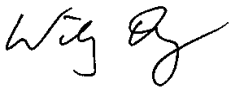
TEST REPORT
IEC 61010-1
Safety requirements for electrical equipment for measurement, control, and laboratory use
Part 1: General requirements

Report Number.	361262
Date of issue	January 10, 2019
Total number of pages	89
Applicant's name	ProSoft Technology Inc.
Address	9201 Camino Media #200, Bakersfield, CA 93311, United States
Test specification:	
Standard	IEC 61010-1:2010 (Third Edition)
Test procedure	CB Scheme
Non-standard test method	N/A
Test Report Form No.	IEC61010_1J
Test Report Form(s) Originator	VDE Testing and Certification Institute
Master TRF	2013-11

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

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

Test item description	Multidrop Field Devices
Trade Mark	ProSoft TECHNOLOGY
Manufacturer	Same as Applicant
Model/Type reference	PLX51-PBS and PLX51-PBM (All models may also include an additional suffix (-CC) to designate conformal coated PCB's)
Ratings	200 mA Max, 10-36 Vd.c.

Testing procedure and testing location:		
☒ CB Testing Laboratory:	Nemko USA, Inc.	
Testing location/ address..... :	2210 Faraday Avenue, Suite 150, Carlsbad, CA 92008, USA	
☐ Associated CB Laboratory:		
Testing location/ address..... :		
Tested by (name + signature) ..... :	Willy Ong (Project Handler)	
Approved by (name + signature) ..... :	Jungju Kim (Verificator)	
☐ Testing procedure: TMP		
Testing location/ address..... :		
Tested by (name + signature) ..... :		
Approved by (name + signature) ..... :		
☐ Testing procedure: WMT		
Testing location/ address..... :		
Tested by (name + signature) ..... :		
Witnessed by (name + signature)..... :		
Approved by (name + signature) ..... :		
☐ Testing procedure: SMT		
Testing location/ address..... :		
Tested by (name + signature) ..... :		
Approved by (name + signature) ..... :		
Supervised by (name + signature) .... :		
☐ Testing procedure: RMT		
Testing location/ address..... :		
Tested by (name + signature) ..... :		
Approved by (name + signature) ..... :		
Supervised by (name + signature) .... :		

List of Attachments (including a total number of pages in each attachment)		
Document No.	Documents included / attached to this report (description)	Page No.
1	Photographs.	6 pages
2	National differences for Canada and USA	7 pages
3	National differences for Japan	4 pages
4	National differences for Switzerland	2 pages

Documents referenced by this report (available on request):		
Document Name or No.	Documents description	Page No.
5	User manual (Draft)	140 pages

Summary of testing:

Clause	Comment
General:	The equipment covered in this report is a Multidrop Field Device which is intended for use in industrial control applications. The equipment is a plug-in type fixture- slot connection to an approved and designated DC power supply unit which supplies low voltage, limited energy only. The DC power supply unit is not covered by this test report.
General:	The products covered in this report are component level modules for building-in. A number of tests shall be conducted in the end installation, see appropriate comments in the Results-Remark field under the relevant test clauses.
General:	This investigation does not include evaluation for Hazardous locations (ordinary locations only). Evaluation and certification for use in hazardous locations has been conducted under separate evaluation.
4.4 Testing in single fault conditions	The equipment is a component level module for building-in which is to be connected to a non-hazardous live power source, all internal circuitry including all I/O ports are protected by limited energy level or limited power source. No hazardous live part, cooling feature, moving part, or heating device in the equipment. Therefore, no applicable single fault condition testing has been considered in this test report.
5.4; User Manual	English versions of the user manuals were reviewed. Instructions and marking related to safety shall be in a language acceptable in the country in which the equipment is to be sold.
5.4.1; Documentation	The equipment covered by this report is considered to be a component for building-in, intended to be professionally configured and installed in another manufacturer's end-product equipment. All information necessary for safety shall be provided in printed form by the end-product manufacturer.
5.4.5 Equipment maintenance and Service	The equipment is a component level module for building-in, special safety instruction for servicing and maintenance is not considered necessary. No maintenance or service intended to be done by service personnel in the field. If it is necessary to get the equipment repaired, the equipment is sent to manufacturer to be repaired.

Summary of testing: (continued)	
5.4.4 g) No cleaning instruction. 11.2 Cleaning of the equipment. 11.3 Spillage of the equipment.	The equipment covered by this report is considered to be a component intended to be professionally configured/installed into another manufacturer's end-product equipment. No cleaning instruction is provided in manual. Therefore, testing and evaluation for the requirements of these clauses are not considered necessary. However, additional testing and evaluation may be required based on auditing agency's discretion.
9.4 Limited-energy circuit.	The equipment is intended to be connected to designated DC power supply modules that are specified as limited-energy circuits under normal and single fault condition. They have non-hazardous voltage outputs and also meet the requirements for a Limited Power Source as defined in Clause 2.5 of IEC 60950-1. Therefore, a fire enclosure is not considered necessary. However, the power source units are not covered by this test report. Additional testing and evaluation may be required in the end product based on the auditing agency's discretion.
6.1.1 Connection to supply.	The equipment is a component level module for building-in which is equipped into a separately certified processor rack/controlLogix processor unit which is provided with separately certified, limited energy power supply units (PSU).
10.4 Conduct of temperature tests.	For testing, the equipment under test (EUT) has been installed into the wood box enclosure which is similar size of the end use processor chassis, is powered by a separate DC power supply unit, and is operated continuously under maximum normal load condition.
16 Hazards resulting from application. 17 Risk assessment	The equipment is a component level module for building-in. Therefore, clauses 16 and 17 have not been covered in this test report and they have to be checked in the end product system.

Test Report History: This report may consist of more than one report and is valid only with additional or previous issued reports:	
Ref. No.	Item
—	—

Tests performed (name of test and test clause):	**Testing location:** See page 2.
Input current- clause 5.1.3 Durability of markings- clause 5.3 Determination of accessible parts- clause 6.2 Protection against electric shock- clause 6.3.1 Protection against spread of fire- clause 9 Temperature- clause 10	

Summary of compliance with National Differences

List of countries addressed:

The list of countries recognizing the CB Scheme is actively updated on the cbscheme.org website.

All CENELEC members countries listed in the EN 61010-1:2010 except for Switzerland which are documented in National Differences Appendixes attached to this report.

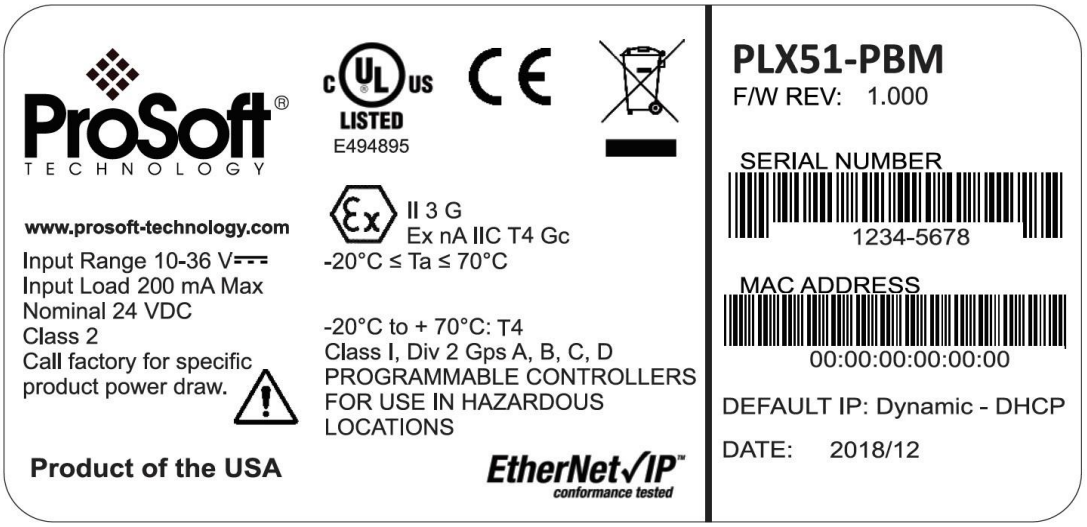
(Note: IEC 61010-1:2010 (Third Edition) was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61010-1 on 2010-10-01 without any modification. This European Standard supersedes EN 61010-1:2001)

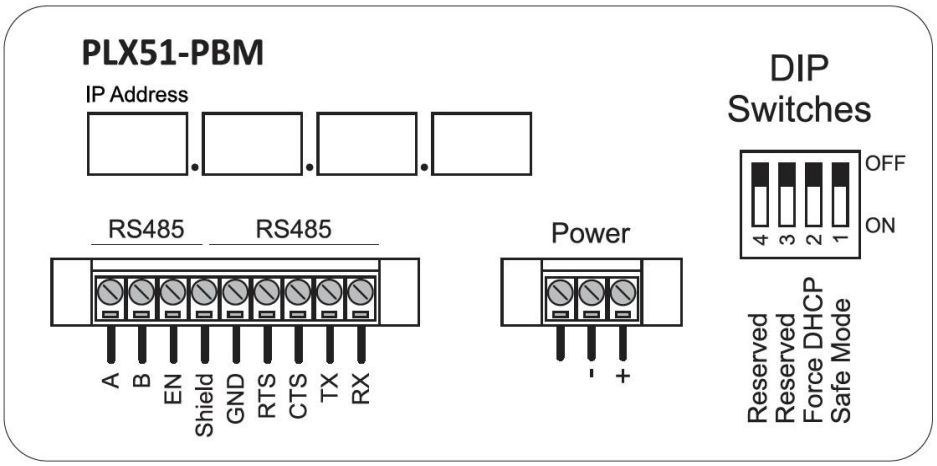
Member countries as listed in the on-line CB bulletin, including Canada, Japan, Switzerland and USA.

☒ **The product fulfils the requirements of all of the above listed national differences.**

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.





Note: There is no difference between models except for model type designation on this label drawing

Test item particulars:	
Type of item ..... :	Multidrop Field Devices
Description of equipment function ..... :	See general product information.
Connection to MAINS supply ..... :	No direct connection to mains supply. To be supplied from the designated DC power supply unit
Overvoltage category ..... :	I
POLLUTION DEGREE ..... :	2
Means of protection ..... :	N/A (supplied by non-hazardous live power source, see summary of testing)
Environmental conditions ..... :	Extended (Specify): Operating temperature: -20˚C to 70˚C Relative Humidity: 5% to 95% with no condensation.
For use in wet locations ..... :	No
Equipment mobility ..... :	Built-in
Operating conditions ..... :	Continuous
Overall size of equipment (W x D x H) ..... :	25 mm x 130 mm x 160 mm
Mass of equipment (kg) ..... :	0.11 kg
Marked degree of protection to IEC 60529 ..... :	IPX0
Possible test case verdicts:	
- Test case does not apply to the test object ..... :	N/A (Not Applicable)
- Test object does meet the requirement ..... :	P (Pass)
- Test object does not meet the requirement ..... :	F (Fail)
Testing:	
Date of receipt of test item ..... :	October 2018
Date (s) of performance of tests ..... :	October 2018

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 Form A.xx)" refers to a table appended to the report.
Bottom lines for measurement tables Form A.xx are optional if used as record.

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

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided..... :	☐ Yes ☒ Not applicable
When differences exist; they shall be identified in the general product information section.	
Name and address of factory (ies) .....:	Aparian, Inc. 24 Twain St., Irvine, CA 92617 United States

Calibration	All instruments used in the tests given in this test report are calibrated and traceable to national or international standards. Further information about traceability will be given on request.
Measurement uncertainty	Measurement uncertainties are calculated for all instruments and instrument set-ups given in this report. Calculations are based on the principles given in the standard EA-4/02 (Dec. 1999), IEC Guide 115:2007, and other relevant internal Nemko-procedures. Further information about measurement uncertainties will be given on request.
Evaluation of results	If not explicitly stated otherwise in the standard, the test is passed if the measured value is equal to or below (above) the limit line, regardless of the measurement uncertainty. If the measured value is above (below) the limit line, the test is not passed - ref IEC Guide 115:2007. The instrumentation accuracy is within limits agreed by IECEE-CTL.

General product information:

Description of unit:

The equipment under test (EUT) is a Multidrop Field Device which is a component level module for building-in.

The equipment is a plug-in type fixture with a connector to an approved and designated DC power supply unit which supplies low voltage, limited energy only. The DC power supply unit is not covered by this test report.

EUT is powered by a non-hazardous voltage level output from an approved designated DC power supply unit as documented in the operator's manual. The following conditions have been considered in this test report.
1. The equipment operates on the low voltage secondary output of the DC power supply unit. Therefore, there are no hazardous voltages in the unit.
2. This investigation does not involve the evaluation of DC power supply unit.
3. This investigation does not include evaluation for use in Hazardous Locations.
4. For testing, the equipment was running manufacturer’s test program simulating maximum load under normal operation.

The equipment consists of one circuit board, input power connector and various I/O ports including Ethernet connector and indicator LEDs, provided in a non-metallic enclosure.

Description of model differences.

Model PLX51-PBS is input device and model PLX51-PBM is output device. Model PLX51-PBS is similar to model PLX51-PBM except for model type designation, minor secondary components, function and software.

Description of special features.
(HV circuits, high pressure systems etc.)

None.

IEC 61010-1			
Clause	Requirement + Test	Result - Remark	Verdict
4	TESTS		N/A
4.4	Testing in SINGLE FAULT CONDITIONS	See summary of testing.	N/A
4.4.1	Fault tests		N/A
4.4.2	Application of SINGLE FAULT CONDITIONS		N/A
4.4.2.1	SINGLE FAULT CONDITIONS not covered by 4.4.2.2 to 4.4.2.14	No additional tests.	—
4.4.2.2	PROTECTIVE IMPEDANCE	No protective impedance used.	N/A
4.4.2.3	PROTECTIVE CONDUCTOR	No protective conductor used.	N/A
4.4.2.4	Equipment or parts for short-term or intermittent operation	Continuously operating equipment and no parts for short-term or intermittent operation in the equipment.	N/A
4.4.2.5	Motors	No motor in the equipment	—
	– stopped while fully energized		N/A
	– prevented from starting		N/A
	– one phase interrupted (multi-phase)		N/A
4.4.2.6	Capacitors	No such capacitors in the equipment.	N/A
4.4.2.7	MAINS transformers	No mains transformer used in the equipment.	N/A
4.4.2.7.2	Short circuit		N/A
4.4.2.7.3	Overload		N/A
4.4.2.8	Outputs	All I/O ports are protected by the limited energy level or limited power source, not considered to be tested. See summary of testing.	N/A
4.4.2.9	Equipment for more than one supply	Equipment has one power supply.	N/A
4.4.2.10	Cooling	The equipment is for building-in, no cooling features provided in the equipment.	—
	– air holes closed		N/A
	– fans stopped		N/A
	– coolant stopped		N/A
	– loss of cooling liquid		N/A
4.4.2.11	Heating devices	No heating devices provided.	N/A
	– timer overridden		N/A
	– temperature controller overridden		N/A

IEC 61010-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.4.2.12	Insulation between circuits and parts	No short circuit test performed for method of Cl.9.1 a).	N/A
4.4.2.13	Interlocks	No safety interlocks in the equipment.	N/A
4.4.2.14	Voltage selectors	No voltage selector in the equipment.	N/A
4.4.3	Duration of tests		—
4.4.4	Conformity after application of fault conditions		N/A
5	MARKING AND DOCUMENTATION		P
5.1.1	Required equipment markings		—
	– visible from the exterior; or	See copy of marking plate.	P
	– visible after removing cover or opening door	See copy of marking plate.	P
	– visible after removal from a rack or panel		N/A
	Not put on parts which can be removed by an operator		P
	Letter symbols (IEC 60027) used	V, mA, Ta, ˚C,	P
	Graphic symbols (IEC 61010-1: Table 1) used	Symbols: 1 and 14 from Table 1	P
5.1.2	Identification		P
	Equipment is identified by:	See below.	—
	a) Manufacturer's or supplier's name or trademark	ProSoft TECHNOLOGY	P
	b) Model number, name or other means	PLX51-PBS and PLX51-PBM (All models may also include an additional suffix (-CC) to designate conformal coated PCB's)	P
	Manufacturing location identified	Only one manufacturing location.	N/A
5.1.3	MAINS supply	No mains connection. However, some markings are provided as indicated below.	N/A
	Equipment is marked as follows:		—
	a) Nature of supply:		—
	1) a.c. RATED MAINS frequency or range of frequencies ..... :	The equipment is supplied from DC power source.	—
	2) d.c. with symbol 1..... :	Symbol 1 of table 1 used on marking plate. Additionally, lettering "DC" may also be used.	—

IEC 61010-1			
Clause	Requirement + Test	Result - Remark	Verdict
	b) RATED supply voltage(s) or range ..... :	10-36 Vd.c.	—
	c) Max. RATED power (W or VA) or input current ..... :	200 mA Max	—
	The marked value not less than 90 % of the maximum value	No mains connection. However, power input test performed, see Form A.2.	P
	If more than one voltage range:		—
	Separate values marked; or		N/A
	Values differ by less than 20 %		N/A
	d) OPERATOR-set for different RATED supply voltages:		—
	Indicates the equipment set voltage	No voltage selecting function.	N/A
	Portable equipment indication is visible from the exterior	The equipment is for building-in, no voltage selecting device.	N/A
	Changing the setting changes the indication	See above.	N/A
	e) Accessory MAINS socket-outlets accepting standard MAINS plugs are marked:	No socket outlets provided.	—
	With the voltage if it is different from the MAINS supply voltage.....:		—
	For use only with specific equipment		N/A
	If not marked for specific equipment it is marked with:	See above.	—
	The maximum rated current or power; or		N/A
	Symbol 14 with full details in the documentation		N/A
5.1.4	Fuses	No fuses provided.	N/A
	Operator replaceable fuse marking (see also 5.4.5).....:		—
5.1.5	TERMINALS, connections and operating devices		P
5.1.5.1	General	See below.	—
	Where necessary for safety, indication of purpose of TERMINALS, connectors, controls and indicators marked	I/O ports are suitably marked. See copy of marking plate.	P
	If insufficient space, symbol 14 used	Symbol No.14 from Table 1 used.	N/A
	Push-buttons and actuators of emergency stop devices and indicators:	Not provided with emergency stop devices or indicators.	—
	– used only to indicate a warning of danger; or		N/A
	– the need for urgent action		N/A
	– coloured red		N/A
	– coded as specified in IEC 60073		N/A

IEC 61010-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Supplementary means of coding provided, if meaning of colour relates (see IEC 60073):		—
	– to safety of persons; or		N/A
	– safety of the environment		N/A
5.1.5.2	TERMINALS	The equipment is not connected to mains, no mains terminal requiring markings under this clause are present. However, all I/O ports are discernible. Also, the instruction of connection is provided in the manual.	—
	MAINS supply TERMINAL identified	No mains connection.	N/A
	Other TERMINAL marking:	See below.	—
	a) FUNCTIONAL EARTH TERMINALS (symbol 5 used)	No functional earth terminals.	N/A
	b) PROTECTIVE CONDUCTOR TERMINALS:	No protective conductor.	—
	Symbol 6 is placed close to or on the TERMINAL; or		N/A
	Part of appliance inlet		N/A
	c) TERMINALS of control circuits (symbol 7 used)	No such terminals in the equipment.	N/A
	d) HAZARDOUS LIVE TERMINALS supplied from the interior	No hazardous terminals.	N/A
	Standard MAINS socket outlet; or		N/A
	RATINGS marked; or		N/A
	Symbol 14 used		N/A
5.1.6	Switches and circuit breakers		N/A
	If disconnecting device, off position clearly marked		N/A
	If push-button used as power supply switch:		—
	– symbol 9 and 15 used for on-position		N/A
	– symbol 10 and 16 used for off-position		N/A
	– pair of symbols 9, 15 and 10, 16 close together		N/A
5.1.7	Equipment protected by DOUBLE INSULATION or REINFORCED INSULATION		N/A
	Protected throughout (symbol 11 used)	See above.	N/A
	Only partially protected (symbol 11 not used)		N/A
5.1.8	Field-wiring TERMINAL boxes	The equipment does not have a field-wiring terminal box.	N/A
	If TERMINAL or ENCLOSURE exceeds 60 °C:		—
	Cable temperature RATING marked ..... :		—

IEC 61010-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Marking visible before and during connection or beside TERMINAL		N/A
5.2	Warning markings	Symbol No. 14 from Table 1 used.	P
	Visible when ready for NORMAL USE		P
	Are near or on applicable parts		P
	Symbols and text correct dimensions and colour:		—
	a) symbols min 2,75 mm and text 1,5 mm high and contrasting in colour with background	Symbols and text meet the minimum size and contrasting colour requirements.	P
	b) symbols and text moulded, stamped or engraved in material min. 2,0 mm high and	No moulded, stamped or engraved symbols or texts.	N/A
	0,5 mm depth or raised if not contrasting in colour		N/A
	If necessary marked with symbol 14	See copy of marking plate.	P
	Statement to isolate or disconnect if access by using a tool to HAZARDOUS LIVE parts is permitted		N/A
5.3	Durability of markings	See below	P
	The required markings remain clear and legible in NORMAL USE	(see Form A.3)	P
5.4	Documentation		P
5.4.1	General	See below.	P
	Equipment is accompanied by documentation for safety purposes for OPERATOR or RESPONSIBLE BODY	Equipment is considered to be a component for building-in, intended for professional installation in other manufacturer's end-use equipment. See summary of testing.	P
	Safety documentation for service personnel authorized by the manufacturer	See clause 5.4.5 and summary of testing.	N/A
	Documentation necessary for safe operation is provided in printed media or	Printed documentation to be provided with end-use equipment.	P
	in electronic media if available at any time	Electronic media also available at: 'www.prosoft-technology.com'	P
	Documentation includes:	See below.	—
	a) intended use	Included in the manual.	P
	b) technical specification	Included in the manual.	P
	c) name and address of manufacturer or supplier	Included in the manual.	P
	d) information specified in 5.4.2 to 5.4.6	Included in the manual.	P

IEC 61010-1			
Clause	Requirement + Test	Result - Remark	Verdict
	e) information to mitigate residual RISK (see also subclause 17)	No information for mitigation of residual risk provided. Refer to clause 17.	N/A
	f) accessories for safe operation of the equipment specified	No accessories specified.	N/A
	g) guidance provided to check correct function of the equipment, if incorrect reading may cause a HAZARD from harmful or corrosive substances of HAZARDOUS live parts	The equipment does not have the function of reading for harmful or corrosive substances and hazardous live quantities.	N/A
	h) instructions for lifting and carrying	The equipment is built-in.	N/A
	Warning statements and a clear explanation of warning symbols:	See below.	—
	– provided in the documentation; or	Included in the manual.	P
	– information is marked on the equipment	Symbol No. 14 from Table 1 is marked on the equipment.	P
5.4.2	Equipment ratings	See below:	P
	Documentation includes:		—
	a) Supply voltage or voltage range ..... :	10-36 Vd.c.	—
	Frequency or frequency range ..... :	DC	—
	Power or current rating..... :	200 mA Max	—
	b) Description of all input and output connections in accordance to 6.6.1 a)	Suitable markings provided. Refer to Copy of marking plate.	P
	c) RATING of insulation of external circuits in accordance to 6.6.1 b)	Only connects to non-hazardous live circuit.	N/A
	d) Statement of the range of environmental conditions (see 1.4)	Included in the manual.	P
	e) Degree of protection (IEC 60529)	The equipment is for building-in, ordinary equipment, Not IP rated. However, the equipment is intended to be mounted in an enclosure in the end use application.	N/A
	f) If impact rating less than 5 J:	No parts that the impact rating is less than 5 J in the equipment.	—
	IK code in accordance to IEC 62262 marked; or		N/A
	symbol 14 of table 1 marked, with		N/A
	RATED energy level and test method stated		N/A
5.4.3	Equipment installation	See below.	P
	Documentation includes instructions for:	Included in the manual.	—
	a) assembly, location and mounting requirements	Included in the manual.	P

IEC 61010-1			
Clause	Requirement + Test	Result - Remark	Verdict
	b) protective earthing	No protective earthing provided.	N/A
	c) connections to supply	Included in the manual.	P
	d) PERMANENTLY CONNECTED EQUIPMENT:	Not intended for permanent connection.	—
	1) Supply wiring requirements		N/A
	2) If external switch or circuit-breaker, requirements and location recommendation		N/A
	e) ventilation requirements	The equipment is a component level module for building-in.	N/A
	f) special services (e. g. air, cooling liquid)	No special services used.	N/A
	g) instructions relating to sound level	No sound generating source in the equipment.	N/A
5.4.4	Equipment operation	See below.	P
	Instructions for use include:	Included in the manual.	—
	a) identification and description of operating controls	Included in the manual.	P
	b) positioning for disconnection	The equipment is a component level module for building-in.	N/A
	c) instructions for interconnection	Included in the manual.	P
	d) specification of intermittent operation limits	The equipment is intended to be operated continuously.	N/A
	e) explanation of symbols used	Included in the manual.	P
	f) replacement of consumable materials	No consumable materials used.	N/A
	g) cleaning and decontamination	Refer to summary of testing.	N/A
	h) listing of any poisonous or injurious gases and quantities	The equipment does not use or produce poisonous and injurious gases.	N/A
	i) RISK reduction procedures relating to flammable liquids (see 9.5)	No flammable liquids contained within the equipment.	N/A
	j) RISK reduction procedures relating burn from surfaces permitted to exceed limits of 10.1	No surface temperatures exceed the limits of 10.1	N/A
	Additional precautions for IEC 60950 conforming equipment in regard to moistures and liquids	The equipment is a component level module for building-in, may be provided with power supply which is separately tested and certified according to IEC 60950-1 or IEC 61010-1. However, the power supply was not covered by this test report as part of the equipment under test. Refer to summary of testing.	N/A

IEC 61010-1			
Clause	Requirement + Test	Result - Remark	Verdict
	A statement about protection impairment if used in a manner not specified by the manufacturer	Included in the manual.	P
5.4.5	Equipment maintenance and Service	See below.	N/A
	Instructions for RESPONSIBLE BODY include:		—
	Instructions sufficient in detail permitting safe maintenance and inspection and continued safety:	The equipment is a component level module for building-in, special safety instructions for servicing and maintenance are not considered necessary, see summary of testing.	—
	Instruction against the use of detachable MAINS supply cord with inadequate rating	The equipment is a component level module for building-in, no connection to mains supply.	N/A
	Specific battery type of user replaceable batteries	No battery in the equipment.	N/A
	Any manufacturer specified parts	No such part in the equipment.	N/A
	Rating and characteristics of fuses	No fuses in the equipment.	N/A
	Instructions include following subjects permitting safe servicing and continued safety:	Equipment is not intended to be serviced in the field, see summary of testing.	—
	a) product specific RISKS may affect service personnel	See above.	N/A
	b) protective measures for these RISKS	See above.	N/A
	c) verification of the safe state after repair	See above.	N/A
5.4.6	Integration into systems or effects resulting from special conditions	See below.	P
	Aspects described in documentation	Included in the manual.	P
6	PROTECTION AGAINST ELECTRIC SHOCK		P
6.1	General	The equipment is a component level module for building-in, is not to be connected to hazardous live parts, and no present hazardous live part in the equipment. (see Form A.14 and A.15)	P
6.1.1	Requirements	See above.	P
	Protection against electric shock maintained in NORMAL CONDITION and SINGLE FAULT CONDITION		N/A
	ACCESSIBLE parts not HAZARDOUS LIVE		N/A
	Voltage, current, charge or energy below the limits in NORMAL CONDITION and in SINGLE FAULT CONDITION between:		—
	ACCESSIBLE parts and earth		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	two ACCESSIBLE parts on same piece of the equipment within a distance of 1,8 m		N/A
	Conformity is checked by the determination of 6.2 and 6.3 followed by the tests of 6.4 to 6.11		N/A
6.1.2	Exceptions	No exceptions.	N/A
	Following HAZARDOUS LIVE parts may be ACCESSIBLE to an OPERATOR:		—
	a) parts of lamps and lamp sockets after lamp removal	No such parts in the equipment.	N/A
	b) parts to be replaced by OPERATOR only by the use of tool and warning marking	No operator replaceable parts in the equipment.	N/A
	Those parts not HAZARDOUS LIVE 10 s after interruption of supply	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment.	N/A
	Capacitance test if charge is received from internal capacitor		N/A
6.2	Determination of ACCESSIBLE parts	(see Form A.4)	P
6.2.1	General		P
	Unless obviously determination of ACCESSIBLE parts as specified in 6.2.2 to 6.2.4		P
6.2.2	Examination	See below.	P
	– with jointed test finger (as specified B.2)		P
	– with rigid test finger (as specified B.1) and a force of 10 N		P
6.2.3	Openings above parts that are HAZARDOUS LIVE	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment.	N/A
	– test pin with length of 100 mm and 4 mm in diameter applied		N/A
6.2.4	Openings for pre-set controls	No such controls in the equipment.	N/A
	– test pin with length of 100 mm and 3 mm in diameter applied		N/A
6.3	Limit values for ACCESSIBLE parts	See below.	P

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Clause	Requirement + Test	Result - Remark	Verdict
6.3.1	Levels in NORMAL CONDITION	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no accessible voltages exceed permissible limits.	—
	a) Voltage limits less than 33 V r.m.s. and 46,7 V peak or 70 V d.c.	(see Form A.5)	P
	for WET LOCATIONS voltage limits less than 16 V r.m.s. and 22,6 V peak or 35 V d.c.	Not for use in wet locations.	N/A
	Voltages are not HAZARDOUS LIVE the levels of:		—
	b) Current less than 0,5 mA r.m.s. for sinusoidal, 0,7 mA peak non-sinusoidal or mixed frequencies or 2 mA d.c. when measured with measuring circuit A.1 or A.2 if less than 100 Hz	Voltage levels do not exceed the levels of 6.3.1. No measurement necessary.	N/A
	for WET LOCATIONS measuring circuit A.4 used	Not for use in wet locations.	N/A
	70 mA r.m.s. when measured with circuit A.3 for higher frequencies		N/A
	or		—
	c) Levels of capacitive charge or energy less:	Voltage levels do not exceed the levels of 6.3.1, no measurement necessary.	—
	1) 45 µC for voltages up to 15 kV peak or d.c. or line A of Figure 3		N/A
	2) 350 mJ stored energy for voltages above 15 kV peak or d.c.		N/A
6.3.2	Levels in SINGLE FAULT CONDITION	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no accessible voltages exceed permissible limits.	—
	a) Voltage limits less than 55 V r.m.s. and 78 V peak or 140 V d.c.		N/A
	for WET LOCATIONS voltage limits less than 33 V r.m.s. and 46,7 V peak or 70 V d.c.	Not for use in wet locations.	N/A
	Voltages are not HAZARDOUS LIVE the levels of:		—
	b) Current less than 3,5 mA r.m.s. for sinusoidal, 5 mA peak non-sinusoidal or mixed frequencies or 15 mA d.c. when measured with measuring circuit A.1 or A.2 if less than 100 Hz	Voltage levels do not exceed the levels of 6.3.1, no measurement necessary.	N/A
	for WET LOCATIONS measuring circuit A.4 used	Not for use in wet locations.	N/A
	500 mA r.m.s. when measured with circuit A.3 for higher frequencies		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	or		—
	c) Levels of capacitive charge or energy less line B of Figure 3	Voltage levels do not exceed the levels of 6.3.1, no measurement necessary.	N/A
6.4	Primary means of protection	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment.	N/A
6.4.1	ACCESSIBLE parts prevented from being HAZARDOUS LIVE by one or more of following means:		—
	a) ENCLOSURES or PROTECTIVE BARRIERS (see 6.4.2)		N/A
	b) BASIC INSULATION (see 6.4.3)		N/A
	c) Impedance (see 6.4.4)		N/A
6.4.2	ENCLOSURES or PROTECTIVE BARRIERS	See below.	—
	– meet rigidity requirements of 8.1	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, the enclosure of the equipment does not serve as protection against electric shock.	N/A
	– meet requirements for BASIC INSULATION, if protection is provided by insulation		N/A
	– meet requirements of 6.7 for CREEPAGE and – CLEARANCES between ACCESSIBLE parts and – HAZARDOUS live parts, if protection is provided by – limited access	No hazardous live parts.	N/A
6.4.3	BASIC INSULATION	No hazardous live parts.	—
	– meet CLEARANCE, CREEPAGE DISTANCE and solid – insulation requirements of 6.7		N/A
6.4.4	Impedance	No protective impedance is in the equipment.	—
	Impedance used as primary means of protection meets all of following requirements:		—
	a) limits current or voltage to level of 6.3.2		N/A
	b) RATED for maximum WORKING VOLTAGE and the amount of power it will dissipate		N/A
	c) CLEARANCE, CREEPAGE DISTANCE between terminations of the impedance meet requirements of BASIC INSULATION of 6.7		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.5	Additional means of protection in case of SINGLE FAULT CONDITION		N/A
6.5.1	ACCESSIBLE parts are prevented from becoming HAZARDOUS live by the primary means of protection and supplemented by one of:	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no additional means of protection necessary.	—
	a) PROTECTIVE BONDING (see 6.5.2)		N/A
	b) SUPPLEMENTARY INSULATION (see 6.5.3)		N/A
	c) automatic disconnection of the supply (see 6.5.5)		N/A
	d) current- or voltage-limiting device (see 6.5.6)		N/A
	Alternatively one of the single means of protection is used:		—
	e) REINFORCED INSULATION (see 6.5.3)		N/A
	f) PROTECTIVE IMPEDANCE (see 6.5.4)		N/A
6.5.2	PROTECTIVE BONDING	No protective bonding in the equipment.	N/A
6.5.2.1	ACCESSIBLE conductive parts, may become HAZARDOUS LIVE in SINGLE FAULT CONDITION:		—
	Bonded to the PROTECTIVE CONDUCTOR TERMINAL; or		N/A
	Separated by conductive screen or barrier bonded to PROTECTIVE CONDUCTOR TERMINAL		N/A
6.5.2.2	Integrity of PROTECTIVE BONDING	None provided.	—
	a) PROTECTIVE BONDING consists of directly connected structural parts or discrete conductors or both; and withstands thermal and dynamic stresses		N/A
	b) Soldered connections:		—
	Independently secured against loosening		N/A
	Not used for other purposes		N/A
	c) Screw connections are secured		N/A
	d) PROTECTIVE BONDING not interrupted; or		N/A
	exempted as removable part carries MAINS SUPPLY input connection		N/A
	e) Any movable PROTECTIVE BONDING connection specifically designed, and meets 6.5.2.4		N/A
	f) No external metal braid of cables used (not regarded as PROTECTIVE BONDING)		N/A
	g) IF MAINS SUPPLY passes through:		—
	Means provided for passing protective conductor;		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Impedance meets 6.5.2.4		N/A
	h) Protective conductors bare or insulated, if insulated, green/yellow		N/A
	Exceptions:		—
	1) earthing braids;		N/A
	2) internal protective conductors etc.;		N/A
	Green/yellow not used for other purposes		N/A
	TERMINAL suitable for connection of a PROTECTIVE CONDUCTOR, and meets 6.5.2.3		N/A
6.5.2.3	PROTECTIVE CONDUCTOR TERMINAL	None provided.	—
	a) Contact surfaces are metal		N/A
	b) Appliance inlet used		N/A
	c) For rewirable cords and PERMANENTLY CONNECTED EQUIPMENT, PROTECTIVE CONDUCTOR TERMINAL is close to MAINS supply TERMINALS		N/A
	d) If no MAINS supply is required, any PROTECTIVE CONDUCTOR TERMINAL:		—
	Is near terminals of circuit for which protective earthing is necessary		N/A
	External if other terminals external		N/A
	e) Equivalent current-carrying capacity to MAINS supply TERMINALS	No connection to mains supply.	N/A
	f) If plug-in, makes first and breaks last		N/A
	g) If also used for other bonding purposes, PROTECTIVE CONDUCTOR:		—
	Applied first;		N/A
	Secured independently;		N/A
	Unlikely to be removed by servicing		N/A
	h) PROTECTIVE CONDUCTOR of measuring circuit:	No measuring circuits.	—
	1) Current RATING equivalent to measuring circuit TERMINAL;		N/A
	2) PROTECTIVE BONDING: not interrupted by any switch or interrupting device		N/A
	i) FUNCTIONAL EARTH TERMINALS allow independent connection		N/A
	j) If a binding screw used for PROTECTIVE CONDUCTOR TERMINAL:		—
	Suitable size for bond wire		N/A
	Not smaller than M 4		N/A
	At least 3 turns of screw engaged		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Passes tightening torque test		N/A
	k) Contact pressure not capable being reduced by deformation of materials		N/A
6.5.2.4	Impedance of PROTECTIVE BONDING of plug-connected equipment	No connection to mains supply.	—
	Impedance between PROTECTIVE CONDUCTOR TERMINAL and each ACCESSIBLE part where PROTECTIVE BONDING is specified, is:		—
	– less than 0,1 Ohm; or		N/A
	– less than 0,2 Ohm if equipment is provided with non-detachable cord		N/A
6.5.2.5	Bonding impedance of PERMANENTLY CONNECTED EQUIPMENT	Not intended for permanent connection.	—
6.5.2.6	Transformer PROTECTIVE BONDING screen	No transformer and bonding screen in the equipment.	—
	Transformer provided with screen for PROTECTIVE BONDING:		—
	screen bonding consists of directly connected structural parts or discrete conductors or both; and withstands thermal and dynamic stresses (see 6.5.2.2 a)		N/A
	screen bonding with soldered connection (see 6.5.2.2 b) is:		N/A
	– Independently secured against loosening		N/A
	– Not used for other purposes		N/A
6.5.3	SUPPLEMENTARY and REINFORCED INSULATION	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment.	N/A
	Meet CLEARANCE, CREEPAGE DISTANCE and solid insulation requirements of 6.7		N/A
6.5.4	PROTECTIVE IMPEDANCE	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment.	N/A
	Limits current or voltage to level of 6.3.1 in NORMAL and to level of 6.3.2 in SINGLE FAULT CONDITION		N/A
	CLEARANCE, CREEPAGE DISTANCE between terminations of the impedance meet requirements of DOUBLE or REINFORCED INSULATION of 6.7		N/A
	The PROTECTIVE IMPEDANCE consists of one or more of the following:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	a) appropriate single component suitable for safety and reliability for protection, it is:		—
	1) RATED twice the maximum WORKING VOLTAGE		N/A
	2) resistor RATED for twice the power dissipation for maximum WORKING VOLTAGE		N/A
	b) combination of components		N/A
	Single electronic device not used as PROTECTIVE IMPEDANCE		N/A
6.5.5	Automatic disconnection of the supply	No such device in the equipment.	N/A
	a) RATED to disconnect the load within time specified in Figure 2		N/A
	b) RATED for the maximum load conditions of the equipment		N/A
6.5.6	Current- or voltage-limiting devices	No such device in the equipment.	N/A
	Device complies with all of:		—
	a) RATED to limit the current or voltage to the level of 6.3.2		N/A
	b) RATED for the maximum WORKING VOLTAGE; and		N/A
	RATED for the maximum operational current if applicable		N/A
	c) CLEARANCE, CREEPAGE DISTANCE between terminations of the impedance meet requirements of SUPPLEMENTARY INSULATION of 6.7		N/A
6.6	Connections to external circuits	See below.	P
6.6.1	Connections do not cause ACCESSIBLE parts of the following to become HAZARDOUS LIVE in NORMAL CONDITION or SINGLE FAULT CONDITION:	All external circuit are signal level low voltage secondary circuits and the equipment operates at low voltage and there are no hazardous voltages or hazardous live parts.	—
	– the external circuits		P
	– the equipment		P
	Protection achieved by separation of circuits; or	See above.	N/A
	short circuit of separation does not cause a HAZARD	See above.	N/A
	Instructions or markings for each terminal include:	See below.	—
	a) RATED conditions for TERMINAL	Suitable marking of I/O ports are marked, and description provided in the manual.	P
	b) Required RATING of external circuit insulation		P

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Clause	Requirement + Test	Result - Remark	Verdict
6.6.2	TERMINALS for external circuits	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, and is intended to be connected to the non-hazardous live circuit only.	P
	TERMINALS which receive a charge from an internal capacitor are not HAZARDOUS LIVE after 10 s of interrupting supply connection	No such terminals.	N/A
6.6.3	Circuits with terminals which are HAZARDOUS LIVE	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, and is intended to be connected to the non-hazardous live circuit only.	N/A
	These circuits are:		—
	Not connected to ACCESSIBLE conductive parts; or		N/A
	Connected to ACCESSIBLE conductive parts, but are not MAINS CIRCUITS and have one TERMINAL contact at earth potential		N/A
	No ACCESSIBLE conductive parts are HAZARDOUS LIVE		N/A
6.6.4	ACCESSIBLE terminals for stranded conductors	No such terminals.	N/A
	No RISK of accidental contact because:		—
	– Located or shielded		N/A
	– Self-evident or marked whether or not connected to ACCESSIBLE conductive parts		N/A
	ACCESSIBLE TERMINALS will not work loose		N/A
6.7	Insulation requirements	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no electrical insulation is required. (see Form A.14 and A.15)	N/A
6.7.1	The nature of insulation		—
6.7.1.1	Insulation between ACCESSIBLE parts or between separate circuits consist of CLEARANCES, CREEPAGE DISTANCES and solid insulation if provided as protection against a HAZARD	(see Form A.14 and A.15)	N/A
6.7.1.2	CLEARANCES		—
	Required CLEARANCES reflecting factors of 6.7.1.1	(see Form A.14 and A.15)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Equipment rated for operating altitude greater than 2000 m correction factor of Table 3 of 61010-1 applied	The equipment is intended for use in normal environmental condition, using at altitude not exceeding 2000 m above sea level.	N/A
6.7.1.3	CREEPAGE DISTANCES	See below.	—
	Required CREEPAGE DISTANCES reflecting factors of 6.7.1.1 a) to d)	(see Form A.14 and A.15)	N/A
	CTI material group reflected by requirements		N/A
	CTI test performed		N/A
6.7.1.4	Solid insulation		—
	Required solid insulation reflecting factors of 6.7.1.1 a) to d)		N/A
6.7.1.5	Requirements for insulation according to type of circuit		—
	a) 6.7.2 MAINS circuits of OVERVOLTAGE CATEGORY II up to nominal supply voltage of 300 V		N/A
	b) 6.7.3 secondary circuits separated from circuits defined in a) by transformer		N/A
	c) K.1 MAINS circuits of OVERVOLTAGE CATEGORY III and IV or OVERVOLTAGE CATEGORY II over 300 V		N/A
	d) K.2 secondary circuits separated from circuits defined in c) by transformer		N/A
	e) K.3 circuits having one or more of:		—
	1) maximum TRANSIENT OVERVOLTAGE is limited to known level below the level of MAINS CIRCUIT		N/A
	2) maximum TRANSIENT OVERVOLTAGE above the level of MAINS CIRCUIT		N/A
	3) WORKING VOLTAGE is the sum of more than one circuit or a mixed voltage		N/A
	4) WORKING VOLTAGE includes recurring peak voltage, may include non-sinusoidal or non-periodic waveform		N/A
	5) WORKING VOLTAGE with a frequency above 30 kHz		N/A
6.7.2	Insulation for MAINS CIRCUITS of OVERVOLTAGE CATEGORY II with a nominal supply voltage up to 300 V	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no connection to mains supply.	N/A
6.7.2.1	CLEARANCES and CREEPAGE DISTANCES		—
	Values for MAINS CIRCUITS of Table 4 are met		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Coatings to achieve reduction to POLLUTION DEGREE 1 comply with requirements of Annex H		N/A
6.7.2.2	Solid insulation	No solid insulation provided.	—
6.7.2.2.1	Withstands electrical and mechanical stresses in normal use and all RATED environmental conditions of 1.4		N/A
	Equipment passed voltage tests of 6.8.3 with values of Table 5		N/A
	Complies as applicable:		—
	a) ENCLOSURE or PROTECTIVE BARRIER of Clause 8		N/A
	b) moulded and potted parts requirements of 6.7.2.2.2		N/A
	c) inner layers of printed wiring boards requirements of 6.7.2.2.3		N/A
	d) thin-film insulation requirements of 6.7.2.2.4		N/A
6.7.2.2.2	Moulded and potted parts		—
	Conductors between same two layers are separated by at least 0,4 mm after moulding is completed		N/A
6.7.2.2.3	Inner insulating layers of printed wiring boards		—
	Separated by at least 0,4 mm between same two layers		N/A
	REINFORCED INSULATION have adequate electric strength; one of following methods used:		—
	a) thickness of insulation is at least 0,4 mm		N/A
	b) insulation is assembled of minimum two separate layers, each RATED for test voltage of Table 5 for BASIC INSULATION		N/A
	c) insulation is assembled of minimum two separate layers, where the combination is rated for test voltage of Table 5 for REINFORCED INSULATION		N/A
6.7.2.2.4	Thin-film insulation	Not used.	—
	Conductors between same two layers are separated by applicable CLEARANCES and CREEPAGE DISTANCE of 6.7.2.1		N/A
	REINFORCED INSULATION have adequate electric strength; one of following methods used:		—
	a) thickness through the insulation at least 0,4 mm		N/A
	b) insulation is assembled of min two separate layers, each RATED for test voltage of Table 5 for BASIC INSULATION		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	c) insulation is assembled of min three separate layers, where the combination of two layers passed voltage tests of 6.8.3 with values of Table 5 for REINFORCED INSULATION		N/A
6.7.3	Insulation for secondary circuits derived from MAINS CIRCUITS of OVERVOLTAGE CATEGORY II up to 300 V	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no electrical insulation is required. (see Form A.14 and A.15)	N/A
6.7.3.1	Secondary circuits where separation from MAINS CIRCUITS is achieved by a transformer providing:		—
	– REINFORCED INSULATION		N/A
	– DOUBLE INSULATION		N/A
	– screen connected to the PROTECTIVE CONDUCTOR TERMINAL		N/A
6.7.3.2	CLEARANCES		—
	a) meet the values of Table 6 for BASIC INSULATION and SUPPLEMENTARY INSULATION; or		N/A
	twice the values of Table 6 for REINFORCED INSULATION		N/A
	or		—
	b) pass the voltage tests of 6.8 with values of Table 6;		—
	with following adjustments:		—
	1) values for reinforced insulation are 1,6 times the values for basic insulation		N/A
	2) if operating altitude is greater than 2000 m values of CLEARANCES multiplied with factor of Table 3		N/A
	3) minimum CLEARANCE is 0,2 mm for POLLUTION DEGREE 2 and 0,8 mm for POLLUTION DEGREE 3		N/A
6.7.3.3	CREEPAGE DISTANCES		—
	Based on WORKING VOLTAGE meets the values of Table 7 for BASIC and SUPPLEMENTARY INSULATION		N/A
	Values for REINFORCED INSULATION are twice the values of BASIC INSULATION		N/A
	Coatings to achieve reduction to POLLUTION DEGREE 1 comply with requirements of Annex H	Coatings not used.	N/A
6.7.3.4	Solid insulation		—
6.7.3.4.1	Withstands electrical and mechanical stresses in normal use and all RATED environmental conditions of 1.4		—

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Clause	Requirement + Test	Result - Remark	Verdict
	a) Equipment passed voltage test of 6.8.3.1 for 5 s with VALUES of Table 6 for BASIC and SUPPLEMENTARY INSULATION		N/A
	values for REINFORCED INSULATION are 1,6 times the values of BASIC INSULATION		N/A
	b) if WORKING VOLTAGE exceeds 300 V, equipment passed voltage test of 6.8.3.1 for 1 min with a test voltage of 1,5 times working voltage for BASIC or SUPPLEMENTARY INSULATION		N/A
	value for REINFORCED INSULATION are twice the WORKING VOLTAGE		N/A
	Complies as applicable:		—
	1) ENCLOSURE or PROTECTIVE BARRIER of Clause 8		N/A
	2) moulded and potted parts requirements of 6.7.3.4.2		N/A
	3) inner layers of printed wiring boards requirements of 6.7.3.4.3		N/A
	4) thin-film insulation requirements of 6.7.3.4.4		N/A
6.7.3.4.2	Moulded and potted parts		—
	Conductors between same two layers are separated by applicable distances of Table 8		N/A
6.7.3.4.3	Inner insulation layers of printed wiring boards		—
	Separated by at least by applicable distances of Table 8 between same two layers		N/A
	REINFORCED INSULATION have adequate electric strength; one of following methods used:		—
	a) thickness at least applicable distance of Table 8		N/A
	b) insulation is assembled of minimum two separate layers, each RATED for test voltage of Table 6 for BASIC INSULATION		N/A
	c) insulation is assembled of min two separate layers, where the combination is RATED for 1,6 times the test voltage of Table 6		N/A
6.7.3.4.4	Thin-film insulation	None used.	—
	Conductors between same two layers are separated by applicable CLEARANCES and CREEPAGE DISTANCE of 6.7.3.2 and 6.7.3.3		N/A
	REINFORCED INSULATION have adequate electric strength; one of following methods used:		—
	a) thickness at least applicable distance of Table 8		N/A
	b) insulation is assembled of min. two separate layers, each RATED for test voltage of Table 6 for BASIC INSULATION		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	c) insulation is assembled of min. three separate layers, where the combination of two layers passed voltage tests with 1,6 time values of Table 6:		—
	a.c. test of 6.8.3.1; or		N/A
	d.c. test of 6.8.3.2 for circuits stressed only by d.c. voltages		N/A
6.8	Procedure for dielectric strength tests	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no electrical insulation is required.	N/A
6.9	Constructional requirements for protection against electric shock		N/A
6.9.1	If a failure could cause a HAZARD:	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no electrical insulation is required.	—
	a) security of wiring connections		N/A
	b) screws securing removable covers		N/A
	c) accidental loosening		N/A
	d) CLEARANCES and CREEPAGE DISTANCES not reduced below the values of basic insulation by loosening of parts or wires		N/A
6.9.2	Insulating materials		N/A
	Material not to be used for safety relevant insulation:		—
	a) easily damaged materials not used		N/A
	b) non-impregnated hygroscopic materials not used		N/A
6.9.3	Colour coding	No green-and-yellow insulation used.	N/A
	Green-and-yellow insulation shall not be used except:		—
	a) protective earth conductors;		N/A
	b) PROTECTIVE BONDING conductors;		N/A
	c) potential equalization conductors;		N/A
	d) functional earth conductors		N/A
6.10	Connection to MAINS supply source and connections between parts of equipment	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no connection to mains supply.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.10.1	MAINS supply cords	Not connected to mains. No supply cord provided.	—
	RATED for maximum equipment current (see 5.1.3 c)		N/A
	Cable complies with IEC 60227 or IEC 60245		N/A
	Heat-resistant if likely to contact hot parts		N/A
	Temperature RATING (cord and inlet) .....:		—
	Green/yellow used only for connection to PROTECTIVE CONDUCTOR TERMINALS		N/A
	Detachable cords with IEC 60320 MAINS connectors:		—
	Conform to IEC 60799; or	None provided.	N/A
	Have the current RATING of the MAINS connector		N/A
6.10.2	Fitting of non-detachable MAINS supply cords		—
6.10.2.1	Cord entry		—
	a) inlet or bushing with a smoothly rounded opening; or		N/A
	b) insulated cord guard protruding >5 D (diameter)		N/A
6.10.2.2	Cord anchorage	No supply cord.	—
	Protective earth conductor is the last to take the strain		N/A
	a) cord is not clamped by direct pressure from a screw		N/A
	b) knots are not used		N/A
	c) cannot push the cord into the equipment to cause a HAZARD		N/A
	d) no failure of cord insulation in anchorage with metal parts		N/A
	e) not to be loosened without a tool		N/A
	f) cord replacement does not cause a HAZARD and method of strain relief is clear		N/A
	Push-pull and or torque test		N/A
6.10.3	Plugs and connectors	Suitable input terminal provided for the secondary low voltage input.	P
	MAINS supply plugs, connectors etc., conform with relevant specifications	Not connected to mains.	N/A
	If equipment supplied at voltages below 6.3.2.a) or from a sole source:		—
	Plugs of supply cords do not fit MAINS sockets above rated SUPPLY voltage		N/A
	MAINS type plugs used only for connection to MAINS supply	No supply cord.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Plug pins which receive a charge from an internal capacitor		N/A
	Accessory MAINS socket outlets:	None provided.	—
	a) marking if accepts a standard MAINS supply plug (see 5.1.3e)		N/A
	b) input has a protective earth conductor if outlet has EARTH TERMINAL CONTACT		N/A
6.11	Disconnection from supply source	The equipment is a component level module for building-in, and it is not to be connected to hazardous live parts, and no present hazardous live part in the equipment.	N/A
6.11.1	Disconnects all current-carrying conductors		N/A
6.11.2	Exceptions	No exceptions.	N/A
6.11.3	Requirements according to type of equipment	See below.	—
6.11.3.1	PERMANENTLY CONNECTED EQUIPMENT and multi-phase equipment	Not permanently connected or multi-phase equipment.	N/A
	Employs switch or circuit-breaker		N/A
	If switch or circuit-breaker is not part of the equipment, documentation requires:		—
	a) switch or circuit-breaker to be included in building installation		N/A
	b) suitable location easily reached		N/A
	c) marking as disconnecting for the equipment		N/A
6.11.3.2	Single-phase cord-connected equipment	The equipment is a component level module for building-in.	N/A
	Equipment is provided with one of the following:		—
	a) switch or circuit-breaker		N/A
	b) appliance coupler (disconnectable without tool)		N/A
	c) separable plug (without locking device)		N/A
6.11.4	Disconnecting devices	The equipment is a component level module for building-in, and it is not to be connected to hazardous live parts, and no present hazardous live part in the equipment.	N/A
6.11.4.1	Disconnecting device part of equipment		N/A
	Electrically close to the SUPPLY		N/A
	Power-consuming components not electrically located between the supply source and the disconnecting device		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Except electromagnetic interference suppression circuits permitted to be located on the supply side of the disconnecting device		N/A
6.11.4.2	Switches and circuit-breakers	No switch or circuit breakers used as disconnecting device.	N/A
	When used as disconnection device:		—
	Meets IEC 60947-1 and IEC 60947-3		N/A
	Marked to indicate function .....:		—
	Not incorporated in MAINS cord		N/A
	Does not interrupt PROTECTIVE EARTH CONDUCTOR		N/A
6.11.4.3	Appliance couplers and plugs	The equipment is a component level module for building-in, and it is not to be connected to hazardous live parts, and no present hazardous live part in the equipment.	N/A
	Where an appliance coupler or separable plug is used as the disconnecting device (see 6.11.3.2):		—
	Readily identifiable and easily reached by the operator		N/A
	Single-phase portable equipment cord length not more than 3 m		N/A
	PROTECTIVE EARTH CONDUCTOR connected first and disconnected last		N/A
7	PROTECTION AGAINST MECHANICAL HAZARDS		P
7.1	Equipment does not cause a mechanical HAZARD in NORMAL nor in SINGLE FAULT CONDITION	See below.	P
	Conformity is checked by 7.2 to 7.7	See below.	P
7.2	Sharp edges	See below.	P
	Easily touched parts are smooth and rounded	All easily touched corners and edges are smooth and rounded.	P
	Do not cause injury during NORMAL USE and		P
	Do not cause injury during SINGLE FAULT CONDITION		P
7.3	Moving parts	No moving parts in the equipment.	N/A
7.3.1	HAZARDS from moving parts limited to a tolerable level with the conditions specified in 7.3.2 and 7.3.5		N/A
	RISK assessment in accordance with 7.3.3 carried out		N/A
7.3.2	Exceptions	No exceptions.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Access to HAZARDOUS moving parts permitted under following circumstances:		—
	a) obviously intended to operate on parts or materials external of the equipment		N/A
	inadvertent touching of moving parts minimized by equipment design (e .g. guards or handles)		N/A
	b) If OPERATOR access is unavoidable outside NORMAL USE following precautions have been taken:		—
	1) access requires TOOL		N/A
	2) statement about training in the instructions		N/A
	3) warning markings on covers prohibiting access by untrained OPERATORS		N/A
	or symbol 14 with full details in documentation		N/A
7.3.3	RISK assessment for mechanical HAZARDS to body parts	No moving parts in the equipment.	N/A
	RISK is reduced to a tolerable level by protective measures as specified in table 12		N/A
	Minimum protective measures:		—
	A. Low level measures		N/A
	B. Moderate measures		N/A
	C. Stringent measures		N/A
7.3.4	Limitation of force and pressure	No moving parts in the equipment.	N/A
	Following levels are met in NORMAL and SINGLE FAULT CONDITION:		—
	Continuous contact pressure below 50 N / cm² with force below 150 N		N/A
	Temporary force below 250 N for an area at least of 3 cm² for a maximum duration of 0,75 s		N/A
7.3.5	Gap limitations between moving parts	No moving parts in the equipment.	N/A
7.3.5.1	Access normally allowed		—
	If levels of 7.3.4 exceeded and body part may be inserted minimum gap as specified in table 13 assured in NORMAL and in SINGLE FAULT CONDITION		N/A
7.3.5.2	Access normally prevented		—
	Maximum gap as specified in table 14 assured in NORMAL and in SINGLE FAULT CONDITION		N/A
7.4	Stability	The equipment is a component level module for building-in, stability test not considered.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Equipment not secured to building structure is physical stable		N/A
	Stability maintained after opening of drawers etc. by automatic means, or		N/A
	warning marking requires the application of means		N/A
	Compliance checked by following tests as applicable:		—
	a) 10° tilt test for other than handheld equipment		N/A
	b) multi-directional force test for equipment exceeds height of 1 m and mass of 25 kg		N/A
	c) downward force test for floor-standing equipment		N/A
	d) overload test with 4 times maximum load for castor or support that supports greatest load		N/A
	e) castor or support that supports greatest load removed from equipment		N/A
7.5	Provisions for lifting and carrying	See below.	N/A
7.5.1	Equipment more than 18 kg :	The equipment is for building-in. It weighs 0.11 kg. No provisions for lifting or carrying deemed necessary to be provided.	—
	Has means for lifting or carrying; or		N/A
	Directions in documentation		N/A
7.5.2	Handles and grips	No handles or grips.	—
	Handles or grips withstand four times weight		N/A
7.5.3	Lifting devices and supporting parts	No such parts provided with the equipment.	—
	RATED for maximum load; or		N/A
	tested with four times maximum static load		N/A
7.6	Wall mounting	Equipment is not intended for wall mounting.	N/A
	Mounting brackets withstand four times weight		N/A
7.7	Expelled parts	No possibility of expelled parts.	N/A
	Equipment contains or limits the energy		N/A
	Protection not removable without the aid of a tool		N/A
8	RESISTANCE TO MECHANICAL STRESSES		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.1	Equipment does not cause a HAZARD when subjected to mechanical stresses in NORMAL USE	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no insulation is required.	N/A
	Normal protection level is 5 J		N/A
	Levels below 5 J but not less than 1 J are acceptable if all of following criteria are met:	No parts that the impact rating is less than 5 J in the equipment.	—
	a) lower level justified by RISK assessment of manufacturer		N/A
	b) equipment installed in its intended application is not easily touched		N/A
	c) only occasional access during NORMAL USE		N/A
	d) IK code in accordance to IEC 62262 marked or symbol 14 used with full information in the documentation		N/A
	for non-metallic ENCLOSURES rated below 2 °C ambient temperature value chosen for minimum RATED temperature		N/A
	impact energies between IK values, the IK code marked for nearest lower value		N/A
	Conformity is checked by performing following tests:		—
	1) static test of 8.2.1		N/A
	2) impact test of 8.2.2 with 5 J except for HAND-HELD EQUIPMENT		N/A
	if impact energy not selected to 5 J alternate method of IEC 62262 used	No parts that the impact rating is less than 5 J in the equipment.	N/A
	3) drop test of 8.3.1 or 8.3.2 except for FIXED EQUIPMENT and equipment with mass over 100 kg	The equipment is a component level module for building-in. Drop test does not apply.	N/A
	Equipment RATED with an impact rating of IK 08 that obviously meets the criteria	The equipment does not provided with the impact rating of enclosure.	N/A
	After the tests inspection with following results:	See below.	—
	– HAZARDOUS LIVE parts above the limits of 6.3.2 not ACCESSIBLE	No hazardous live parts.	N/A
	– insulation pass the voltage tests of 6.8		N/A
	i) no leaks of corrosive and harmful substances		N/A
	ii) ENCLOSURE shows no cracks resulting in a HAZARD		N/A
	iii) CLEARANCES not less than their permitted values		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	iv) insulation of internal wiring remains undamaged		N/A
	v) PROTECTIVE BARRIERS not damaged or loosened		N/A
	vi) No moving parts exposed, except permitted by 7.3	No moving parts in the equipment	N/A
	vii) no damage which could cause spread of fire		N/A
8.2	ENCLOSURE rigidity test		N/A
8.2.1	Static test		N/A
	– 30 N with 12 mm rod to each part of ENCLOSURE		N/A
	– in case of doubt test conducted at maximum RATED ambient temperature		N/A
8.2.2	Impact test		N/A
	Impact applied to any part of ENCLOSURE causing a HAZARD if damaged		N/A
	Impact energy level and corresponding IK code.....:	5J (IK08)	—
	Non-metallic ENCLOSURES cooled to minimum RATED ambient temperature if below 2 °C		N/A
8.3	Drop test	The equipment is structured for rail-rack mounting.	N/A
8.3.1	Other than HAND-HELD and DIRECT-PLUG-IN EQUIPMENT		N/A
	Tests conducted with a drop height or angle of .....:		—
8.3.2	HAND-HELD and DIRECT-PLUG-IN EQUIPMENT		—
	Non-metallic ENCLOSURES cooled to minimum RATED ambient temperature if below 2 °C	Equipment is not hand-held or direct plug-in.	N/A
	Drop test conducted with an height of 1 m		N/A

9	PROTECTION AGAINST THE SPREAD OF FIRE		P
9.1	No spread of fire in NORMAL and SINGLE FAULT CONDITION	See below.	P
	MAINS supplied equipment meets requirements of 9.6 additionally	Not connected to mains supply.	N/A
	Conformity is checked by minimum one or a combination of the following (see Figure 11):	(See Form A.22)	—
	a) SINGLE FAULT test of 4.4; or	This method was not used to evaluate the requirements of the protection of fire spread for the equipment	N/A
	b) Application of 9.2 (eliminating or reducing the sources of ignition); or	(see Form A.22)	P

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Clause	Requirement + Test	Result - Remark	Verdict
	c) Application of 9.3 (containment of fire within the equipment)	This method was not used to evaluate the requirements of the protection of fire spread for the equipment.	N/A
9.2	Eliminating or reducing the sources of ignition within the equipment	See below.	P
	a) 1) Limited-energy circuit (see 9.4); or	The equipment is a component level module for building-in, is supplied from DC power supply modules that are specified as limited-energy circuits under normal and single fault condition, see Summary of testing. (see Form A.24)	P
	b) 2) BASIC INSULATION provided for parts of different potential; or	Refer above.	P
	Bridging the insulation does not cause ignition		N/A
	c) Surface temperature of liquids and parts (see 9.5)	No flammable liquids in the equipment.	N/A
	d) No ignition in circuits designed to produce heat	Equipment does not contain circuits designed to produce heat.	N/A
9.3	Containment of the fire within the equipment, should it occur	The equipment is a component level module for building-in, is supplied from DC power supply modules that are specified as limited-energy circuits under normal and single fault condition, see Summary of testing. Not deemed necessary to have the fire enclosure or operator held switch.	N/A
9.3.1	Spread of fire outside equipment reduced to a tolerable level if:	See above.	—
	a) Energizing of the equipment is controlled by an OPERATOR held switch		N/A
	b) ENCLOSURE is conform with constructional requirements of 9.3.2; and		N/A
	Requirements of 9.5 are met		N/A
9.3.2	Constructional requirements	See above.	—
	a) Connectors and insulating material have flammability classification V-2 or better		N/A
	b) Insulated wires and cables are flame retardant (VW-1 or equivalent)		N/A
	c) ENCLOSURE meets following requirements:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	1) Bottom and sides in arc of 5 ° (see Figure 13) to non-limited circuits (9.4) meets:		—
	i) no openings; or		N/A
	ii) perforated as specified in table 16; or		N/A
	iii) metal screen with a mesh; or		N/A
	iv) baffles as specified in Figure 12		N/A
	2) Material of ENCLOSURE and any baffle or flame barrier is made of:		—
	Metal (except magnesium); or		N/A
	Non-metallic materials have flammability classification V-1 or better		N/A
	3) ENCLOSURE and any baffle or flame barrier have adequate rigidity		N/A
9.4	Limited-energy circuit	(see Form A.24)	P
	a) Potential not more than 30 r.m.s. and 42,4 V peak, or 60 V dc	The maximum voltage is 36 Vdc.	P
	b) Current limited by one of following means:	See below.	—
	1) Inherently or by impedance (see table 17); or	Current is inherently limited by the power sources according to limited-energy circuits. See summary of testing.	P
	2) Overcurrent protective device (see table 18); or	Current is inherently limited.	N/A
	3) A regulating network limits also in SINGLE FAULT CONDITION (see table 17)	Current is inherently limited.	N/A
	c) Is separated by at least BASIC INSULATION	See above.	P
	Fuse or a nonadjustable electromechanical device is used		N/A
9.5	Requirements for equipment containing or using flammable liquids	Equipment does not contain or use flammable liquids.	N/A
	Flammable liquids contained in or specified for use with equipment do not cause spread of fire		N/A
	RISK is reduced to a tolerable level:		—
	a) The temperature of surface or parts in contact with flammable liquids is 25 °C below fire point		N/A
	b) The quantity of liquid is limited		N/A
	c) Flames are contained within the equipment		N/A
	Detailed instructions for RISK-reduction provided		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
9.6	Overcurrent protection	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no mains supply connection.	N/A
9.6.1	MAINS supplied equipment protected	No connection to mains supply.	N/A
	BASIC INSULATION between MAINS parts of opposite polarity provided		N/A
	Devices not in the protective conductor	No protective conductor.	N/A
	Fuses or single-pole circuit-breakers not fitted in neutral (multi-phase)	DC operation only.	N/A
9.6.2	PERMANENTLY CONNECTED EQUIPMENT	Not permanently connected equipment.	N/A
	Overcurrent protection device:		—
	Fitted within the equipment; or		N/A
	Specified in manufacturer's instructions		N/A
9.6.3	Other equipment		—
	Protection within the equipment		N/A
10	EQUIPMENT TEMPERATURE LIMITS AND RESISTANCE TO HEAT		P
10.1	Surface temperature limits for protection against burns	See below.	P
	Easily touched surfaces within the limits in NORMAL and in SINGLE FAULT CONDITION:	(see Form A.26A)	—
	– at an specified ambient temperature of 40 °C		N/A
	– for equipment rated above 40 °C ambient temperature limits not exceeded raised by the difference to 40 °C	Maximum specified ambient temperature is 70 °C, see Form A.26A.	P
	Heated surfaces necessary for functional reasons exceeding specified values:	No heated surfaces necessary for functional reasons.	—
	– Are recognizable as such by appearance or function; or		N/A
	– Are marked with symbol 13		N/A
	– Guards are not removable without tool		N/A
10.2	Temperatures of windings	No isolating wound component in the equipment.	N/A
	Limits not exceeded in:		—
	NORMAL CONDITION		N/A
	SINGLE FAULT CONDITION		N/A
10.3	Other temperature measurements	See below.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Following measurements conducted if applicable:	(see Form A.26A)	—
	a) Value of 60 °C of field-wiring terminal box not exceeded	The equipment does not have a field-wiring terminal box.	N/A
	b) Surface of flammable liquids and parts in contact with this liquids	No flammable liquids contains within the equipment.	N/A
	c) Surface of non-metallic ENCLOSURES		N/A
	d) Parts made of insulating material supporting parts connected to MAINS supply	No such parts for mains supply connection in the equipment.	N/A
	e) Terminals carrying a current more than 0,5 A		N/A
10.4	Conduct of temperature tests	See below.	P
10.4.1	Tests conducted under reference test conditions and manufacturer's instructions	Maximum specified ambient temperature is 70 °C, see Form A.26A.	P
10.4.2	Temperature measurement of heating equipment	No heating devices provided.	N/A
	Tests conducted in test corner		N/A
10.4.3	Equipment intended for installation in a cabinet or wall	The equipment is built-in, test performed at the specified installation condition by manufacturer.	P
	Equipment built in as specified in installation instructions	(see Form A.26A)	P
10.5	Resistance to heat	See below.	N/A
10.5.1	Integrity of CLEARANCE and CREEPAGE DISTANCES	Equipment operates at low voltage and there are no hazardous voltages or hazardous live parts.	N/A
10.5.2	Non-metallic ENCLOSURES		N/A
	Within 10 min after treatment:		—
	Equipment subjected to suitable stresses of 8.2 and 8.3 complying with criteria of 8.1		N/A
10.5.3	Insulating material	See below.	N/A
	a) Parts supporting parts connected to MAINS supply	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no mains supply connection.	N/A
	b) TERMINALS carrying a current more than 0,5 A	No such terminals	N/A
	Examination of material data; or		N/A
	in case of doubt:		N/A
	1) Ball pressure test; or		N/A
	2) Vicat softening test of ISO 306		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
11	PROTECTION AGAINST HAZARDS FROM FLUIDS		N/A
11.1	Protection to OPERATORS and surrounding area provided by EQUIPMENT	See below.	N/A
	All fluids specified by manufacturer considered	No fluid specified by the manufacturer.	N/A
11.2	Cleaning	The equipment is for building-in. No cleaning instructions provided. See Summary of testing.	N/A
11.3	Spillage	No use of fluids in equipment.	N/A
11.4	Overflow	No liquid container in the equipment.	N/A
11.5	Battery electrolyte	No battery in the equipment.	N/A
	Battery electrolyte leakage presents no HAZARD		N/A
11.6	Specially protected equipment	The equipment is ordinary equipment, Not IP rated.	N/A
11.7	Fluid pressure and leakage	The equipment contains neither fluid-containing parts nor fluid pressure parts in the equipment.	N/A
11.7.1	Maximum pressure ..... :	No use of fluids	—
	Maximum pressure of any part does not exceed P_{RATED}		N/A
11.7.2	Leakage and rupture at high pressure	No use of fluids	—
	Fluid-containing parts subjected to hydraulic test if ....:		—
	a) product of pressure and volume > 200 kPal; and		N/A
	b) pressure > 50 kPa		N/A
	Parts of refrigerating systems meets pressure-related requirements of IEC 60335-24 or IEC 60335-2-89		N/A
11.7.3	Leakage from low-pressure parts	No use of fluids	N/A
11.7.4	Overpressure safety device	None provided.	N/A
	Does not operate in NORMAL USE		N/A
	a) Connected as close as possible to parts intended to be protected		N/A
	b) Easy access for inspection, maintenance and repair		N/A
	c) Adjustment only with TOOL		N/A
	d) No discharge towards person		N/A
	e) No HAZARD from deposit of discharged material		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	f) Adequate discharge capacity		N/A
	No shut-off valve between overpressure safety device and protected parts		N/A
12	PROTECTION AGAINST RADIATION, INCLUDING LASER SOURCES, AND AGAINST SONIC AND ULTRASONIC PRESSURE		N/A
12.1	Equipment provides protection		N/A
12.2	Equipment producing ionizing radiation	The equipment does not generate ultraviolet, ionizing or microwave radiation, is not provided with laser sources and does not generate sonic or ultrasonic pressure.	N/A
12.2.1	Ionizing radiation		N/A
12.2.1.1	Equipment meets the following requirements:		—
	a) if intended to emit radiation meets requirements of 12.2.1.2; or		N/A
	tested, classified and marked in accordance to IEC 60405		N/A
	b) if only emits stray radiation meets requirements of 12.2.1.3		N/A
12.2.1.2	Equipment intended to emit radiation	The equipment is not intended to generate or emit radiation.	—
	Effective dose rate of radiation measured.....:		—
	If dose rate exceeds 5 µSv/h marked with the following:		—
	a) symbol 17 (ISO 361)		N/A
	b) abbreviations of the radionuclides ..... :		—
	c) with maximum dose at 1 m; or ..... :		—
	with dose rate value between 1 µSv/h and 5 µSv/h in m.....:		—
12.2.1.3	Equipment not intended to emit radiation	The equipment does not generate or emit radiation.	—
	Limit for unintended stray radiation of 1 µSv/h at any easily reached point kept .....:		—
12.2.2	Accelerated electrons	The equipment does not generate or emit radiation.	—
	Compartments opened only by the use of a TOOL		N/A
12.3	Ultraviolet (UV) radiation	The equipment does not generate UV radiation.	N/A
	No unintentional HAZARDOUS escape of UV radiation:		—
	– checked by inspection; and		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	– evaluation of RISK assessment documentation		N/A
12.4	Microwave radiation	The equipment does not generate Microwave radiation.	N/A
	Power density does not exceed 10 W/m^2..... :		N/A
12.5	Sonic and ultrasonic pressure	See below.	N/A
12.5.1	Sound level	The equipment does not generate excessive sound from equipment.	—
	No HAZARDOUS sound emission		N/A
	Maximum sound pressure level measured and calculated for maximum sound power level as specified in ISO 3746 or ISO 9614-1		N/A
	Instruction describes measures for protection		N/A
12.5.2	Ultrasonic pressure	The equipment does not generate ultrasonic pressure.	N/A
	Equipment not intended to emit ultrasound does not exceed limit of 110 dB between 20 kHz and 100 kHz		N/A
	Equipment intended to emit ultrasound:		N/A
	Outside useful beam does not exceed limit of 110 dB between 20 kHz and 100 kHz		N/A
	If inside useful beam above values exceeded:		—
	Marked with Symbol 14 of table 1		N/A
	and following information in the documentation:		—
	a) dimensions of useful beam		N/A
	b) area where ultrasonic pressure exceed 110 dB		N/A
	c) maximum sound pressure inside beam area		N/A
12.6	Laser sources	No laser sources in the equipment.	N/A
	Equipment meets requirements of IEC 60825-1		N/A
13	PROTECTION AGAINST LIBERATED GASES AND SUBSTANCES, EXPLOSION AND IMPLOSION		N/A
13.1	Poisonous and injurious gases and substances	The equipment does not use or produce poisonous and injurious gases.	N/A
	No poisonous or injurious gases or substances liberated in NORMAL CONDITION		N/A
	Attached data/test reports demonstrate conformity		N/A
13.2	Explosion and implosion		N/A
13.2.1	Components		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Components liable to explode:		—
	Pressure release device provided; or		N/A
	Apparatus incorporates operator protection (see also 7.7)		N/A
	Pressure release device:		—
	Discharge without danger		N/A
	Cannot be obstructed		N/A
13.2.2	Batteries and battery charging	No battery in the equipment.	—
	If explosion or fire HAZARD could occur:		—
	Protection incorporated in the equipment; or		N/A
	Instructions specify batteries with built-in protection		N/A
	In case of wrong type of battery used:		—
	No HAZARD; or		N/A
	Warning by marking and within instructions		N/A
	Equipment with means to charge rechargeable batteries:		—
	Warning against the charging of non-rechargeable batteries; and		N/A
	Type of rechargeable battery indicated; or		N/A
	Symbol 14 used		N/A
	Battery compartment design		N/A
	Single component failure		N/A
	Polarity reversal test		N/A
13.2.3	Implosion of cathode ray tubes	No cathode ray tubes in the equipment.	N/A
	If maximum face dimensions > 160 mm.....:		—
	Intrinsically protected and correctly mounted; or		N/A
	ENCLOSURE provides protection:		N/A
	If non-intrinsically protected:		—
	Screen not removable without TOOL		N/A
	If glass screen, not in contact with surface of tube		N/A
14	COMPONENTS AND SUBASSEMBLIES		P
14.1	Where safety is involved, components and subassemblies meet relevant requirements	(see TABLE 1)	P
14.2	Motors	No motor in the equipment.	N/A
14.2.1	Motor temperatures		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Does not present a HAZARD when stopped or prevented from starting; or		N/A
	Protected by over-temperature or thermal protection device conform with 14.3		N/A
14.2.2	Series excitation motors		N/A
	Connected direct to device, if overspeeding causes a HAZARD		N/A
14.3	Overtemperature protection devices		N/A
	Devices operating in a SINGLE FAULT CONDITION	No thermal control devices or over-temperature protection devices in the equipment.	N/A
	a) Reliable function is ensured		N/A
	b) RATED to interrupt maximum current and voltage		N/A
	c) Does not operate in NORMAL USE		N/A
	If self-resetting device used to prevent a HAZARD, protected part requires intervention before restarting		N/A
14.4	Fuse holders	See below.	N/A
	No access to HAZARDOUS LIVE parts	No fuse or fuse holder in the equipment.	N/A
14.5	MAINS voltage selecting devices	See below.	N/A
	Accidental change not possible	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no mains connection.	N/A
14.6	MAINS transformers tested outside equipment	No Mains transformer in the equipment.	N/A
14.7	Printed circuit boards	The equipment is provided with certified PCB material, see below	P
	Data shows conformity with V-1 of IEC 60695-11-10 or better; or	(see Table: 1 and Form A.23)	P
	Test shows conformity with V-1 of IEC 60695-11-10 or better		N/A
	Not applicable for printed wiring boards with limited-energy circuits (9.4)	See above.	P
14.8	Circuits or components used as TRANSIENT OVERVOLTAGE limiting devices	No such circuits or components in the equipment.	N/A
	Test conducted between each pair of MAINS SUPPLY TERMINALS		N/A
	No HAZARD resulting from rupture or overheating of the component:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	– no bridging of safety relevant insulation		N/A
	– no heat to other parts above the self-ignition points		N/A
15	PROTECTION BY INTERLOCKS		N/A
15.1	Interlocks are designed to remove a HAZARD before OPERATOR exposed	No safety interlocks in the equipment.	N/A
15.2	Prevention of reactivation		N/A
15.3	Reliability		N/A
	Single fault unlikely to occur; or		N/A
	Cannot cause a HAZARD		N/A
16	HAZARDS RESULTING FROM APPLICATION		N/A
16.1	REASONABLY FORESEEABLE MISUSE	The equipment is a component level module for building-in. Must be checked in the end product system. See Summary of testing.	N/A
	No HAZARDS arising from settings not intended and not described in the instructions		N/A
	Other cases of REASONABLY FORESEEABLE MISUSE addressed by RISK assessment		N/A
16.2	Ergonomic aspects	No hazards from ergonomic perspective.	N/A
	Factors giving rise to a HAZARD the RISK assessment is reflecting those aspects:		—
	a) limitation of body dimensions		N/A
	b) displays and indicators		N/A
	c) accessibility and conventions of controls		N/A
	d) arrangement of TERMINALS		N/A
17	RISK ASSESSMENT		N/A
	RISK assessment conducted, if HAZARD might arise and not covered by Clauses 6 to 16	Potential hazards covered by Clauses 6 to 15. No Risk assessment deemed necessary. However, clauses 16 and 17 have to be checked in the end product system. See Summary of testing	N/A
	TOLERABLE RISK achieved by iterative documented process covering the following:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	a) RISK analysis		N/A
	Identifies HAZARDS and estimates RISK		N/A
	b) RISK evaluation		N/A
	Plan to judge acceptability of resulting RISK level based on the estimated severity and likelihood of a RISK		N/A
	c) RISK reduction		N/A
	Initial RISK reduced by counter measures;		N/A
	Repeated RISK evaluation without new RISKS introduced		N/A
	RISKS remaining after RISK assessment addressed in instructions to RESPONSIBLE BODY:		—
	Information contained how to mitigate these RISKS		N/A
	Following principles in methods of RISK reduction applied by manufacturer in given order:		—
	1) RISKS eliminated or reduced as far as possible		N/A
	2) Protective measures taken for RISKS that cannot be eliminated		N/A
	3) User information about residual RISK due to any defect of the protective measures		N/A
	Indication of particular training is required		N/A
	Specification of the need for personal protective equipment		N/A
	Conformity checked by evaluation of the RISK assessment documentation		N/A

ANNEX F	ROUTINE TESTS		N/A
	Manufacturer ´s declaration	No routine tests required.	N/A

ANNEX H	QUALIFICATION OF CONFORMAL COATINGS FOR PROTECTION AGAINST POLLUTION		N/A
H.1	General	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no insulation requirements.	N/A
	Conformal coatings meet the requirements of Clause H.2 and H.3.		N/A
H.2	Technical properties		N/A
	Technical properties of conformal coatings are suitable for the intended application. In particular:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	a) Manufacturer indicate that it is a coating for PWBs;		N/A
	b) RATED operating temperature include the temperature range of the indicated application;		N/A
	c) CTI, insulation resistance and dielectric strength are suitable for the intended application;		N/A
	d) Coating have adequate UV resistance, if it is exposed to sunlight;		N/A
	e) Flammability RATING of the coating is at least the required flammability RATING of the applied PWB.		N/A
H.3	Qualification of coatings		N/A
	Coating complies with the conformity requirements.		N/A
ANNEX K	INSULATION REQUIREMENTS NOT COVERED BY CLAUSE 6.7	The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment.	N/A

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

4.4	**TABLE: Testing in SINGLE FAULT CONDITION – Results**			**Form A.1**	N/A
Test subclause	Fault No.	Fault description	Td 4.4.3 (NOTE)	How was test terminated Comments	Meets 4.4.4
–	–	–	–	–	–

NOTE Td = Test duration in hh:mm:ss
Record dielectric strength test on Form A.18 and temperature tests on Form A.26A and or A.26B.
Record in the comments column for each test whether carried out during or after SINGLE FAULT CONDITION.

Supplementary information:

No fault tests considered necessary, see summary of testing.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

5.1.3c)	**TABLE: MAINS supply**		**Form A.2**	P
	Marked rating..... :	10-36	V	—
	Phase..... :		DC	—
	Frequency ..... :		DC	—
	Current ..... :	200	mA Max	—
	Power ..... :		-	—
	Power ..... :		-	—

Test No.	Voltage [V]	Frequency [Hz]	Current [mA]	Power [W]	Power [VA]	Comments
1	9	-	232.0	2.11	-	Model PLX51-PBS
2	10	-	207.4	2.08	-	
3	13.5	-	145.9	1.97	-	
4	15	-	131.0	1.96	-	
5	21.6	-	91.5	1.98	-	
6	24	-	82.9	1.99	-	
7	26.4	-	76.3	2.01	-	
8	36	-	58.6	2.11	-	
9	39.6	-	54.5	2.16	-	
10	9	-	227.1	2.06	-	Model PLX51-PBM
11	10	-	202.2	2.02	-	
12	13.5	-	146.6	1.98	-	
13	15	-	132.0	1.98	-	
14	21.6	-	92.0	1.99	-	
15	24	-	83.5	2.00	-	
16	26.4	-	76.5	2.02	-	
17	36	-	59.0	2.13	-	
18	39.6	-	54.7	2.17	-	

NOTE – Measurements are only required for marked ratings.

Supplementary information:

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

5.3	**TABLE: Durability of markings**	**Form A.3**	P

Marking method (see NOTE)	Agent
1) Adhesive labels	A Water
	B Isopropyl alcohol 70%

NOTE – Where applicable include print method, label material, ink or paint type, fixing method, adhesive and surface to which marking is fixed.

Marking location	Marking method (see above)
Identification (5.1.2)	1)
MAINS supply (5.1.3)	1)
Fuses (5.1.4)	-
Terminals and operating devices (5.1.5.2)	1)
Switches and circuit breakers (5.1.6)	-
Double/reinforced equipment (5.1.7)	-
Field wiring Terminal boxes (5.1.8)	-
Warning marking (5.2)	1)
Battery charging (13.2.2)	-

Method	Test agent	Remains legible	Label loose	Curled edges	Comments
		Verdict	Verdict	Verdict	
1)	A, B	Yes	No	No	Pass

Supplementary information:

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

6.2	**TABLE: List of ACCESSIBLE parts** **Form A.4**	P
6.1.2	Exceptions	—
6.2	Determination of ACCESSIBLE parts	—

Item	Description	Determination method (NOTE 5)	Exception under 6.1.2 (NOTE 4)
1	Enclosure	V, R, J	None
2	I/O ports	V, R, J	None

NOTE 1 – Test fingers and pins are to be applied without force unless a force is specified (see 6.2.2)

NOTE 2 – Special consideration should be given to inadequate insulation and high voltage parts (see 6.2)

NOTE 3 – Parts are considered to be ACCESSIBLE if they could be touched in the absence of any covering which is not considered to provide suitable insulation (see 6.4).

NOTE 4 – Capacitor test may be required (see Form A.5).

NOTE 5 – The determination methods are:
V = visual; R = rigid test finger; J = jointed test finger; P3 = pin 3 mm diameter; P4 = pin 4 mm diameter.

Supplementary information:

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

6	**TABLE: Values in NORMAL CONDITION**	**Form A.5**	P
6.1.2	Exceptions	11.2 Cleaning and decontamination	—
6.3.1	Values in NORMAL CONDITION (see NOTE 1)	11.3 Spillage	—
6.6.2	Terminals for external circuit	11.4 Overflow	—
6.10.3	Plugs and connections		—

Item (see Form A.4)	Voltage			Current				Capacitance		10 s / 5 s test (NOTE)			Comments
	V r.m.s.	V peak	V d.c.	Test circuit A1/A2/A3	mA r.m.s.	mA peak	mA d.c.	µC	mJ	V	µC	mJ	
1	0	0	0	N/A	N/A	N/A	N/A	-	-	-	-	-	Pass
2	0	0	36	N/A	N/A	N/A	N/A	-	-	-	-	-	Pass

NOTE – A 10 s test is specified in 6.1.2 a) b). A. 5 s test is specified in 6.10.3. The capacitance level versus voltage below the limits given from figure 3 of IEC 61010-1.

Supplementary information:

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

6.3.2	**TABLE: Values in SINGLE FAULT CONDITION**										**Form A.6**	N/A
Item	Subclause and	Voltage			Transient (see NOTE)		Current				Capacitance	Comments
(see Form A.4)	fault No. (see Form A.1)	V r.m.s.	V peak	V d.c.	V	s	Test circuit A1/A2/A3	mA r.m.s.	mA peak	mA d.c.	µF (see NOTE)	
–	–	–	–	–	–	–	–	–	–	–	–	–
NOTE – Transient voltages must be below the limits given from Figure 2 and the capacitance below the limits from figure 3 of IEC 61010-1.												
Supplementary information: The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no accessible voltages exceed permissible limits.												

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

6.5.2.2	**TABLE: Cross-sectional area of bonding conductors**	**Form A.7**	N/A
Conductor location	CROSS-SECTIONAL AREA [mm²]		Verdict
–	–		–
Supplementary information:			

6.5.2.3	**TABLE: Tightening torque test**		**Form A.8**	N/A
Conductor location	Size of screw	Tightening torque [Nm]	Verdict	
–	–	–	–	
Supplementary information:				

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

6.5.2.4	**TABLE: Bonding impedance of plug connected equipment**			**Form A.9**	N/A
ACCESSIBLE part under test		Test current [A]	Voltage attained after 1 min [V]	Calculated resistance (Maximum 0,1 or 0,2 Ω) [Ω] (NOTE 1)	Verdict
–		–	–	–	–
NOTE 1 – For none-detachable power cord the impedance between protective conductor plug pin of MAINS cord and each ACCESSIBLE part shall not exceed 0,2 Ohm.					
Supplementary information:					

6.5.2.5	**TABLE: Bonding impedance of permanently connected equipment**		**Form A.10**	N/A
ACCESSIBLE part under test		Test current [A]	Voltage attained after 1 min (maximum 10 V) [V]	Verdict
–		–	–	–
Supplementary information: No protective earthing provided.				

6.5.2.6	**TABLE: Transformer PROTECIVE BONDING screen**			**Form A.11**	N/A
ACCESSIBLE part under test		Test current (see NOTE) [A]	Voltage attained after 1 min (maximum 10 V) [V]	Calculated resistance (maximum 0,1 Ω) [Ω]	Verdict
–		–	–	–	–
NOTE – Test current must be twice the value of the overcurrent protection means of the winding. Test is specified in 6.5.2.6 a) or b).					
Supplementary information: No protective earthing provided.					

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

6.5.4	**TABLE: protective impedance**	**Form A.12**	N/A

A single component

Component	Location	Measured		Calculated	Rated		Verdict	Comments
		Working voltage [V]	Current [A]	Power dissipation [W]	Working voltage [V]	Power dissipation [W]		
–	–	–	–	–	–	–	–	–

A combination of components

Component	Location	Comments
–	–	–

NOTE – A PROTECTIVE IMPEDANCE shall not be a single electronic device that employs electron conduction in a vacuum, gas or semiconductor.

Supplementary information:

None provided.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

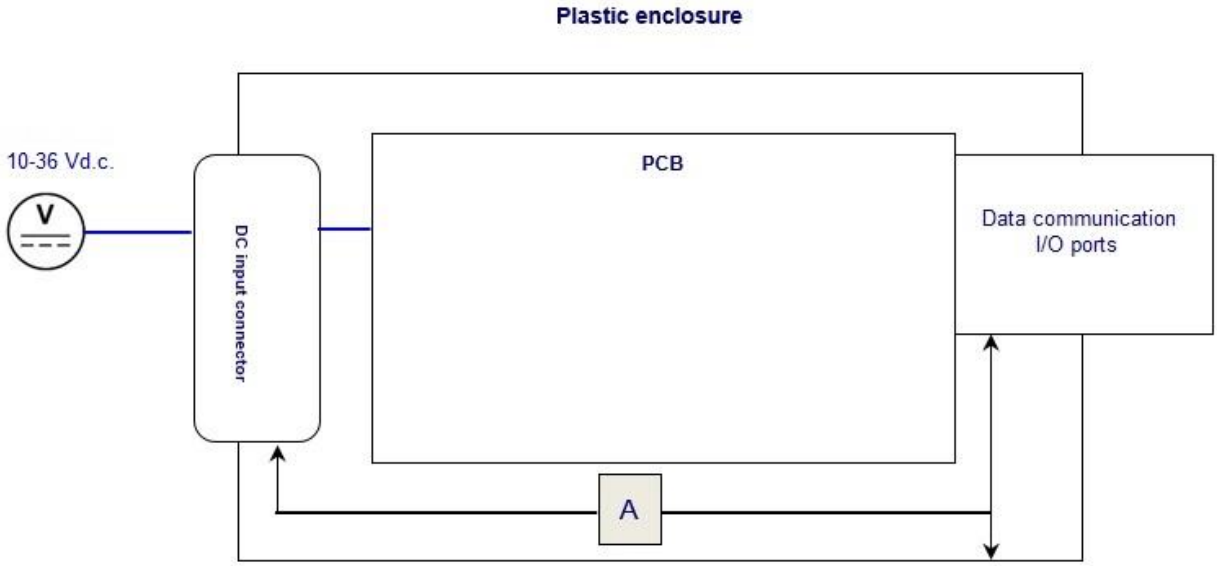
6.5.6	**TABLE: Current- or voltage-limiting device**						**Form A.13**	N/A
Component	Location	Measured		Rated		Verdict	Comments	
		Working voltage [V]	Current [A]	Working voltage [V]	Current [A]			
–	–	–	–	–	–	–	–	

Supplementary information:

None provided.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

6.7	**TABLE: Insulation requirements- Block diagram of system**	**Form A.14**	N/A



Pollution degree..... : 2	Overvoltage category..... : II

Area	Location	Insulation type	WORKING VOLTAGE			Test voltage	Comments (NOTE 3)
		(NOTE 1)	RMS [V]	Peak [V]	Frequency [kHz]	(NOTE 2) [V]	
A	From input to output including plastic enclosure	–	36 Vd.c.	36 Vd.c.	d.c.	–	Note 4

NOTE 1 – Type of insulation:
BI = BASIC INSULATION
DI = DOUBLE INSULATION
PI = PROTECTIVE IMPEDANCE
RI = Reinforced INSULATION
SI = Supplementary INSULATION
see also Form A.15 for further details

NOTE 2 - Types of voltage
Peak impulse test voltage (pulse)
r.m.s.
d.c.
peak

NOTE 3 - OVERVOLTAGE CATEGORIES or POLLUTION DEGREES which differ should be shown under "Comments"

Supplementary Information:

Note 4: The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no electrical insulation is required.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

6.7	**TABLE: Insulation requirements- Clearances and Creepages**		**Form A.15**	N/A
6.2.2	Examination	6.5.4	Protective impedance	—
6.4.2	ENCLOSURES and protective barriers	6.5.6	Current- or voltage-limiting device	—
6.4.4	Impedance	9.6.1	BASIC INSULATION between opposite polarity	—

Area	Location (See Form A.14)	Insulation type (NOTE 1)	WORKING VOLTAGE (NOTE 2)			Clearance		Creepage		CTI	Verdict	Comments
			RMS [V]	Peak [V]	Frequency [kHz]	Required [mm]	Measured [mm]	Required [mm]	Measured [mm]			
A	From input to output including plastic enclosure	–	36 Vd.c.	36 Vd.c.	d.c.	–	–	–	–	100	P	Note 3)

NOTE 1 – refer to Form A.14 for type of insulation shown in the insulation diagram NOTE 2 - to be used for definition of required insulation (see Form A.14)

Input supply voltage…….:	36	V	d.c.	Hz

Supplementary information:

Note 3) The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no electrical insulation is required.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

6.7	**TABLE: Insulation requirements- Clearances and Creepages**		**Form A.16**	N/A
6.4.2	ENCLOSURES or PROTECTIVE BARRIERS	9.6.1	Overcurrent protection basic insulation between MAINS parts	—
8	Mechanical resistance to shock and impact	10.5.1	Integrity of CLEARANCES and CREEPAGE distances	—

Area	Location (See Form A.14)	Insulation type	Mechanical tests (NOTE)					Test at max.	Measured after test (if required)		Verdict	Comments
			Applied force	Rigidity (8.2)		Drop (8.3)		RATED ambient	Clearance	Creepage distance		
			N	Static (8.2.1)	Impact (8.2.2)	Normal (8.3.1)	Hand-held/ Plug-in	(10.5.1)	mm	mm		
A	From input to output including plastic enclosure	–	N/A	N/A	N/A	N/A	N/A	—	—	—	P	Note 1

NOTE – Refer to Form A.18 for dielectric strength tests following the above tests.

Supplementary information:

Note 1: The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no electrical insulation is required.

IEC 61010-1			
Clause	Requirement – Test	Result — Remark	Verdict

6.7.2.2.2	**TABLE: Reliability of potted components**	**Form A.17 (optional)**	N/A
14.1 b)	**Components and subassemblies**		N/A

Temperature Cycling Test	
Manufacturer .....:	—
Type.....:	—
Construction .....:	—
Potting compound .....:	—
CREEPAGE distances measured .....:	—
CLEARANCES measured .....:	—
Thickness through insulation.....:	—
Adhesive test Pass/Fail.....:	—
Test temperature T °C.....:	—

Cycles at U= AC 500 V				Leakage current (500 V) mA			
Number of cycles	Date			68 h / 125 °C	1 h / 25 °C	2 h / 0 °C	1 h / 25 °C
1. Cycle from	—	to	—	—	—	—	—
2. Cycle from	—	to	—	—	—	—	—
3. Cycle from	—	to	—	—	—	—	—
4. Cycle from	—	to	—	—	—	—	—
5. Cycle from	—	to	—	—	—	—	—
6. Cycle from	—	to	—	—	—	—	—
7. Cycle from	—	to	—	—	—	—	—
8. Cycle from	—	to	—	—	—	—	—
9. Cycle from	—	to	—	—	—	—	—
10. Cycle from	—	to	—	—	—	—	—

After Cycling Test :		
Humidity conditioning	48 h	
Requirements for dielectric strength (s. insulation diagram)	Test voltage V r.m.s	Verdict
Basic insulation _____ V r.m.s.	—	—
Supplementary insulation _____ V r.m.s.	—	—
Reinforced insulation _____ V r.m.s.	—	—

NOTE - to be used for evaluation of components containing insulation through solid insulation, when the component standard require thermal cycling test. Ref Clause 14.1 and Figure 15, option b)

Supplementary information: No potted components.

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Clause	Requirement — Test	Result — Remark	Verdict

6.8	**TABLE: Dielectric strength tests**	**Form A.18**	N/A
4.4.4.1 b)	Conformity after application of SINGLE FAULT CONDITIONS[1]		N/A
6.4	Primary means of protection[2]		N/A
6.6	Connections to external circuits		N/A
6.7.	Insulation requirements[2] (see Annex K)		N/A
6.10.2	Fitting of non-detachable MAINS supply cords[1]		N/A
9.2 a) 2)	Eliminating or reducing the sources of ignition within the equipment		N/A
9.4 c)	Limited-energy circuit		N/A
9.6.1	Overcurrent protection basic insulation between MAINS - parts		N/A
	Test site altitude ..... :	95 m	—
	Test voltage correction factor (see table 10)..... :	N/A	—

Location or references from Forms A.1 and A.14	Clause or sub-clause	Humidity	Working voltage	Test voltage	Comments (NOTE)	Verdict
		Yes/No	V	r.m.s./peak/ d.c.		
From input to output including plastic enclosure	–	–	36 Vd.c.	–	Note 1	N/A

[1] Record the fault, test or treatment applied before the dielectric strength test. [2] Humidity preconditioning required.
NOTE: Test duration may be recorded.

Supplementary information:

Note 1: The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no electrical insulation is required.

6.10.2	**TABLE: Cord anchorage**				**Form A.19**	N/A

Location	Mass [kg]	Pull [N]	Verdict	Torque [Nm]	Verdict	Comment
–	–	–	–	–	–	–

Dielectric strength test for 1 min. (6.8.3.1).....:	–	V r.m.s.	–

Supplementary information:

No cord provided.

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Clause	Requirement — Test	Result — Remark	Verdict

7.	**TABLE: Protection against mechanical HAZARDS** **Form A.20**	N/A
7.3.4	Limitation of force and pressure	—
7.3.5	Gap limitations between moving parts	—

Part / Location	Clause 7.3.4		Clause 7.3.5.1								Clause 7.3.5.2			Verdict	Comments
	Continuous	Temporary	Minimum gaps [mm]								Maximum gaps [mm]				
	Contact pressure max. 50 N /cm² @ max. 150 N	max. 250 N / 3 cm² @ max. 0,75 s	Torso 500	Head 300	Leg 180	Foot 120	Toes 50	Arm 120	Hand 100	Finger 25	Head 120	Foot 35	Finger 4		
–	–	–	–	–	–	–	–	–	–	–	–	–	–	N/A	–

Supplementary information:

No moving parts in the equipment. No mechanical hazards.

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Clause	Requirement – Test	Result - Remark		Verdict
8.2	**ENCLOSURE rigidity test**		**Form A.21A**	N/A
8.2.1	Static test			N/A
	Material of enclosure .....:	–		—
	Preparation for the test:	–		—
	Operated at ambient temperature .....:	° C	h	—
Location		Comments		Verdict
–		–		–
Supplementary information:				
8.2.2	**Dynamic test**			N/A
	Material of enclosure .....:	–		—
	Corresponding IK-code .....:	–		—
	Preparation for the test:	–		—
	Cooled to (temperature) .....:	° C		—
Location		Comments		Verdict
–		–		–
Supplementary information: The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no insulation is required.				

IEC 61010-1				
Clause	Requirement – Test		Result - Remark	Verdict
8.3	**Drop test**		**Form A.21B**	N/A
8.3.1	Other equipment			—
Location	Raised up to		Comments	—
	[mm]	30 °		—
–	–	–	–	–
Supplementary information: The equipment is a component level module for building-in.				
8.3.2	Hand-held EQUIPMENT and direct plug-in equipment			N/A
	Material of enclosure .....:		–	—
	Preparation for the test:		–	—
	Cooled to (temperature) .....:		° C	—
Location			Comments	Verdict
–			–	–
Supplementary information: Equipment is not hand-held or direct plug-in.				

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

9	**TABLE: Protection against the spread of fire**			**Form A.22**	P
Item	Source of HAZARD or area of the equipment considered (circuit, component, liquid etc.)	Protection Method (9.1 a, b or c)	Protection details		Verdict
1	Equipment	9.1 b)	The equipment is a component level module for building-in, is supplied from DC power supply modules are specified as limited-energy circuits under normal and single fault condition, see Summary of testing.		P
Supplementary information:					

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict
9.3.2	**TABLE: Constructional requirements**	**Form A.23**	P
14.7	Printed circuit boards		P
Material tested ..... :	PCB is certified with V1 rating.		—
Generic name ..... :	–		—
Material manufacturer..... :	–		—
Type ..... :	–		—
Colour ..... :	–		—
Conditioning details ..... :	–		—

		Sample					
		1	2	3	4	5	6
Thickness of specimen	mm						
Duration of flaming after first Application	s						
Duration of flaming plus glowing After second application	s						
Specimen burns to holding clamp	Yes/No						
Cotton ignited	Yes/No						
Sample result	Pass/Fail						

Supplementary information:

Refer to Table 1.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

9.4	**TABLE: Limited-energy circuit**				**Form A.24**	P
Item or Location (see Form A.22)	9.4 a)	9.4 b) Current limitation (NOTE)		9.4 c)	Decision	Comments
	Maximum potential in circuit voltage r.m.s./d.c. [V]	Maximum available current [A]	Overload protection after 120 s [A]	Circuit separation	Yes/No	
1	36 Vd.c.	≤ 4.1	–	–	Yes	Note 1
NOTE – Maximum values see Tables 17 and 18 of IEC 61010-1						
Supplementary information: Note 1: The equipment is a component level module for building-in, is supplied from DC power supply modules are specified as limited-energy circuits under normal and single fault condition, see Summary of testing.						

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

9.5	**TABLE: Requirements for equipment containing or using flammable liquids**	**Form A.25**	N/A
Type of liquid	9.5 Flammable liquids		Verdict
	b) Quantity	c) Containment	
–	–	–	–

Supplementary information:

No flammable liquids.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

10.	**TABLE : Temperature Measurements** **Form A.26A**	P
10.1	Surface temperature limits – NORMAL CONDITION	P
10.2	Temperature of windings – NORMAL CONDITION	N/A
10.3	Other temperature measurements	P

Operating conditions:	Maximum normal operating condition continuously, see summary of testing.		
Frequency..... :	d.c.	Test room ambient temperature (ta)...:	See below
Voltage..... :	9 V	Test duration.....:	2 h 50 min

Part / Location	t_m [°C]	t_c [°C]	t_{max} [°C]	Verdict	Comments
PLX51-PBS					
U15 body on rear board	86	87	105	P	Note 5)
U14 body on rear board	84	85	105	P	Note 5)
U9 body on front board	86	87	105	P	Note 5)
U10 body on front board	77	78	105	P	Note 5)
U4 body on front board	87	88	105	P	Note 5)
U1 body on front board	89	90	105	P	Note 5)
U19 body on front board	93	94	105	P	Note 5)
C5 body on front board	95	96	105	P	Note 5)
T1 body on front board	80	81	105	P	Note 5)
Power connector body on front board	74	75	105	P	Note 5)
U18 body on front board	85	86	115	P	Note 5)
C1 body on front board	81	82	105	P	Note 5)
U17 body on front board	81	82	105	P	Note 5)
T3 body on front board	83	84	105	P	Note 5)
J7 (I/O connector) body on front board	75	76	105	P	Note 5)
T2 body on front board	82	83	105	P	Note 5)
U7 body on front board	76	77	105	P	Note 5)
J2 (Ethernet connector) body on front board	76	77	105	P	Note 5)
Plastic enclosure near LED	73	74	90	P	Manufacturer's specification.
Ambient	69	70	-		

NOTE 1 - t_m = measured temperature
t_c = t_m corrected (t_m–t_a+ **70 °C** or max. RATED ambient)
t_{max} = maximum permitted temperature
NOTE 2 - see also 14.1 with reference to component operating conditions
NOTE 3 - Record values for NORMAL CONDITION and / or SINGLE FAULT CONDITION in this Form use additional form if necessary
NOTE 4 - see Form A.26B for details of winding temperature measurements

Supplementary information:
Note 5) The temperature limit value is based on the specification of PCB material.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

10.	**TABLE : Temperature Measurements** **Form A.26A**	P
10.1	Surface temperature limits – NORMAL CONDITION	P
10.2	Temperature of windings – NORMAL CONDITION	N/A
10.3	Other temperature measurements	P

Operating conditions:	Maximum normal operating condition continuously, see summary of testing.		
Frequency..... :	d.c.	Test room ambient temperature (ta)...:	See below
Voltage..... :	39.6 V	Test duration.....:	1 h 5 min

Part / Location	t_m [°C]	t_c [°C]	t_{max} [°C]	Verdict	Comments
PLX51-PBS					
U15 body on rear board	85	86	105	P	Note 5)
U14 body on rear board	82	83	105	P	Note 5)
U9 body on front board	84	85	105	P	Note 5)
U10 body on front board	75	76	105	P	Note 5)
U4 body on front board	85	86	105	P	Note 5)
U1 body on front board	94	95	105	P	Note 5)
U19 body on front board	92	93	105	P	Note 5)
C5 body on front board	84	85	105	P	Note 5)
T1 body on front board	78	79	105	P	Note 5)
Power connector body on front board	73	74	105	P	Note 5)
U18 body on front board	84	85	115	P	Note 5)
C1 body on front board	81	82	105	P	Note 5)
U17 body on front board	80	81	105	P	Note 5)
T3 body on front board	82	83	105	P	Note 5)
J7 (I/O connector) body on front board	74	75	105	P	Note 5)
T2 body on front board	81	82	105	P	Note 5)
U7 body on front board	102	103	105	P	Note 5)
J2 (Ethernet connector) body on front board	75	76	105	P	Note 5)
Plastic enclosure near LED	71	72	90	P	Manufacturer's specification.
Ambient	69	70	-		

NOTE 1 - t_m = measured temperature
t_c = t_m corrected (t_m–t_a+ **70 °C** or max. RATED ambient)
t_{max} = maximum permitted temperature
NOTE 2 - see also 14.1 with reference to component operating conditions
NOTE 3 - Record values for NORMAL CONDITION and / or SINGLE FAULT CONDITION in this Form use additional form if necessary
NOTE 4 - see Form A.26B for details of winding temperature measurements

Supplementary information:
Note 5) The temperature limit value is based on the specification of PCB material.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

10.2	**TABLE: Temperature of windings** **Form A.26B** **Resistance method Temperature Measurements**	N/A
4.4.2.7	MAINS transformers	N/A
14.2.1	Motor temperatures	N/A

Operating conditions..:								
Frequency.....:	Hz	Test room ambient temperature (ta1/ta2)..:					/	°C (initial / final)
Voltage.....:	V	Test duration.....:					h	min
Part / Designation	Rcold [Ω]	Rwarm [Ω]	Current [A]	t_r [K]	t_c [°C]	t_{max} [°C]	Verdict	Comments
–	–	–	–	–	–	–	–	–

NOTE 1- R_{cold} = initial resistance; R_{warm} = final resistance
t_r = temperature rise; t_c = t_r corrected (t_c= t_r - { t_{a2} - t_{a1}} + [40 °C or max RATED ambient])
t_{max} = maximum permitted temperature
NOTE 2 - Indicate insulation class (IEC 60085) under comments (optional)
NOTE 3 - Record values for NORMAL CONDITION and / or SINGLE FAULT CONDITION in this Form use additional form if necessary

Supplementary information:

Resistance method not used.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

10.5.2	**TABLE: Resistance to heat of non-metallic ENCLOSURES**			**Form A.27**	N/A
	Test method used:				—
	Non-operative treatment ..... :	[ ]			N/A
	Empty ENCLOSURE ..... :	[ ]			N/A
	Operative treatment ..... :	[ ]			N/A
	Temperature during tests ..... :	˚C			—
Description	Material	Comments			Verdict
–	–	–			N/A
Dielectric strength test (6.8) ..... :		–	V	r.m.s.	N/A

NOTE – Within 10 minutes of the end of treatment suitable tests in acc. to 8.2 and 8.3 must be conducted and pass criteria of 8.1.

Supplementary information:

The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no electrical insulation is required.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

10.5.3	**TABLE: Insulating Materials**	**Form A.28**	N/A
10.5.3 1)	Ball-pressure test		N/A
	Max. allowed impression diameter ..... :	2 mm	—

Part	Test temperature [°C]	Impression diameter [mm]	Verdict
–	–	–	–

Supplementary information:

10.5.3 2)	**Vicat softening test (ISO 306)**	**Form A.29**	N/A

Part	Vicat softening temperature [°C]	Thickness of sample [mm]	Verdict
–	–	–	–

Supplementary information:

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

8	**TABLE: Mechanical resistance to shock and impact** **Form A.30**	N/A
11	**Protection against HAZARDS from fluids**	N/A

Voltage tests can be carried out once after performing the tests of clause **8** and clause **11**. However, if voltage tests are carried out separately after each set of tests, two forms can be used.

Location (see Form A.14)	Clause 8 tests				Clause 11 tests				Working voltage [V]	Test voltage [V]	Verdict	Comments
	Static (8.2.1) 30 N	Impact (8.2.2)	Normal (8.3.1)	Handheld Plug-in	Cleaning (11.2)	Spillage (11.3)	Overflow (11.4)	IEC 60529 (11.6)				
A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	36 Vd.c.	–	N/A	Note 1

NOTE – Use r.m.s., d.c. or peak to indicate the used test voltage.

Supplementary information:

No fluids used.

Note 1: The equipment is not to be connected to hazardous live parts, and no present hazardous live part in the equipment, no insulation is required.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

11.7.2	TABLE: Leakage and rupture at high pressure				Form A.31	N/A
Part	Maximum permissible working pressure [MPa]	Test pressure [MPa]	Leakage Yes / No	Deformation Yes / No	Burst Yes / No	Comments
–	–	–	–	–	–	–

NOTE – see also Annex G with requirements for USA and Canada.

Supplementary information:

11.7.3	Leakage from low-pressure parts		Form A.32	N/A
Part	Test pressure [MPa]	Leakage Yes / No	Comments	
–	–	–	–	

Supplementary information:

No pressurized part in the equipment.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

12.2.1	**TABLE: Ionizing radiation**	**Form A.33**	N/A
12.2.1.2	Equipment intended to emit radiation		N/A

Locations tested	Measured values [µSv/h]	Verdict	Comments
–	–	–	–

Supplementary information:

No ionizing radiation from equipment.

12.2.1.3	Equipment not intended to emit radiation	**Form A.34**	N/A
	Max. allowed effective dose rate at 100 mm……:	1 µSv/h	—

Locations tested	Measured values [µSv/h]	Verdict	Comments
–	–	–	–

Supplementary information:

No ionizing radiation from equipment.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

12.5.1	**TABLE: Sound level**	**Form A.35**	N/A

Locations tested	Measured maximum sound pressure level dB(A)	Calculated maximum sound power level
At operator's normal position and at bystanders' positions	–	–
–	–	–

Supplementary information:

12.5.2	Ultrasonic pressure	**Form A.36**	N/A

Locations tested	Measured values		Comments
	[dB]	[kHz]	
At operator's normal position	–	–	–
At 1 m from the ENCLOSURE	–	–	–
–	–	–	–

NOTE – No limit is specified at present, but a limit of 110 dB above the reference pressure value of 20 μPa is under consideration for applicable frequencies between 20 kHz and 100 kHz.

Supplementary information:

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict
13.2.2	**TABLE: Batteries** **Form A.37**		N/A
	Battery load and charging circuit diagram:		
	Battery type..... :	–	—
	Battery manufacturer/model/catalogue No..... :	–	—
	Battery ratings..... :	–	—
	Reverse polarity instalment test	–	N/A

Single component failures	Verdict	
Component	Open circuit	Short circuit
–	–	–

Supplementary information:

No battery in equipment.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

14.3	**TABLE: Overtemperature protection devices**	**Form A.38**	N/A

Reliability test

Component	Type (NOTE)	Verdict	Comments
–	–	–	–

NOTE:
NSR = non-self-resetting (10 times)
NR = non-resetting (1 time)
SR = self-resetting (200 times)

Supplementary information:

None provided.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

4.4.2.7	**TABLE: MAINS transformer**				**Form A.39** N/A
4.4.2.7.2	Short circuit				N/A
14.6	MAINS transformers tested outside equipment				N/A
Type ..... :	No transformers provided.				—
Manufacturer ..... :					—
Test in equipment					N/A
Test on bench					N/A
Test repeated inside equipment (see 14.6)					N/A
Optional – Insulation class (IEC 60085) of the lowest rated winding ..... :					—
Winding identification		–	–	–	–
Type of Protector for winding (NOTE 1)		–	–	–	–
Elapsed time		–	–	–	–
Current, A primary		–	–	–	–
secondary		–	–	–	–
Winding temperature, °C primary		–	–	–	–
(see NOTE 2) secondary		–	–	–	–
Tissue paper / cheesecloth OK ? (Pass / Fail)		–	–	–	–
Voltage tests (see NOTE 3)		–	–	–	–
Primary to secondary	_____ V ____	–	–	–	–
Primary to core	_____ V ____	–	–	–	–
Secondary to secondary	_____ V ____	–	–	–	–
Secondary to core	_____ V ____	–	–	–	–
Verdict		–	–	–	–

NOTE 1: Primary fuse - PF / ( ) A
Secondary fuse - SF / ( ) A
Overtemperature protection - OP / ( ) °C
Impedance protection - Z

NOTE 2: Indicate method of measurement - TC = with thermocouple
- R = resistance method
If resistance method is used, record resistance in cold and warm condition in FormA.26B.

NOTE 3: Record the voltage applied and the type of voltage (r.m.s. / d.c. / peak) and for results use NB = no breakdown or B = breakdown

Supplementary information:

No transformers provided.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

4.4.2.7	**TABLE: MAINS transformer**			**Form A.40**	N/A
4.4.2.7.3	Overload tests (for MAINS transformers)				N/A
14.6	MAINS transformers tested outside equipment				N/A
Type .....:	No transformers provided.				—
Manufacturer .....:					—
Test in equipment					N/A
Test on bench					N/A
Test repeated inside equipment (see 14.6)					N/A
Optional – Insulation class (IEC 60085) of the lowest rated winding .....:					—

Winding identification	–	–	–	–
Type of Protector for winding (NOTE 1)	–	–	–	–
Elapsed time	–	–	–	–
Current, A primary	–	–	–	–
secondary	–	–	–	–
Winding temperature, °C primary	–	–	–	–
(see NOTE 2) secondary	–	–	–	–
Tissue paper / cheesecloth OK ? (Pass / Fail)	–	–	–	–
Voltage tests (see NOTE 3)	–	–	–	–
Primary to secondary _____ V ____	–	–	–	–
Primary to core _____ V ____	–	–	–	–
Secondary to secondary _____ V ____	–	–	–	–
Secondary to core _____ V ____	–	–	–	–
Verdict	–	–	–	–

NOTE 1: Primary fuse - PF / ( ) A
Secondary fuse - SF / ( ) A
Overtemperature protection - OP / ( ) °C
Impedance protection - Z

NOTE 2: Indicate method of measurement TC = with thermocouple
R = resistance method
If resistance method is used, record resistance in cold and warm condition in FormA.26B.

NOTE 3: Record the voltage applied and the type of voltage (r.m.s. / d.c. / peak) and for results use NB = no breakdown or B = breakdown

Supplementary information:

No transformers provided.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict

14.8	**TABLE: Transient overvoltage limiting devices**									**Form A.41**	N/A
Component / Designation	Overvoltage Category	MAINS voltage [V rms]	Test voltage [V]	t_m [°C]	t_c [°C]	t_{max} [°C]	Rupture Yes / No	Circuit breaker tripped	Verdict	Comments	
–	–	–	–	–	–	–	–	–	–	–	
Test room ambient temperature ….:		°C									

NOTE - t_m = measured temperature
t_c = t_m corrected (t_m–t_a+ **40 °C** or max. RATED ambient)
t_{max} = maximum permitted temperature
Conformity is checked by applying 5 positive and 5 negative impulses with the applicable impulse withstand voltage, spaced up to 1 min apart, from a hybrid impulse generator (see IEC 61180-1).

Supplementary information:

IEC 61010-1			
Clause	Requirement – Test	Result — Remark	Verdict

Annex H	**TABLE: Qualification of conformal coating for protection against pollution**	**Form A.42**	N/A

Technical properties		
Manufacturer		—
Type		—
Meet requirements of ANSI / UL 746E	[yes / no]	—
Manufacturer declaration of coating material	[yes / no]	—
Operating temperature of coating	[ ] °C	—
Comparative tracking index (CTI)	[ ]	—
Insulation resistance	[ ] Ω	—
Dielectric strength	[ ] V	—
UV resistance (if required)	[yes / no]	—
Flammability rating		—
Preparation of the test specimens conducted	[yes / no]	—

Item	Test conditioning	Parameter	Td	Samples						Verdict	Comments
			h	1	2	3	4	5	6		
1	Scratch resistance			–	–	–	–	–	–	–	–
	Visual inspection			–	–	–	–	–	–	–	–
2	Cold		24	–	–	–	–	–	–	–	–
3	Dry heat		48	–	–	–	–	–	–	–	–
4	Rapid temp. change			–	–	–	–	–	–	–	–
5	Damp heat		24	–	–	–	–	–	–	–	–
6	Adhesion of coating	5 N		–	–	–	–	–	–	–	–
	Visual inspection			–	–	–	–	–	–	–	–
7	Humidity		48	–	–	–	–	–	–	–	–
8	Insulation resistance	>= 100 Ω		–	–	–	–	–	–	–	–
	Visual inspection			–	–	–	–	–	–	–	–
				–	–	–	–	–	–	–	–

NOTE Td = Test duration time

Supplementary information:

No conformal coatings used.

IEC 61010-1			
Clause	Requirement – Test	Result — Remark	Verdict

	TABLE: Additional or special tests conducted	**Form A.43**	N/A
Clause and name of test	Test type and condition	Observed results	—
–	–	–	–

Supplementary information:

No additional or special tests conducted.

IEC 61010-1			
Clause	Requirement — Test	Result — Remark	Verdict
	TABLE 1: - List of components and circuits relied on for safety		P

Unique component reference or location	Application/function	Manufacturer / trademark (NOTE 1)	Type / model	Technical data (NOTE 2)	Standard	Mark(s) of conformity evidence of acceptance (NOTE 3 and 4)
Enclosure	Enclosure	SABIC INNOVATIVE PLASTICS B V or manufacturer with equivalent technical specifications.	CX7240 or type with equivalent technical specifications.	Temperature Rating minimum 90 ˚C, Flammability minimum V-0, minimum thickness 0.75 mm	UL94	UR (E45329)
Main PCB	Main PCB	Ampel Inc. or manufacturer with equivalent technical specifications.	Type “-0-1” or type with equivalent technical specifications.	Rated minimum V-1, min. 105 ˚C	UL746	UR
LED PCB	LED PCB	Ampel Inc. or manufacturer with equivalent technical specifications.	Type “-0-1” or type with equivalent technical specifications.	Rated minimum V-1, min. 105˚C	UL746	UR

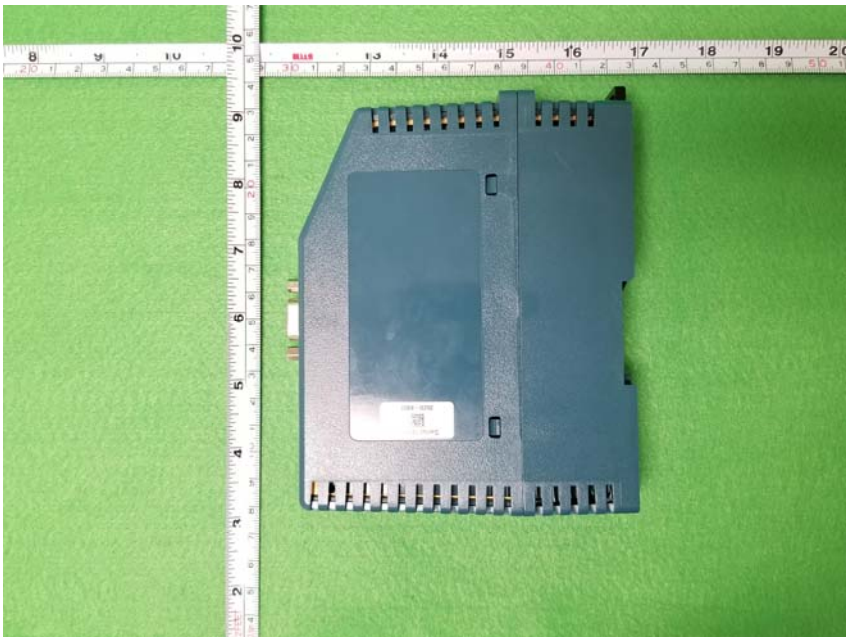
NOTE → 1 List all different manufacturers of the above components → 4 asterisk indicates mark assuring agreed level of surveillance
→ 2 May include electrical, mechanical values
→ 3 List licence no or method of acceptance

ATTACHMENT 1: Photographs of equipment

1. Perspective view 1 (PLX51- PBS)

2. Perspective view 2 (PLX51- PBS)

ATTACHMENT 1: Photographs of equipment



3. Right view (PLX51-PBS)

4. Left view (PLX51-PBS)

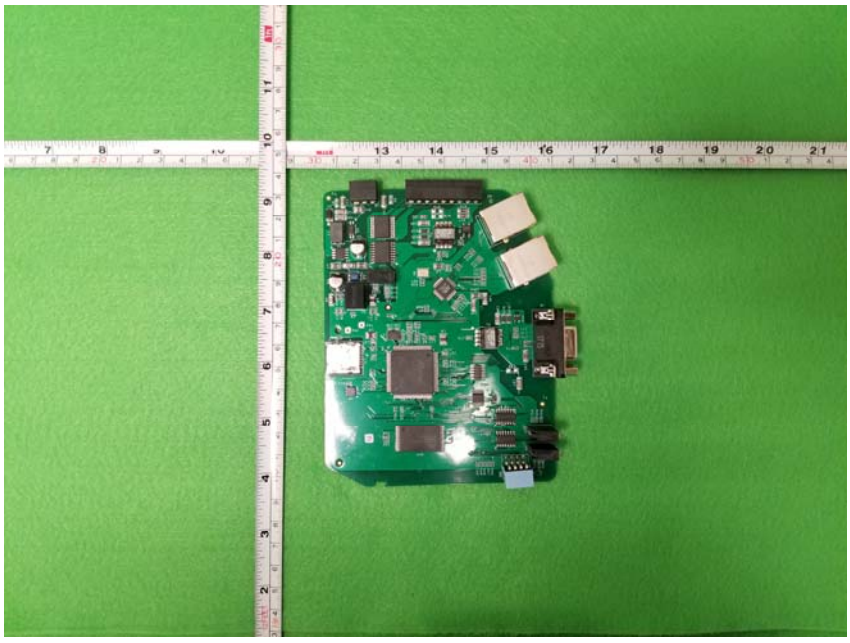
ATTACHMENT 1: Photographs of equipment

5. Front view (PLX51-PBS)

6. Rear view (PLX51-PBS)

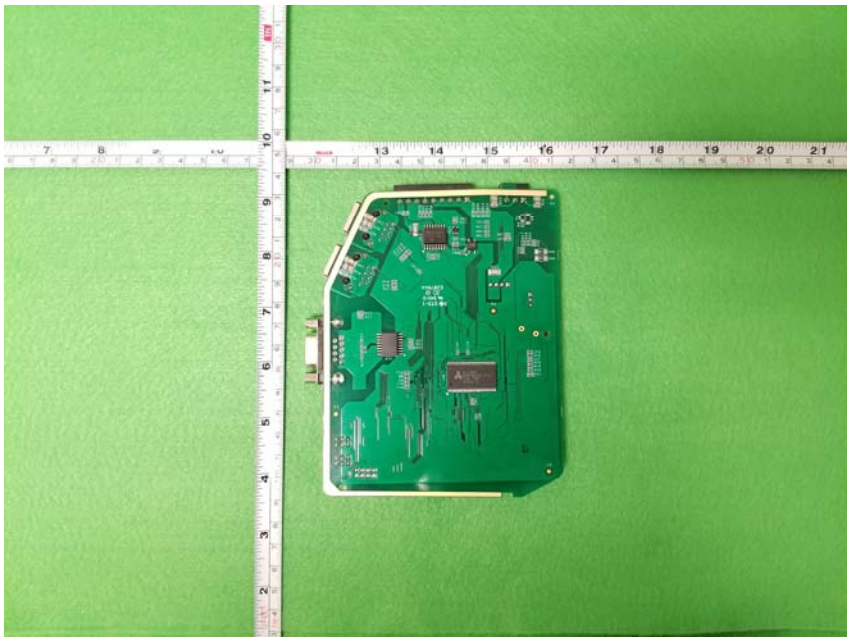
ATTACHMENT 1: Photographs of equipment

7. Internal view 1 (PLX51-PBS)

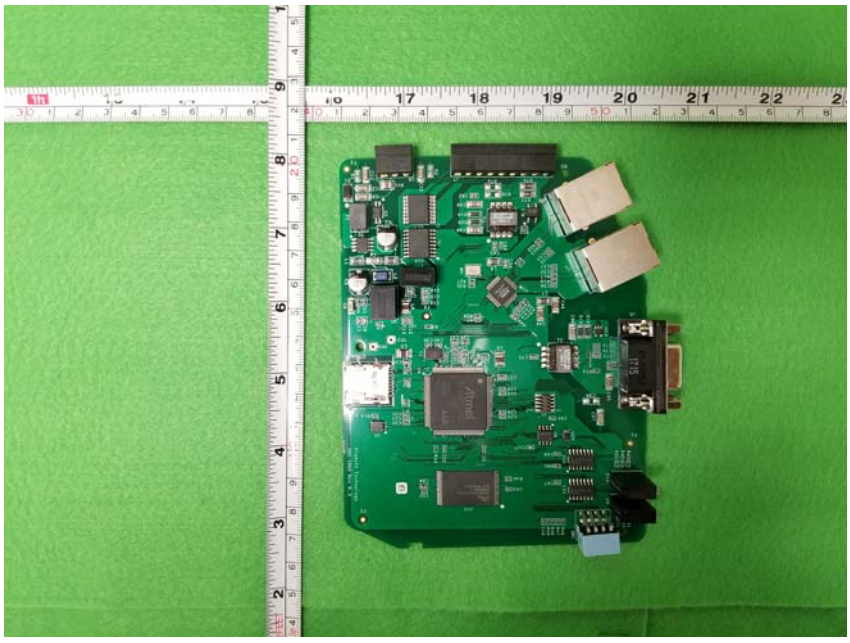


8. PCB (Top view) (PLX51-PBS)

ATTACHMENT 1: Photographs of equipment

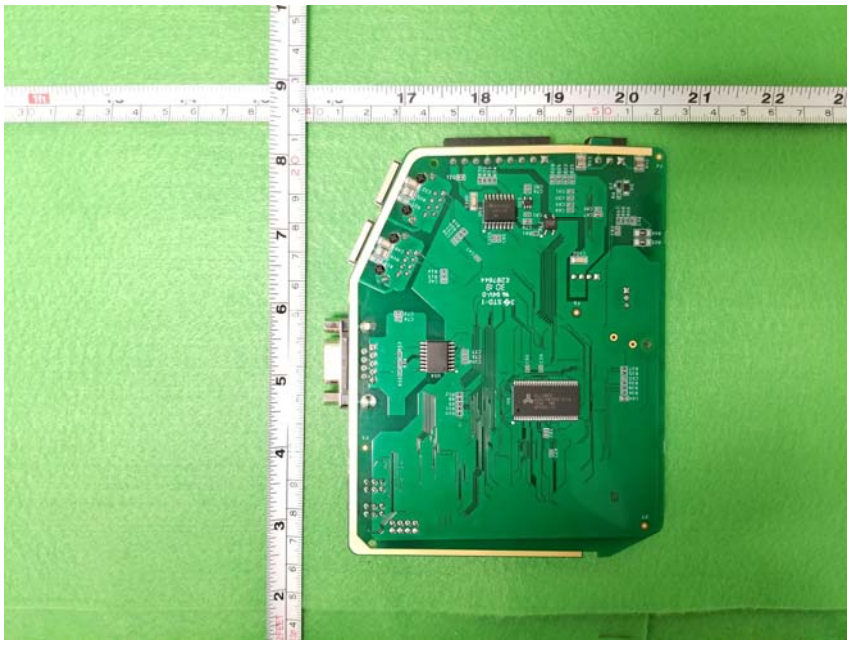


9. PCB (Bottom view) (PLX51-PBS)



10. PCB (Top view) (PLX51-PBM)

ATTACHMENT 1: Photographs of equipment



11. PCB (Bottom view) (PLX51-PBM)

ATTACHMENT TO TEST REPORT IEC61010-1
CANADA / US NATIONAL DIFFERENCES

(Safety requirements for electrical equipment for measurement, control, and laboratory use
Part 1: General requirements)

Differences according to .....:	National standard CSA C22.2 No. 61010-1-12 / UL 61010-1:2012
Attachment Form No. .....:	CA_ND_IEC61010_1J
Attachment Originator.....:	TÜV SÜD Product Service GmbH
Master Attachment .....:	Date (2014-01)

CA / US	National Differences		P
	NATIONAL DIFFERENCES of IEC Publication 61010-1, Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1:		—
1.1.4 DV [DR]	This standard applies to equipment to be employed in accordance with ANSI/NFPA 70, National Electrical Code® (NEC); designed to be installed in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1, and CSA C22.2 No. 0; or designed to comply with both the NEC and CEC	Considered.	P
6.3.1 a) DV [D2]	Voltage levels are 30 V r.m.s. and 42,4 V peak or 60 V d.c. For equipment RATED for use in WET LOCATIONS, the voltage levels are 16 V r.m.s. and 22,6 V peak or 35 V d.c.	Considered.	P
6.3.2 a) DV [D2]	Voltage levels are 50 V r.m.s. and 70 V peak or 120 V d.c. For equipment RATED for use in WET LOCATIONS, the voltage levels are 33 V r.m.s. and 46,7 V peak or 70 V d.c.	Considered.	N/A
6.5.2.4 DV [D2]	Plug connected connected Equipment containing all poles disconnection devices the voltage drop does not exceed 4 V a.c.	Equipment is not plug connected.	N/A
	Equipment contains all pole overcurrent protection of mains supply ; wiring cannot become in contact with accessible parts, test current need not more than twice the rating of overcurrent protection	No mains supply.	N/A
	Test current is twice the rating but not less than 40 A		N/A
	Test current more than 500 A, see CAN/CSA-C22.2 No. 0.4		N/A

<table>
<tr><td>6.5.2.4 DV.1 [D2]</td><td>Duration of protective bonding test<table><tr><td>Value of building MAINS supply overcurrent protection means (A)</td><td>Time (Min)</td></tr><tr><td>0 - 30</td><td>2</td></tr><tr><td>31 - 60</td><td>4</td></tr><tr><td>61 - 100</td><td>6</td></tr><tr><td>101 - 200</td><td>8</td></tr><tr><td>201 and over</td><td>10</td></tr></table></td><td>No connection to protective earth.</td><td>N/A</td></tr>
<tr><td>6.5.2.5
DV [D2]</td><td>Modification:
Permanently connected equipment only
Replace “1 min” with “the duration specified in Table 6.5.2.4DV.1” and “10 V” with “4 V”</td><td></td><td>—</td></tr>
<tr><td>6.10.1 d)
DV.2</td><td>Green covered conductors (with or without yellow stripes) are used only for connection to PROTECTIVE CONDUCTOR TERMINALS.</td><td>No protective conductor terminal.</td><td>N/A</td></tr>
<tr><td>6.10.1
DV.4</td><td>Requirements for MAINS cords or cord sets are contained in ANSI/UL 817 and CSA C22.2 No. 21.</td><td>No connection to mains supply.</td><td>N/A</td></tr>
<tr><td>6.10.1</td><td>Requirements for general use receptacles, attachment plugs, and similar wiring devices are contained in ANSI/UL 498 and CSA C22.2 No. 42, CSA C22.2 No. 182.1, CSA C22.2 No. 182.2, and CSA C22.2 No. 182.3.</td><td></td><td>N/A</td></tr>
<tr><td>6.10.3
DV [D2]</td><td>Plugs of MAINS cords are in accordance with ANSI/UL 498 and CSA C22.2 No. 42, CSA C22.2 No. 182.1, CSA C22.2No. 182.2, and CSA C22.2 No. 182.3.</td><td>No connection to mains supply.</td><td>N/A</td></tr>
<tr><td>6.10.4
DV.1</td><td>Permanently connected equipment
See Annex DVD</td><td></td><td>—</td></tr>
<tr><td>6.11
DV [D2]</td><td>Modification of title:
Add "and maintaining polarity" to the end of the subclause title.</td><td></td><td>—</td></tr>
<tr><td>6.11.5
DV.1</td><td>Any line-connected single-pole switch, any center contact of a lampholder, and any automatic control with a marked off position is connected to a TERMINAL or lead intended for connection to the ungrounded conductor of the supply circuit.</td><td></td><td>N/A</td></tr>
<tr><td>9.3.2
DV.1 [D2]</td><td>Flame RATINGS of ANSI/UL 94 V-0, V-1, and V-2 are equivalent to the flammability classifications of IEC 60695-11-10</td><td>Considered.</td><td>P</td></tr>
<tr><td></td><td>Flammability RATINGS FT-1 of CSA C22.2 No. 0.3 and VW-1 of ANSI/UL 1581 are also considered acceptable for insulated wire and cable.</td><td>Considered.</td><td>P</td></tr>
</table>

9.6.1 ADV D2	Overcurrent protective devices		N/A
9.6.1 ADV.1	Overucrrent protective device connected to the ungrounded supply connector.	None provided.	N/A
9.6.1 ADV.2	Multiple-pole circuit breaker interrupta all neutral and ungrounded connectors of mains supply simultaneously	None provided.	N/A
9.6.1 ADV.3	Single-fuse are connected in the ungrounded supply conductor	No fuses.	N/A
9.6.1 ADV.4	Fuseholders for fuses used in both conductors mounted adjacent to each other		N/A
	Fuses of same ratings and characteristics	No fuses.	N/A
9.6.1 ADV.5	The screw shell of a plug fuseholder and the ACCESSIBLE contact of an extractor fuseholder connected to the ungrounded supply conductor is connected towards the load	No fuse holders.	N/A
	The ACCESSIBLE contact or screw shell of fuseholders connected in the neutral (grounded) conductor is located towards the grounded supply line.		N/A
11.7 DV [D2]	Annex G is normative		—
11.7.1 DV.1	Laboratory equipment and testing and measurement equipment having both of the following characteristics meet the requirements of 11.7.2 and G.5:	No fluids provided.	—
	- a product of pressure and volume greater than 200 kPa·l, - a pressure greater than 50 kPa.	No fluids provided.	N/A
11.7.1 DV.2	Laboratory equipment and testing and measurement equipment that do not have those characteristics meet the requirements of 11.7.3 and 11.7.4, as applicable.	No fluids provided.	N/A
11.7.1 DV.3	Other types of equipment meet the requirements of Annex G, as applicable.		N/A
11.7.2 DV [D2]	Note: National authorities may allow safety to be established by calculation, for example according to the ASME Boiler and Pressure Vessel Code.		—
12.1 DV1 [D2]	NOTE 1A: In the USA, x-ray equipment is within the scope of 21 CFR 1020 and laser equipment is within the scope of 21 CFR 1040. In Canada, both are within the scope of the Canadian Radiation Emitting Devices Act.		—
12.3 DV [DV2]	NOTE 2A The ACIGH UV Guidelines, UL 746C, and CSA C22.2 No. 0.17 provide useful guidance to the RISK assessment.		—
14.1 DV [DV2]	Where safety is involved, components comply with applicable safety requirements specified in relevant ANSI, CAN, CSA, IEC, ISO, or UL standards, as appropriate.	Considered. See list of critical components.	P

14.7 DV [D2]	Flame RATINGS of ANSI/UL 94 V-1 or CAN/CSA C22.2 No. 0.17 is considered equivalent to the same classifications of IEC 60695-11-10		P
14.9 DV.1	Enclosures intended for outdoor use Nonmetallic enclosures intended for outdoor use meet the UV resistance requirements of ANSI/UL 746C or of CSA C22.2 No. 0.17, or both as appropriate.	Not intended for outdoor use.	N/A
14.9 DV.1	Conductive coatings		N/A
14.10 ADV.1.2	Compliance with the requirements in 14.9ADV.1 is checked by:		—
	a) Evaluating the bond in accordance with the requirements for “Adhesives” in ANSI/UL 746C and/or CSA C22.2 No.0.17, or	No conductive coating provided.	N/A
	b) Evaluating the product to determine that peeling or flaking of the coating would not reduce spacings or bridge live parts so as to introduce a risk of fire or electric shock.		N/A
14.10 DV.2.1	If peeling of the conductive shield or tape may introduce a risk of fire or electric shock, the bond between a conductive shield or tape and any other surface is investigated.		N/A
14.11 DV.1	Direct plug-in transformer units are subject to additional requirements found in ANSI/UL 1310, CAN/CSA C22.2 No. 223, or in both standards.	Not direct plug-in equipment.	N/A
Annex G	Modification by replacing "informative" with "normative" in the heading of Annex G, and add the following text: See 11.7.1DV for cases in which Annex G applies.		—
DVC D2	Addition of a new annex DVC as follows:		N/A
DVC.1	General		N/A
DVC.1.1	threshold limit values (TLVs) refer to ultraviolet (UV) radiation in the spectral region between 180 and 400 nm and represent conditions under which it is believed that nearly all workers may be repeatedly exposed without adverse health effects.	No lasers.	—
DVC.1.2	These values should be used as guides in the control of exposure to UV sources and should not be regarded as a fine line between safe and dangerous levels.	No UV radiation.	—
DVC.2.1	The TLVs for occupational exposure to UV radiation incident upon skin or eye where irradiance values are known and exposure time is controlled are as follows:		—
	a) UV-A (315 to 400 nm) radiation to the unprotected eye:	Equipment does not generate UV radiation.	N/A
	- For exposure times less than 1 000 seconds, the total energy should not exceed 1 J/cm2 (1 000 mJ/cm2)		N/A

	- For exposure times greater than 1000 seconds, the average power level should not exceed 1 mW/cm2; and no 1000 second time period should present a total energy that exceeds 1 J/cm2 (1000 mJ/cm2).		N/A
	b) For monochromatic sources, the TLV for exposure to the unprotected skin or eye is shown in Table DVC.2.1.1 (also represented in Figure DVC.2.1.1) and should not be exceeded within an 8-hour period.		N/A
	c) For broad-spectrum or multi-peak sources, the TLV for exposure of the unprotected skin or eye should be calculated		N/A
	d) For most white-light sources and all open arcs, the weighting of spectral irradiance between 200 and 315 nm should suffice to determine the effective irradiance.		N/A
	- specialized UV sources designed to emit UV-A radiation would normally require spectral weighting from 315 to 400 nm.		N/A
	All of the preceding TLVs for UV energy apply to sources which subtend an angle less than 80°		N/A
	Sources which subtend a greater angle need to be measured only over an angle of 80°		N/A
Annex DVD	Equipment intended for permanent connection		N/A
DVD.1.1	Equipment intended for permanent connection to the mains has provision for connection of a wiring system in accordance with ANSI/NFPA 70, NEC, with CSA C22.1, CEC, Part I or with both as appropriate and meet the requirements of DVD.2 to DVD.3	Not intended for permanent connection.	N/A
DVD.2	Wiring terminals and leads		N/A
DVD.2.1.1	PERMANENTLY CONNECTED EQUIPMENT is provided with TERMINALS or leads for the connection of conductors having an ampacity that, in accordance with the National Electrical Code and/or the Canadian Electrical Code, Part I, is acceptable for the equipment.	Not intended for permanent connection.	N/A
DVD.2.1.2	A TERMINAL or splice compartment is complete and	Not intended for permanent connection.	N/A
	the top, all sides, and a complete bottom are provided when the equipment is shipped from the factory and		N/A
	enclose all FIELD WIRING TERMINALS and splices intended to be made in the field		N/A
	Equipment with an ENCLOSURE that is complete need not be provided with a separate compartment.		N/A

DVD.2.1.3	The TERMINAL or splice compartment in which mains connections to PERMANENTLY CONNECTED EQUIPMENT are made is located so that:		—
	a) Internal wiring and electrical components are not exposed to mechanical damage or strain while connections are being made, and	Not intended for permanent connection.	N/A
	b) These connections may be readily inspected after the equipment is installed as intended.		N/A
DVD.2.2	Wiring Terminals		P
DVD.2.2.1	Wiring TERMINALS provide effective connections, by use of screws, nuts or equally effective devices	Special DC connector used.	P
DVD.2.2.2	Wire binding screws are permitted as follows:		—
	a) A No. 6 or M4 screw may be used to connect a 14 AWG (2,1 mm²) or smaller wire.		N/A
	b) A No. 8 or M4.5 screw may be used to connect a 12 AWG (3,3 mm²) or smaller wire.		N/A
	c) A No. 10 or M5 screw may be used to connect a 10 AWG (5,3 mm²) or smaller wire.		N/A
DVD.2.3.1	The free length of a lead inside a wiring compartment is at least 6 inches (150 mm).		N/A
DVD.2.4	TERMINAL and lead identification		P
DVD.2.4.1	TERMINALS and leads are identified in a manner that will permit the equipment to be connected as intended by the manufacturer		P
DVD.2.4.2	An identified neutral (grounded) conductor for equipment with a mains-connected polarized convenience receptacle	DC equipment, no neutral conductor.	N/A
	An identified neutral (grounded) conductor for equipment with a mains-connected polarized lamp socket	No lamp sockets.	N/A
DVD.2.4.3	A wiring TERMINAL intended solely for connection of the neutral (grounded) mains conductor is readily distinguishable from all other TERMINALS	DC equipment, no neutral conductor.	N/A
	Constructed of, or plated with, metal that is substantially white in color or		N/A
	Clearly identified in some other manner, such as on a wiring diagram permanently attached to the equipment		N/A
DVD.2.4.4	A lead intended solely for field wiring connection to the neutral (grounded) mains conductor is readily distinguishable from all other leads by means to show a white or natural gray color	DC equipment, no neutral conductor.	N/A
DVD.2.5	The protective grounding (earthing) TERMINAL is marked in accordance with 5.1.5.2 (b) or		N/A
	marked „G,“ _GR,“ „GND,“ „GRD,“ „GROUND,“ or „GROUNDING“ or		N/A

	provided with a green colored screwhead that is hexagonal, slotted, or both.		N/A
DVD.2.6	A lead intended for field connection to the protective grounding conductor is readily distinguishable from all other leads by being finished to show a green color with or without yellow stripes.	Not intended for field connection.	N/A
DVD.3	ENCLOSURE requirements for conduit entry		N/A
DVD.3.1	ENCLOSURE does not pull apart or sustain damage	Not for connection by conduit.	N/A
	Knockouts remain in place		N/A
DVD.3.2	Uncoated sheet steel enclosure is 0,81 mm thick minimum		N/A
	Galvanized sheet steel enclosure is 0,86 mm thick minimum		N/A
	Aluminum sheet enclosure is 1,11 mm thick minimum		N/A
	Copper or brass sheet enclosure is 1,09 mm thick minimum		N/A
	NOTE: ENCLOSURES complying with ANSI/UL 50 are deemed to comply with DVD.4.1 and DVD.4.2.		—
DVD.4	Conduit ENCLOSURE entry tests		N/A
DVD.4.1	Conduit pull-out test (890N, 5 min)		N/A
DVD.4.2.1	Conduit torque test		N/A
	Tightening torque.....:		—
DVD.4.3	A length of conduit at least 1 ft (300 mm) long of the intended size is installed:		—
	1) In the center of the largest unreinforced surface, or		N/A
	2) In a hub or an opening if provided as part of the ENCLOSURE.		N/A
	Weight W hung at the conduit (lb or kg) .....:		—
	Length L of the conduit (in or m) .....:		—
	Weight C of the conduit (lb or kg) .....:		—
	Bending moment M (lb-in or Nm) .....:		—
	Horizontal mounting plane of surface used		N/A
	Vertical mounting plane of surface used		N/A
	Metallic conduit		N/A
	Nonmetallic conduit		N/A
DVD.4.4	Knockouts subjected to a force of 20 lb (89 N)		N/A

ATTACHMENT TO TEST REPORT IEC 61010-1
JAPAN NATIONAL DIFFERENCES

Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements

Differences according to .....:	IEC 61010-1:2010 Ed. 3
Attachment Form No. .....:	JP_ND_IEC61010_1J
Attachment Originator.....:	TÜV Rheinland Japan Ltd.
Master Attachment .....:	2014-01

National Differences - Japan

2	Except the first paragraph, replace the existing part of standards with the following (not including "IEC 60799, *Electrical accessories - Cord sets and interconnection cord sets"*, and apply these properly in the following clauses if any: IEC 60027 (all parts), *Letter symbols to be used in electrical technology* JIS C6065:2007, *Audio, video and similar electronic apparatus - Safety requirements, Amendment 1 (2009)* NOTE: IEC 60065:2001 + Amendment 1:2005 (MOD) JIS C60068-2-14:2011, *Environmental testing - Part 2 - 14: Tests - Test N: Change of temperature* NOTE: IEC 60068-2-14:2009 (IDT) JIS C60068-2-75:2004, *Environmental testing - Part 2-75: Tests - Test Eh: Hammer tests* NOTE: IEC 60068-2-75:1997 (IDT) IEC 60073, *Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicators and actuators* NOTE: At present, as the corresponding JIS, the following exists: JIS C0448:1997, Coding of indicating devices and actuators by colours and supplementary means (IEC 60073:1991 (IDT)) JIS C3662 (all parts), *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V* NOTE: IEC 60227 (all parts) (MOD) JIS C3663 (all parts), *Rubber insulated cables - Rated voltages up to and including 450/750 V* NOTE: IEC 60245 (all parts) (MOD) JIS C8285:2010, *Plugs, socket-outlets and couplers for industrial purposes* NOTE: IEC 60309-1:1999 + Amendment 1:2005 (MOD)	Must be considered when the equipment is marketed in Japan.	—

2	JIS C8283 (all parts), *Appliance couplers for household and similar general purposes* NOTE: IEC 60320 (all parts) (MOD) JIS C3665-1-2:2007, *Tests on electric and optical fibre cables under fire conditions - Part 1 - 2: Test for vertical flame propagation for a single insulated wire or cable – Procedure for 1 kW premixed flame* NOTE: IEC 60332-1-2:2004 (IDT) IEC 60332-2-2, *Tests on electric and optical fibre cables under fire conditions - Part 2 - 2: Test for vertical flame propagation for a single small insulated wire or cable - Procedure for diffustion flame* JIS C9335-2-24:2005 *Household and similar electrical appliances - Safety - Part 2 - 24: Particular requirements for refrigerating appliances, ice-cream appliances and ice-makers.* NOTE: IEC 60335-2-24:2002 (MOD) JIS C9335-2-89:2005 *Household and similar electrical appliances - Safety - Part 2 - 89: Particular requirements for commercial refrigerating appliances with an incorporated or remote refrigerant condensing unit or compressor* NOTE: IEC 60335-2-89:2002 (MOD) JIS C60364-4-44:2011 *Low-voltage electrical installations - Part 4 - 44: Protection for safety - Protection against voltage disturbances and electromagnetic disturbances* NOTE: IEC 60364-4-44:2007 (IDT) IEC 62598, *Nuclear instrumentation - Constructional requirements and classification of radiometric gauges* NOTE: IEC 60405 was replaced by IEC 62598. IEC 60417, *Graphical symbols for use on equipment* JIS C0920:2003, *Degrees of protection provided by enclosures (IP Code)* NOTE: IEC 60529:2001 (IDT) JIS C60664-3:2009, *Insulation coordination for equipment within low-voltage systems - Part 3: Use of coating, potting or moulding for protection against pollution* NOTE: IEC 60664-3:2003 (IDT) JIS C60695-11-10:2006, *Fire hazard testing - Part 11 - 10: Test flames - 50 W horizontal and vertical flame test methods* NOTE: IEC 60695-11-10:1999 + Amendment 1:2003 (IDT) JIS C6802:2011, Safety of laser products NOTE: IEC 60825-1:2007 (IDT)	Must be considered when the equipment is marketed in Japan.	—

2	JIS C8201-1:2007, *Low-voltage switchgear and controlgear - Part 1: General rules* NOTE: IEC 60947-1:2004 (MOD) JIS C8201-3:2009, *Low-voltage switchgear and controlgear - Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units* NOTE: IEC 60947-3:1999 + Amendment 1:2001 + Amendment 2:2005 (MOD) JIS C1010-31:2011, *Safety requirements for electrical equipment for measurement, control and laboratory use - Part 031: Safety requirements for hand-held probe assemblies for electrical measurement and test* NOTE: IEC 61010-031:2008 (Ed. 1.1) (MOD) IEC 61180 (all parts), *High-voltage test techniques for low-voltage equipment* IEC 61180-1, *High-voltage test techniques for low-voltage equipment - Part 1: Definitions, test and procedure requirements* IEC 61180-2, *High-voltage test techniques for low-voltage equipment - Part 2: Test equipment* JIS C1509-1:2005, *Electroacoustics - Sound level meters - Part 1: Specifications* NOTE: IEC 61672-1:2002 (IDT) JIS C1509-2:2005, *Electroacoustics - Sound level meters - Part 2: Pattern evaluation tests* NOTE: IEC 61672-2:2003 (IDT) IEC 62262, *Degrees of protection provided by enclosures for electrical equipment against external impacts (IK code)* IEC Guide 104, *The preparation of safety publications and the use of basic safety publications and group safety publications* ISO/IEC Guide 51, *Safety aspects - Guidelines for their inclusion in standards* JIS K 7206:1999, *Plastics - Thermoplastic materials - Determination of Vicat softening temperature (VST)* NOTE: ISO 306:1994 (MOD) ISO 361, *Basic ionizing radiation symbol* ISO 3746, *Acoustics - Determination of sound power levels of noise sources using sound pressure - Survey method using an enveloping measurement surface over a reflecting plane* ISO 7000, *Graphical symbols for use on equipment* JIS Z8736-1:1999, *Acoustics - Determination of sound power levels of noise sources using sound intensity - Part 1: Measurement at discrete points* NOTE: ISO 9614-1:1993 (IDT)	Must be considered when the equipment is marketed in Japan.	—

14	Add the following NOTEs: NOTE 1 - The product or the accessory/component of product may be in scope of the Electrical Appliance and Material Safety Act and/or other regulation(s). If any is in scope of the said regulation(s), it shall at least comply with the legally specified requirements. For example, cords/cables, fuses/thermal links, plugs, sockets, transformers, DC power supply units etc. are subjected to the Electrical Appliance and Material Safety Act. The said Act classifies products into two groups, i.e., Category A products requiring mandatory certification and Category B products not requiring mandatory certification. Information of products subjected to the said Act is available in http://www.meti.go.jp/english/policy/economy/consumer/pse/index.html NOTE 2 - For example, the said Act specifies the applicable standards for product evaluation. However, application of IEC 61010 to the products subjected to the said Act has not been allowed at present. NOTE 3 - Refer to Clause 2.	Must be considered when the equipment is marketed in Japan.	—

ATTACHMENT TO TEST REPORT IEC61010-1
SWITZERLAND NATIONAL DIFFERENCES

(Safety requirements for electrical equipment for measurement, control, and laboratory use
Part 1: General requirements)

Differences according to .....:	SN EN 61010-1:2010
Attachment Form No. .....:	CH_ND_IEC61010_1J
Attachment Originator.....:	TÜV SÜD Product Service GmbH
Master Attachment .....:	Date (2014-01)

	National Differences		P
1	Ordinance on environmentally hazardous substances SR 814.081, Annex 1.7, Mercury - Annex 1.7 of SR 814.81 applies for mercury. Switches containing mercury such as thermostats, relays and level controllers are not allowed.	No hazardous substances.	N/A
	Ordinance on chemical hazardous risk reduction SR 814.81, Annex 2.15 batteries containing cadmium and mercury. Swiss national deviation to EC-battery directives.	No such batteries.	N/A
	Amount of cadmium less than 0.015% in carbon-zinc batteries		N/A
	Amount of cadmium (%) .....:		—
	Built-in batteries have less the 0.0005% cadmium, 0.0005% mercury or 0.1% lead	See above.	N/A
	Amount of cadmium (%) .....:		—
	Amount of mercury (%) .....:		—
	Amount of lead (%).....:		—
5.1.3	Supply cords of portable electrical appliances having a rated current not exceeding 10 A is provided with a plug complying with IEC 60884-1 (3.ed.) + am1, SEV 1011 and one of the following dimension sheets:	Equipment is not intended for connection to mains supply, refer to the main test report.	N/A
	- SEV 6532-2.1991 Plug Type 15 3P + N + PE, 250/400V, 10A	See above.	N/A
	- SEV 6533-2.1991 Plug Type 11 L + N, 250V, 10A	See above.	N/A
	- SEV 6534-2.1991 Plug Type 12 L + N + PE, 250V, 10A	See above.	N/A
	Supply cords of portable electrical appliances having a rated current not exceeding 16 A is provided with a plug complying with IEC 60884-1(3.ed.) + am1, SEV 1011 and one of the following dimension sheets:	Equipment is not intended for connection to mains supply, refer to the main test report.	N/A

	- SEV 5932-2.1998 Plug Type 25 3P + N + PE, 250/400V, 16A	See above.	N/A
	- SEV 5933-2.1998 Plug Type 21 L + N, 250 V, 16A	See above.	N/A
	- SEV 5934-2.1998 Plug Type 23 L + N + PE, 250 V, 16A	See above.	N/A
	NOTE 16 A plugs are not often used in Swiss domestic installation system	See above.	—
	Removable adapters for Swiss plugs: A removable adapter is not fixed to the original plug and can be removed without damage. Removable adapters are allowed in Switzerland for temporary use e.g. tourists or trade fairs only. They are not accepted for electrical products intended for sale on the Swiss market.	Equipment is not intended for connection to mains supply, refer to the main test report.	N/A
	Non removable adapters to Swiss plugs: Non removable adapters are fixed to the original plug and cannot be removed without damage the plug. These adapters can be used for products intended for sale in Switzerland. Following restrictions have to be considered:		N/A
	- max. power rating 10A		N/A
	- earth pin corresponds with the protection class		N/A
	- IP protection max. IP20		N/A
	- assembly note has to be attached to the equipment		N/A
	General product safety ordinance on technical installations and appliances PrSV 930.11		N/A
	User, installation and service manual as well as safety relevant notes are in German, French and Italian	Must be considered before marketing in Switzerland	N/A