.3.1	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vpeak or 60 Vd.c., the maximum acceptable current through a 2000 ohm resistor (or greater) connected across the voltage source with other loads disconnected is 7.1 mA peak or 30 mA d.c. under normal operating conditions.	No TNV-2 and TNV-3 circuits	N/A
2.3.2	In the event of a single fault, the limits of 2.2.3 apply to SELV Circuits and accessible conductive parts.	Considered	P
2.5	Where a fuse is used to provide Class 2, Limited Power Source, or TNV current limiting, it shall not be operator-accessible unless it is not interchangeable.	No fuse	N/A
2.6.3.4	When subject to impedance testing, protective earthing and bonding are required to be subjected to the additional test conditions specified.	Class III equipment	N/A
2.7.1	Suitable NEC/CEC branch circuit protection rated at the maximum circuit rating is required for all standard supply outlets, receptacles and medium-base or smaller lampholders if the supply branch circuit protection is not suitable. Power distribution transformers distributing power at 100 volts or more, and rated 10 kVA or more, require transformer overcurrent protection.	No primary circuits	N/A
3.2	Wiring methods (terminals, leads, etc.) used for the connection of the equipment to the mains shall be in accordance with the NEC/CEC.	No connection to AC mains supply	N/A
3.2.1	Power supply cords are required to have attachment plugs rated not less than 125 percent of the rated current of the equipment.	Power supply cords are not a part of EUT	N/A
3.2.1.2	Equipment connected to a centralized d.c. power system, and having one pole of the DC mains input terminal connected to the main protective earthing terminal in the equipment, is required to comply with special earthing, wiring, marking and installation instruction requirements.	No connection to a centralized DC power system	N/A
3.2.3	Permanent connection of equipment to the mains supply by a power supply cord is not 2 permitted, except for certain equipment, such as ATMs.	Not permanently connected to mains supply	N/A
3.2.5	Power supply cords are required to be no longer than 4.5 m in length. Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.	Power supply cords are not a part of EUT	N/A
3.2.9	Permanently connected equipment is required to have a suitable wiring compartment and wire bending space.	Not permanently connected	N/A
3.3	Wiring terminals and associated spacings for field wiring connections shall comply with CSA C22.2 No. 0.	No field wiring connections	N/A
3.3.3	Wire binding screws are not permitted to attach conductors larger than 10 AWG (5.3 mm 2).	No binding screws	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in the United States of America (US) CB Bulletin No. 112A December 2006			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
3.3.4	Terminals for permanent wiring, including protective earthing terminals, are required to be suitable for U.S./Canadian wire gauge sizes, rated 125 percent of the equipment rating, and be specially marked when specified (1.7.7).	Considred	P
3.4.2	Motor control devices are required for cord-connected equipment with a motor if the equipment is rated more than 12 A, or if the motor has a nominal voltage rating greater than 120 V, or is rated more than 1/3 hp (locked rotor current over 43 A).	No motors	N/A
3.4.8	Vertically-mounted disconnect switches and circuit breakers are required to have the "on" position indicated by the handle in the up position.	No such parts	N/A
3.4.11	For computer room applications, equipment with battery systems capable of supplying 750 VA for five minutes are required to have a battery disconnect means that may be connected to the computer room remote power-off circuit.	No batteries	N/A
4.2.8.1	Enclosures around CRTs with a face diameter of 160 mm or more are required to reduce the risk of injury due to the implosion of the CRT.	No CRT	N/A
4.3.2	Equipment with handles is required to comply with special loading tests.	No handles	N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment is required to comply with NFPA 30.	No flammable liquid	N/A
4.3.13	Equipment with lasers is required to meet the Code of Federal Regulations 21 CFR 1040 (and the Canadian Radiation Emitting Devices Act, REDR C1370).	No lasers	N/A
4.7	For computer room applications, automated information storage systems with combustible media greater than 27 cubic feet are required to have a provision for connection of either automatic sprinklers or a gaseous agent extinguishing system with an extended discharge.	No such parts	N/A
4.7.3.1	For computer room applications, enclosures with combustible material measuring greater than 0.9 m 2 or a single dimension greater than 1.8 m are required to have a flame spread rating of 50 or less. For other applications, enclosures with the same dimensions require a flame spread rating of 200 or less.	No such parts	N/A
5.1.8.3	Equipment intended to receive telecommunication ringing signals is required to comply with a special touch current measurement tests.	No such parts	N/A
6.2.1	Enamel coating on winding wire not considered electrical separation unless subjected to special investigation.	No such parts	N/A
6.4	Equipment intended for connection to telecommunication network outside plant cable is required to be protected against overvoltage from power line crosses in accordance with 6.4 and Annex NAC.	No connection to telecommunication network	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Variations to IEC 60950-1: 2001 for application in the United States of America (US) CB Bulletin No. 112A December 2006			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
6.5	Equipment connected to a telecommunications network and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure tests. M.2 Continuous ringing signals up to 16 mA only are permitted if the equipment is subjected to special installation and performance restrictions.	No ringing telephone signals	N/A
Annex H	Equipment that produces ionizing radiation is required to comply with the Code of Federal Regulations, 21 CFR 1020 (and the Canadian Radiation Emitting Devices Act, REDR C1370). 3	No equipment that produces ionizing radiations	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Group Differences to IEC 60950-1: 2001 CB Bulletin No. 112A December 2006			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
General	Delete all the "country" notes in the reference document according to the following list: 1.5.1 Note 2 1.5.8 Note 2 1.6.1 Note 1.7.2 Note 4 1.7.12 Note 2 2.1 Note 2.2.3 Note 2.2.4 Note 2.3.2 Note 2, 7, 8 2.3.3 Note 1, 2 2.3.4 Note 2, 3 2.7.1 Note 2.10.3.1 Note 4 3.2.1.1 Note 3.2.3 Note 1, 2 3.2.5.1 Note 2 4.3.6 Note 1, 2 4.7.2.2 Note 4.7.3.1 Note 2 6.1.2.1 Note 6.1.2.2 Note 6.2.2 Note 6.2.2.1 Note 2 6.2.2.2 Note 7 Note 4 7.1 Note G2.2 Note 1, 2 Annex H Note 2		P
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building 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.	Considered.	N/A
2.7.2	This subclause has been declared 'void'.	Considered	N/A
2.10.2	Replace in the first line "(see also 1.4.7)" by "(see also 1.4.8)".	Considered	N/A
3.2.3	Delete Note 1 and in Table 3A, delete the conduit sizes in parentheses.	Considered	N/A

Annex 2: National deviation according IEC 60950-1: 2001			
Group Differences to IEC 60950-1: 2001 CB Bulletin No. 112A December 2006			
Clause	**Requirement – Test**	**Result - Remark**	**Verdict**
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[1)] Over 6 up to and including 10 (0,75)[2)] 1,0 Over 10 up to and including 16 (1,0)[3)] 1,5 In the Conditions applicable to Table 3B delete the words "in some countries" in condition [1)]. In Note 1, applicable to Table 3B, delete the second sentence.	Considered	N/A
3.3.4	In table 3D, delete the fourth line: conductor sizes for 10 to 13A, 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.	Considered	N/A
4.3.13.6	C, G: Add the following note: NOTE: Attention is drawn to 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz. Standards taking into account this recommendation are currently under development.	Considered	N/A
Annex H	C, G: 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.	No radiation	N/A
Annex P	Replace the text of this annex by: See annex ZA.	Considered	N/A
Annex Q	Replace the title of IEC 61032 by "Protection of persons and equipment by enclosures – Probes for verification". Add the following notes for the standards indicated: IEC 60127 NOTE Harmonized as EN 60127 (Series) (not modified) IEC 60269-2-1 NOTE Harmonized as HD 630.2.1 S4:2000 (modified) IEC 60529 NOTE Harmonized as EN 60529:1991 (not modified) IEC 61032 NOTE Harmonized as EN 61032:1998 (not modified) IEC 61140 NOTE Harmonized as EN 61140:2001 (not modified) ITU-T Recommendation K.31 NOTE In Europe, the suggested document is EN 50083-1.		N/A