

TEST REPORT

Report No.: CTC156J0300801SR

Applicant: Guangdong Yada Electronics Co., Ltd.

Product Name: Remot control unit

Product Type: YM-D16K8

Tested Date: 2025-03-13 to 2025-03-17

Issued Date: 2025-03-17

Shenzhen Circle Testing Certification Co., Ltd.

TEST REPORT**EN 61010-1:2010+A1:2019****Safety requirements for electrical equipment for measurement, control, and laboratory use
Part 1: General requirements**

Report Number : CTC156J0300801SR

Date of issue : 2025-03-17

Total number of pages : 71 Pages

Applicant's name : Guangdong Yada Electronics Co., Ltd.

Address : YADA Industrial Park, Gaopugang , Heyuan, Guangdong , China

Test specification:

Standard : IEC 61010-1:2010+A1:2016 and EN 61010-1:2010+A1:2019

Test procedure : Test report

Non-standard test method : N/A

Test Report Form No. : IEC61010_1H

TRF Originator : Test report

Master TRF : 2011-11

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Test item description : Remot control unit

Trade Mark : 

Manufacturer : Same as Applicant

Model/Type Reference : YM-D16K8

YM-DD16K2-W1

Ratings : Input: AC85-265V or DC85-330V, 50/60Hz, 5A

TRF No. IEC61010_1H

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Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒	Testing Laboratory:	Shenzhen Circle Testing Certification Co., Ltd.
Testing location/ address.....:		302 & 101, 1/F., Building 1, Donglongxing Technology Park, Huaning Road, Xinshi Community, Dalang Subdistrict, Longhua District, Shenzhen, Guangdong, China
Tested by (name, function, signature)..:		Miko Li / Engineer
Approved by (name, function, signature) :		Davis Wei / Sr. Project Engineer



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List of Attachments (including a total number of pages in each attachment):																	
Document No.	Documents included / attached to this report (description)*	Page Numbers**															
TABLE 1	List of safety relevant components	1															
ATTACHMENT 1	Product photos	1															
Summary of testing: ☒ The product fulfils the requirements of IEC 61010-1:2010+A1:2016 and EN 61010-1:2010+A1:2019																	
Test Report History: This report may consist of more than one report and is valid only with additional or previous issued reports:																	
Ref. No.: CTC156J0300801SR		Item															
<table border="1"> <thead> <tr> <th>Tests performed (name of test and test clause):</th> <th>Testing location:</th> </tr> </thead> <tbody> <tr> <td> All testing indicated below was performed as part of the original evaluation according to report number CTC156J0300801SR, no additional testing was performed for this upgrade of standard. </td> <td rowspan="8"> Shenzhen Circle Testing Certification Co., Ltd. 302 & 101, 1/F., Building 1, Donglongxing Technology Park, Huaning Road, Xinshi Community, Dalang Subdistrict, Longhua District, Shenzhen, Guangdong, China </td> </tr> <tr> <td>4.4: Single Fault Condition</td> </tr> <tr> <td>5.1.3 c): Inputs</td> </tr> <tr> <td>5.3: Durability of Markings</td> </tr> <tr> <td>6.5.2.3 Tighting torque test</td> </tr> <tr> <td>6.5.2.4 Bonding Impedance</td> </tr> <tr> <td>6.8 Dielectric Strength</td> </tr> <tr> <td>6.10.2 Cord anchorage test</td> </tr> <tr> <td>6.10.3 Capacitance Discharge</td> <td></td> </tr> <tr> <td>10.1.3/3 Temperature Measurements</td> <td></td> </tr> </tbody> </table>			Tests performed (name of test and test clause):	Testing location:	All testing indicated below was performed as part of the original evaluation according to report number CTC156J0300801SR, no additional testing was performed for this upgrade of standard.	Shenzhen Circle Testing Certification Co., Ltd. 302 & 101, 1/F., Building 1, Donglongxing Technology Park, Huaning Road, Xinshi Community, Dalang Subdistrict, Longhua District, Shenzhen, Guangdong, China	4.4: Single Fault Condition	5.1.3 c): Inputs	5.3: Durability of Markings	6.5.2.3 Tighting torque test	6.5.2.4 Bonding Impedance	6.8 Dielectric Strength	6.10.2 Cord anchorage test	6.10.3 Capacitance Discharge		10.1.3/3 Temperature Measurements	
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Summary of compliance with National Differences:

List of countries addressed: All EC countries are covered by the report. National Differences for Canada and United States are addressed in Attachment 1.

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.

Remot control unit

Model: YM-D16K8

Input: AC85-265V or DC85-330V, 50/60Hz, 5A



MADE IN CHINA

Manufacturer: Guangdong Yada Electronics Co., Ltd.
YADA Industrial Park, Gaopugang , Heyuan, Guangdong , China

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ZLJL-7.8-5-2018 A1

Test item particulars..... :

Type of item : ☐ Measurement / ☒ Control / ☐ Laboratory

Description of equipment function : See 'General Product Description' below

Connection to MAINS supply..... : ☐ Permanent / ☒ Detachable Cord Set / ☐ Non Detachable Cord Set / ☐ None

Overvoltage category..... : II

POLLUTION DEGREE : 2

Means of protection : ☐ Class I (PE connected) / ☒ Class II (isolated)

Environmental rating : ☒ Normal / ☐ Extended (Specify):

Equipment mobility..... : ☐ Portable / ☐ Hand-held / ☐ Floor-standing / ☒ Fixed / ☐ Built in

Operating conditions : ☒ Continuous / ☐ Short-time / ☐ Intermittent

Mass of the equipment (kg) : 0.4

Marked degree of protection to IEC 60529 : IPX0

Possible test case verdicts:

– test case does not apply to the test object : N/A

– test object does meet the requirement..... : P (Pass)

– test object does not meet the requirement..... : F (Fail)

Testing

Date of receipt of test item..... : 2025-03-13

Date (s) of performance of tests..... : 2025-03-13 to 2025-03-17

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 Attachment #)" refers to additional information appended to the report.
 "(See Form A.xx)" refers to a table appended to the report.
 Throughout this report a comma / ☒ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 6.2.5 of IEC 60335-1:

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) : Guangdong Yada Electronics Co., Ltd.
 YADA Industrial Park, Gaopugang , Heyuan, Guangdong , China

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General product information:

Instructions and equipment marking related to safety is applied in the language that is acceptable in the country in which the equipment is to be sold.

- The maximum ambient temperature is 40°C .
- The test sample was a pre-production sample without serial number.

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict
4.4	TESTING IN SINGLE FAULT CONDITIONS		N/A
4.4.1	Fault tests	See Form A.1 and A.2	N/A
4.4.2	Application of SINGLE FAULT CONDITIONS		N/A
4.4.2.1	SINGLE FAULT CONDITIONS not covered by 4.4.2.1 to 4.4.2.14	All covered by 4.4.2.1 to 4.4.2.12	N/A
4.4.2.2	PROTECTIVE IMPEDANCE	None relied upon for safety	N/A
4.4.2.3	PROTECTIVE CONDUCTOR	See 6.3.2	N/A
4.4.2.4	Equipment or parts for short-term or intermittent operation	Continuous operation	N/A
4.4.2.5	Motors	Certified fans used Motor was tested, refer to Form A.1	N/A
	– stopped while fully energized	See above	N/A
	– prevented from starting	See above	N/A
	– one phase interrupted (multi-phase)	See above	N/A
4.4.2.6	Capacitors	No capacitors provided within auxiliary windings or AC motor	N/A
4.4.2.7	MAINS transformers	Mains transformer has been tested within appliance.	N/A
4.4.2.7.2	Short circuit	(see Forms A.39)	N/A
4.4.2.7.3	Overload	(see Forms A.40)	N/A
4.4.2.8	Outputs	AC outlet for Vacuum pump is protected by one fuse in phase and has been properly tested, Form A.1 and A.2	N/A
4.4.2.9	Equipment for more than one supply	Single supply per unit	N/A
4.4.2.10	Cooling	(see Form A.26A) Blocked vents and locked fan rotor	N/A
	– air holes closed		N/A
	– fans stopped		N/A
	– coolant stopped	No coolant	N/A
	– loss of cooling liquid	See above	N/A
4.4.2.11	Heating devices	Heating devices have been properly evaluated and tested within application, see Form A.1 and A.2	N/A
	– timer overridden	No timer	N/A

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict
	– temperature controller overridden	No temperature control used where safety is relied upon <i>[Temperature control: 600W heater at top, thermocouple with feedback loop, 0-crossing triac, getting close to the set-up it flickers at 34Hz. -> feels open save, fails close, supervisory circuit thermocouple 425degC]</i>	N/A
4.4.2.12	Insulation between circuits and parts	Circuits comply with par. 9.1	N/A
4.4.2.13	Interlocks	Interlock is used for functional purposes only, no further evaluation or testing deemed necessary	N/A
4.4.2.14	Voltage selectors	Two voltage settings possible, the transformer is wired internally for the correct voltage, the corresponding rating and certification mark for the actual setting is guaranteed at manufacturing site, no further testing deemed necessary.	N/A
4.4.3	Duration of tests	(see Form A.1)	—
4.4.4	Conformity after application of fault conditions	(see Form A.1; A.6, A.18)	N/A

5	MARKING AND DOCUMENTATION		P
5.1.1	General		N/A
	Required equipment markings		N/A
	- Visible from the exterior; or	Markings are visible from the exterior or when the lid / main cover is opened, see below	N/A
	- Visible after removing cover or opening door	Additional warning symbols are visible once enclosure to main compartments is opened (ISO 3864 No. B3.1) No doors	N/A
	- Visible after removal from a rack or panel	Not so mounted in intended use	N/A
	Not put on parts which can be removed by an operator	Safety related markings are not put on parts which can be removed by an OPERATOR	N/A
	Letter symbols (IEC 60027) used	V, HZ, VA	N/A
	Graphic symbols (IEC 61010-1 and/or EN 61010-1:	Comply with Table 1	N/A

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict
	Table 1) used		
5.1.2	Identification		N/A
	Equipment is identified by:		N/A
	a) Manufacturer's or supplier's name or trademark		N/A
	b) Model number, name or other means	Chromatograph Family, specific model number clearly identified on units	N/A
	Manufacturing location identified	Single manufacturing location	N/A
5.1.3	MAINS supply	See below	P
	Equipment is marked as follows:		P
	a) Nature of supply:		—
	1) a.c. RATED MAINS frequency or range of frequencies		P
	2) d.c. with symbol 1		N/A
	b) RATED supply voltage(s) or range		P
	c) Max. RATED power (W or VA) or input current ... :		P
	The marked value not less than 90 % of the maximum value	The measured power consumption value was less than rated power (see Form A.3)	P
	If more than one voltage range:		—
	Separate values marked; or	No voltage range but two voltage settings possible, transformer is wired internally for the correct voltage, the corresponding rating and certification mark for the actual setting is guaranteed.	P
	Values differ by less than 20 %	See above, requirement does not apply	N/A
	d) OPERATOR-set for different RATED supply voltages:		—
	Indicates the equipment set voltage	No such operator setting	N/A
	PORTABLE EQUIPMENT indication is visible from the exterior	No such operator setting	N/A
	Changing the setting changes the indication	No such operator setting	N/A

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict
	e) Accessory MAINS socket-outlets accepting standard MAINS plugs are marked:		—
	With the voltage if it is different from the MAINS supply voltage	IEC60320 mains plug is referenced adjacent to the outlet, description of voltage and max. current rating provided	P
	For use only with specific equipment	Provided on label adjacent to outlet	P
	If not marked for specific equipment it is marked with:		P
	The maximum RATED current or power; or	See above	P
	Symbol 14 with full details in the documentation	No further symbol necessary	N/A
5.1.4	Fuses		N/A
	OPERATOR replaceable fuse marking (see also 5.4.5)	Non-operator-replaceable circuit breakers and fuses provided	N/A
5.1.5	TERMINALS, connections and operating devices	See below	N/A
5.1.5.1	General		N/A
	Where necessary for safety, indication of purpose of TERMINALS, connectors, controls and indicators marked	Connectors are marked with indication of purpose	N/A
	If insufficient space, symbol 14 used	Not required	N/A
	Push-buttons and actuators of emergency stop devices and indicators:	See above	—
	used only to indicate a warning of danger or	See above	N/A
	the need for urgent action	See above	N/A
	coloured red	See above	N/A
	coded as specified in IEC 60073	See above	N/A
	Supplementary means of coding provided, if meaning of colour relates (see IEC 60073):	See above	N/A
	to safety of persons; or	See above	N/A
	safety of the environment	See above	N/A
5.1.5.2	TERMINALS	See below	N/A
	MAINS supply TERMINALS identified	Non-detachable mains cord provided. Internal terminals provided as part of circuit breaker and EMI filter, used for the internal distribution of mains power. No further marking deemed necessary	N/A
	Other TERMINAL	See below	N/A

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict
	marking..... :		
	a) FUNCTIONAL EARTH TERMINALS (symbol 5 used)	No functional earth	N/A
	b) PROTECTIVE CONDUCTOR TERMINALS:	See below	N/A
	Symbol 6 is placed close to or on the TERMINAL; or	Provided	N/A
	Part of appliance inlet	No appliance inlet	N/A
	c) TERMINALS of control circuits (symbol 7 used)	No measuring and control circuits which are in the scope of this standard	N/A
	d) HAZARDOUS LIVE TERMINALS supplied from the interior	Auxiliary AC outlet for the vacuum pump is properly marked	N/A
	Standard MAINS socket outlet; or	None provided	N/A
	RATINGS marked; or	Auxiliary AC output for the vacuum pump is properly marked	N/A
	Symbol 14 used	See above	N/A
5.1.6	Switches and circuit breakers	See below	N/A
	If disconnecting device, off position clearly marked	Plug on power cord is regarded as disconnecting device. Nevertheless, mains switch is marked with symbols 9 and 10.	N/A
	If push-button used as power supply switch:	Push-button not used as power supply switch.	N/A
	Symbol 9 and 15 used for on-position	See above	N/A
	Symbol 10 and 16 used for off-position	See above	N/A
	Pair of symbols 9, 15 and 10, 16 close together	See above	N/A
5.1.7	Equipment protected by DOUBLE INSULATION or REINFORCED INSULATION	See below	N/A
	Protected throughout (symbol 11 used)	Not Class II equipment	N/A
	Only partially protected (symbol 11 not used)	Only partially protected for accessible conductive parts not connected to protective earth (symbol 11 not used)	N/A
5.1.8	Field-wiring TERMINAL boxes	No field wiring terminal boxes	N/A
	If TERMINAL or ENCLOSURE exceeds 60 °C:	See below	N/A
	Cable temperature RATING marked	See above	N/A
	Marking visible before and during connection or beside TERMINAL	See above	N/A

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict
5.2	Warning markings	See above	N/A
	Visible when ready for NORMAL USE	 Symbol provided on cover. As well as hot surface symbol IEC 417 No. 5041 on the upper enclosure and other internal parts; all warning markings for hot surface were found adequate for the product and application in question	N/A
	Are near or on applicable parts	See above	N/A
	Symbols and text correct dimensions and colour:	See above	N/A
	a) symbols min 2,75 mm and text 1,5 mm high and contrasting in colour with background	Proper size used	N/A
	b) symbols and text moulded, stamped or engraved in material min. 2,0 mm high and	Separate labels used on the product	N/A
	0.5 mm depth or raised if not contrasting in colour	See above	N/A
	If necessary marked with symbol 14	See above	N/A
	Statement to isolate or disconnect if access by using a tool to HAZARDOUS LIVE parts is permitted	No operator accessible parts at hazardous live	N/A
5.3	Durability of markings		P
	The required markings remain clear and legible in NORMAL USE	The required markings remain clear and legible in NORMAL USE (see Form A.3)	P
5.4	Documentation	See below	N/A
5.4.1	General	See below	N/A
	Equipment is accompanied by documentation for safety purposes for OPERATOR or RESPONSIBLE BODY	Operating instructions are all available online depending upon configuration of the actual gas chromatography system	N/A
	Safety documentation for service personnel authorized by the manufacturer	See above	N/A
	Documentation necessary for safe operation is provided in printed media or	See above	N/A
	in electronic media if available at any time		N/A
	Documentation includes:		—
	a) Intended use	Provided in user manual (operating instructions)	N/A
	b) Technical specification	Provided in user manual	N/A

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Clause	Requirement – Test	Result – Remark	Verdict
	c) Name and address of manufacturer or supplier	Provided in user manual and on product	N/A
	d) Information specified in 5.4.2 to 5.4.6	See below clause 5.4.2	N/A
	e) Information to mitigate residual RISK (see also subclause 17)		N/A
	f) Accessories for safe operation of the equipment specified	Sufficient information provided in instructions	N/A
	g) Guidance provided to check correct function of the equipment, if incorrect reading may cause a HAZARD from harmful or corrosive substances or HAZARDOUS live parts	No such equipment which needs further instructions or guidance to check correction function the equipment	N/A
	h) Instructions for lifting and carrying	No handle or grips	N/A
	Warning statements and a clear explanation of warning symbols:		—
	Provided in the documentation; or	Not measuring equipment	N/A
	Information is marked on the equipment	Not measuring equipment	N/A
5.4.2	Equipment RATINGS	See below	N/A
	Documentation includes:		—
	a) Supply voltage or voltage range		N/A
	Frequency or frequency range		N/A
	Power or current RATING	1725VA	N/A
	b) Description of all input and output connections in accordance to 6.6.1 a)	Description of all connections provided in user manual and on product	N/A
	c) RATING of insulation of external circuits in accordance to 6.6.1 b)	No special insulation is required: external circuits are SELV except for auxiliary AC outlet for vacuum pump which is not considered as such	N/A

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict
	d) Statement of the range of environmental conditions (see 1.4)	Provided in manual: Indoor use (defined as laboratory benchtop device) Altitude up to 2500m Temperature 10°C to 40°C Maximum relative humidity 80% (non-condensing) MAINS supply voltage fluctuations up to $\pm 10\%$ of the nominal voltage Transient over voltages Over voltage Category II NOTE: The nominal level of transient over voltages is impulse withstand (over voltage) category II of IEC 60364-4-44 Applicable Pollution Degree II	N/A
	e) Degree of protection (IEC 60529)	Not required: IPX0	N/A
	f) If impact rating less than 5 J:		—
	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	N/A
	Documentation includes instructions for:		—
	a) Assembly, location and mounting requirements	Provided in user manual	N/A
	b) Protective earthing	Instruction to connect equipment to earthed socket outlet only provided in manual	N/A
	c) Connections to supply	No special instructions required	N/A
	d) PERMANENTLY CONNECTED EQUIPMENT:	See below	N/A
	1) Supply wiring requirements	Not PERMANENTLY CONNECTED EQUIPMENT	N/A
	2) If external switch or circuit-breaker, requirements and location recommendation	Not PERMANENTLY CONNECTED EQUIPMENT	N/A
	e) Ventilation requirements	No special requirements	N/A
	f) Special services (e.g. air, cooling liquid)	No special requirements	N/A

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict
	g) Instructions relating to sound level	Not required: equipment does not produce considerable amount of sound.	N/A
5.4.4	Equipment operation	See below	N/A
	Instructions for use include:		
	a) Identification and description of operating controls	None affecting safety other than for ON/OFF switch marked "I/O" as evident	N/A
	b) Positioning for disconnection	Instruction not to position equipment so that it is difficult to operate the disconnecting device (appliance coupler) is provided on label, see page 4	N/A
	c) Instructions for interconnection	Connection of computer via standard signal cables (e.g. USB) is properly described in the manual	N/A
	d) Specification of intermittent operation limits	No such limits	N/A
	e) Explanation of symbols used	Provided in user manual	N/A
	f) Replacement of consumable materials	No consumable materials	N/A
	g) Cleaning and decontamination	Minimal cleaning required which has no safety relevant impact	N/A
	h) Listing of any poisonous or injurious gases and quantities	No poisonous or injurious gases	N/A
	i) RISK reduction procedures relating to flammable liquids (see 9.5)	No flammable liquids (hydrogen gas has been considered)	N/A
	j) RISK reduction procedures relating burn from surfaces permitted to exceed limits of 10.1	Proper warnings and labels are provided on the equipment, see photographs	N/A
	Additional precautions for IEC 60950 conforming equipment in regard to moistures and liquids	Product not considered 'IEC60950 conforming equipment'	N/A
	A statement about protection impairment if used in a manner not specified by the manufacturer	Provided in user manual	N/A
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:	Provided in user manual	N/A
	Instruction against the use of detachable MAINS supply cord with inadequate rating	No detachable power cord	N/A
	Specific battery type of user replaceable batteries	No batteries	N/A

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Clause	Requirement – Test	Result – Remark	Verdict
	Any manufacturer specified parts	Instructions provided in the user manual	N/A
	Rating and characteristics of fuses	Replaceable fuse for power outlet is properly described on fuse holder, adjacent to AC-outlet	N/A
	Instructions include following subjects permitting safe servicing and continued safety:	Servicing of the product is done by the manufacturer	N/A
	a) Product specific RISKS may affect service personnel	No such additional risks which may affect service personnel	N/A
	b) Protective measures for these RISKS	See above	N/A
	c) Verification of the safe state after repair	See above, safe state after repair is guaranteed by hipot and ground continuity test.	N/A
5.4.6	Integration into systems or effects resulting from special conditions	No such integration into systems or other special conditions	N/A
	Aspects described in documentation	See above	N/A

6	PROTECTION AGAINST ELECTRIC SHOCK		P
6.1	General	(see Form A.4 and A.5)	N/A
6.1.1	Requirements		—
	Protection against electric shock maintained in NORMAL CONDITION and SINGLE FAULT CONDITION	See clause 6.4 and 6.5	N/A
	ACCESSIBLE parts not HAZARDOUS LIVE	ACCESSIBLE parts not HAZARDOUS LIVE in NORMAL CONDITION and SINGLE FAULT CONDITION	N/A
	Voltage, current, charge or energy below the limits in NORMAL CONDITION and in SINGLE FAULT CONDITION between:	See clause 6.3.1 and 6.3.2	N/A
	ACCESSIBLE parts and earth	See above	N/A
	Two ACCESSIBLE parts on same piece of the equipment within a distance of 1,8 m	See above	N/A
	Conformity is checked by the determination of 6.2 and 6.3 followed by the tests of 6.4 to 6.11	Considerations applied	N/A
6.1.2	Exceptions	No exceptions applied	N/A

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Clause	Requirement – Test	Result – Remark	Verdict
	Following HAZARDOUS LIVE parts may be accessible to an OPERATOR:	See above	N/A
	a) parts of lamps and lamp sockets after lamp removal	See above	N/A
	b) parts to be replaced by operator only by the use of tool and warning marking	See above	N/A
	Those parts not HAZARDOUS LIVE 10 s after interrupt- tion of supply	See above	N/A
	Capacitance test if charge is received from internal capacitor	See above	N/A
6.2	Determination of ACCESSIBLE parts	See below	N/A
6.2.1	General	No access to hazardous parts with jointed test finger applied with force 10N (see Form A.6)	N/A
	Unless obviously determination of accessible parts as specified in 6.2.2 to 6.2.4	See above	—
6.2.2	Examination		—
	- with jointed test finger (as specified B.2)	See below	N/A
	- with rigid test finger (as specified B.1) and a force of 10 N	No access to hazardous parts with jointed test finger applied with force 10N (see Form A.4)	N/A
6.2.3	Openings above parts that are HAZARDOUS LIVE	No such openings	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 openings	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	N/A
6.3.1	Levels in NORMAL CONDITION	Values in NORMAL CONDITION NOT EXCEEDED (SEE FORM A.5)	N/A
	a) Voltage limits less than 33 V r.m.s. and 46,7 V peak or 70 V d.c.	See above	N/A
	for wet locations voltage limits less than 16 V r.m.s. and 22,6 V peak or 35 V d.c.	Not intended for wet locations	N/A
	Voltages are not HAZARDOUS LIVE the levels of:		—

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Clause	Requirement – Test	Result – Remark	Verdict
	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	See 6.3.1 above	N/A
	for WET LOCATIONS measuring circuit A.4 used	Not intended for wet locations	N/A
	or		—
	c) Levels of capacitive charge or energy less:	No such energies or charges measured	N/A
	1) 45 μ C for voltages up to 15 kV peak or d.c. or line A of Figure 3	See above	N/A
	2) 350 mJ stored energy for voltages above 15 kV peak or d.c.	See above	N/A
6.3.2	Levels in SINGLE FAULT CONDITION	Values in SINGLE FAULT CONDITION not exceeded (see Form A.6)	N/A
	a) Voltage limits less than 55 V r.m.s. and 78 V peak or 140 V d.c.	See above	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 intended for 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	See 6.3.2 above	N/A
	for wet locations measuring circuit A.4 used	Not intended for wet locations	N/A
	500 mA r.m.s. when measured with circuit A.3 for higher frequencies	See above	N/A
	or		—
	c) Levels of capacitive charge or energy less line B of Figure 3	No such energies or charges measured	N/A
6.4	Primary means of protection (see 6.2, 6.3.1, 6.7, 6.8 and 8.1)		N/A
6.4.1	ACCESSIBLE parts prevented from being HAZARDOUS LIVE by one or more of following means:		N/A
	a) ENCLOSURES or PROTECTIVE BARRIERS (see 6.4.2)	Considerations of b) applied	N/A
	b) BASIC INSULATION (see 6.4.3)	Provided by Basic insulation between hazardous parts and accessible parts connected to protective earth	N/A

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Clause	Requirement – Test	Result – Remark	Verdict
	c) Impedance (see 6.4.4)	Considerations of b) applied	N/A
6.4.2	ENCLOSURES or PROTECTIVE BARRIERS	(see Form A.15)	N/A
	- meet rigidity requirements of 8.1	See clause 8.1	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	See clause 6.7	N/A
6.4.3	BASIC INSULATION	(see Form A.15)	N/A
	- meet CLEARANCE, CREEPAGE DISTANCE and solid insulation requirements of 6.7		N/A
6.4.4	Impedance	No protective impedance	N/A
	Impedance used as primary means of protection meets all of following requirements:		N/A
	a) limits current or voltage to level of 6.3.2	(see Form A.6)	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	(see Form A.15)	N/A
6.5	Additional means of protection in case of SINGLE FAULT CONDITION		P
6.5.1	ACCESSIBLE parts are prevented from becoming HAZARDOUS live by the primary means of protection and supplemented by one of:		—
	a) PROTECTIVE BONDING (see 6.5.2)	Connection to PE terminal relied upon	P
	b) SUPPLEMENTARY INSULATION (see 6.5.3)	Not Used	N/A
	c) automatic disconnection of the supply (see 6.5.5)	Not Used	N/A
	d) current- or voltage-limiting device (see 6.5.6)	Not Used	N/A
	Alternatively one of the single means of protection is used:		P

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Clause	Requirement – Test	Result – Remark	Verdict
	e) REINFORCED INSULATION (see 6.5.3)	Double insulation or reinforced insulation between mains and SELV maintained within isolation transformer provided with UL Recognized insulation system (See Separate Construction Data Form)	P
	f) PROTECTIVE IMPEDANCE (see 6.5.4)	Double insulation or reinforced insulation between mains and SELV maintained within isolation transformer provided with UL Recognized insulation system (See Separate Construction Data Form)	P
6.5.2	PROTECTIVE BONDING	(see Forms A.7, A.8, A.9, A.10 or A.11)	—
6.5.2.1	ACCESSIBLE conductive parts, may become HAZARDOUS LIVE in SINGLE FAULT CONDITION:		—
	Bonded to the PROTECTIVE CONDUCTOR TERMINAL; or	ACCESSIBLE conductive parts bonded to the PROTECTIVE CONDUCTOR TERMINAL	N/A
	Separated by conductive screen or barrier bonded to PROTECTIVE CONDUCTOR TERMINAL	Not used	N/A
6.5.2.2	Integrity of PROTECTIVE BONDING	See below	N/A
	a) PROTECTIVE BONDING consists of directly connected structural parts or discrete conductors or both; and withstands thermal and dynamic stresses	PROTECTIVE BONDING consists of directly connected structural parts or discrete conductors or both; and withstands thermal and dynamic stresses	N/A
	b) Soldered connections:	Soldered connections are not used for bonding	N/A
	Independently secured against loosening	See above	N/A
	Not used for other purposes	See above	N/A
	c) Screw connections are secured	See above	N/A
	d) PROTECTIVE BONDING not interrupted; or	No operator-removable parts providing ground continuity other than plug on power cord used as disconnect device, AC outlet for vacuum pump not considered as such	N/A
	exempted as removable part carries MAINS SUPPLY INPUT connection	See above	N/A

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Clause	Requirement – Test	Result – Remark	Verdict
	e) Any moveable PROTECTIVE BONDING connection specifically designed, and meets 6.5.2.4	No moveable connections	N/A
	f) No external metal braid of cables used (not regarded as PROTECTIVE BONDING)	No external metal braid of cables used	N/A
	g) If MAINS supply passes through:	Mains is properly passing through the equipment and is reliably fixed on AC-outlet	N/A
	Means provided for passing protective conductor;	See above, protective conductor inspected and tested	N/A
	Impedance meets 6.5.2.4	See above	N/A
	h) Protective conductors bare or insulated, if insulated, green/yellow	Green/yellow used for protective conductors	N/A
	Exceptions:		—
	1) earthing braids;	No earthing braids used	N/A
	2) internal protective conductors etc.;	Terminal meets 6.5.2.3	N/A
	Green/yellow not used for other purposes	Green/yellow not used for purposes other than bonding	N/A
	TERMINAL suitable for connection of a PROTECTIVE CONDUCTOR, and meets 6.5.2.3	Terminal meets 6.5.2.3	N/A
6.5.2.3	PROTECTIVE CONDUCTOR TERMINAL	See below	N/A
	a) Contact surfaces are metal	Contact surfaces are metal	N/A
	b) Appliance inlet used	Non-detachable power cord used	N/A
	c) For rewirable cords and PERMANENTLY CONNECTED EQUIPMENT, PROTECTIVE CONDUCTOR TERMINAL is close to MAINS supply TERMINALS	No rewirable cords and not PERMANENTLY CONNECTED EQUIPMENT	N/A
	d) If no MAINS supply is required, any PROTECTIVE CONDUCTOR TERMINAL:	Protective conductor terminal is required only for mains supply	N/A
	Is near TERMINALS of circuit for which protective earthing is necessary	See above	N/A
	External if other TERMINALS external	See above	N/A
	e) Equivalent current-carrying capacity to MAINS supply TERMINALS	By inspection of power cord related adequately for application	N/A
	f) If plug-in, makes first and breaks last	By inspection	N/A
	g) If also used for other bonding purposes, PROTECTIVE CONDUCTOR:	Not used for other bonding purposes	N/A

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Clause	Requirement – Test	Result – Remark	Verdict
	Applied first;	See above	N/A
	Secured independently;	See above	N/A
	Unlikely to be removed by servicing	See above	N/A
	h) PROTECTIVE CONDUCTOR of measuring circuit:	No measuring circuit provided	N/A
	1) Current RATING equivalent to measuring circuit TERMINAL;	See above	N/A
	2) PROTECTIVE BONDING:	See above	N/A
	Not interrupted	See above	N/A
	i) FUNCTIONAL EARTH TERMINALS allow independent connection	No functional earth connection	N/A
	j) If a binding screw used for PROTECTIVE CONDUCTOR TERMINAL:	No binding screw	N/A
	Suitable size for bond wire	By inspection	N/A
	Not smaller than M 4 (No. 6)	By inspection	N/A
	At least 3 turns of screw engaged	By inspection	N/A
	Passes tightening torque test	See Form A.8	N/A
	k) Contact pressure not capable being reduced by deformation of materials	By inspection	N/A
6.5.2.4	Impedance of PROTECTIVE BONDING of plug-connected equipment	Impedance does not exceed 0.1 Ω (see Form A.9)	N/A
	Impedance between PROTECTIVE CONDUCTOR TERMINAL and each ACCESSIBLE part where PROTECTIVE BONDING is specified, is:		—
	less than 0,1 Ohm; or	See above	N/A
	less than 0,2 Ohm if equipment is provided with non detachable cord	See above	N/A
6.5.2.5	Bonding impedance of PERMANENTLY CONNECTED EQUIPMENT	No PERMANENTLY CONNECTED EQUIPMENT	N/A
6.5.2.6	Transformer PROTECTIVE BONDING screen	(see Form A.11)	N/A
	Transformer provided with screen for protective bonding:	No such screen provided	N/A
	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

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Clause	Requirement – Test	Result – Remark	Verdict
	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	Double insulation or reinforced insulation between mains and SELV maintained within isolation transformer provided with UL Recognized insulation system (See Separate Construction Data Form)	N/A
	Meet CLEARANCE, CREEPAGE DISTANCE and solid insulation requirements of 6.7	(See table A.15)	N/A
6.5.4	PROTECTIVE IMPEDANCE	PROTECTIVE IMPEDANCE not used	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	See above	N/A
	CLEARANCE, CREEPAGE DISTANCE between terminations of the impedance meet requirements of DOUBLE or REINFORCED INSULATION of 6.7	See above	N/A
	The protective impedance consists of one or more of the following:		—
	a) appropriate single component suitable for safety and reliability for protection, it is:	See above	N/A
	1) RATED twice the maximum WORKING VOLTAGE	See above	N/A
	2) resistor RATED for twice the power dissipation for maximum WORKING VOLTAGE	See above	N/A
	b) combination of components	See above	N/A
	Single electronic device not used as PROTECTIVE IMPEDANCE		N/A
6.5.5	Automatic disconnection of the supply	Automatic disconnection of the supply is not used	N/A
	a) RATED to disconnect the load within time specified in Figure 2	See above	N/A
	b) RATED for the maximum load conditions of the equipment	See above	N/A

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Clause	Requirement – Test	Result – Remark	Verdict
6.5.6	Current- or voltage-limiting devices	No such components used, input fuse is not considered as such (see Form A.13)	N/A
	Device complies with all of:	See above	N/A
	a) RATED to limit the current or voltage to the level of 6.3.2	See above, (see Form A.6)	N/A
	b) RATED for the maximum working voltage; and	See above	N/A
	RATED for the maximum operational current if applicable	See above	N/A
	c) CLEARANCE, CREEPAGE DISTANCE between terminations of the impedance meet requirements of SUPPLEMENTARY INSULATION of 6.7	(see Form A.14, A.15)	N/A
6.6	Connections to external circuits	Automatic disconnection of the supply is not used	N/A
6.6.1	Connections do not cause ACCESSIBLE parts of the following to become HAZARDOUS LIVE in NORMAL CONDITION or SINGLE FAULT CONDITION:	Inspected Signal on signal port to external computer is SELV	N/A
	- the external circuits	See above	N/A
	- the equipment	See above	N/A
	Protection achieved by separation of circuits; or	See above, separation guaranteed by isolation transformer and proper insulation on PCBs	N/A
	Short circuit of separation does not cause a HAZARD	See above	N/A
	Instructions or markings for each terminal include:	No further instructions or markings	N/A
	a) RATED conditions for TERMINAL	See above	N/A
	b) Required RATING of external circuit insulation	See above	N/A
6.6.2	TERMINALS for external circuits	No such terminals	N/A
	TERMINALS which receive a charge from an internal capacitor are not HAZARDOUS LIVE after 10 s of interrupting supply connection	See above	N/A
6.6.3	Circuits with TERMINALS which are HAZARDOUS LIVE	No such terminals provided, AC outlet is a standard outlet for a vacuum pump not considered as such	N/A
	These circuits are:		—

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Clause	Requirement – Test	Result – Remark	Verdict
	Not connected to ACCESSIBLE conductive parts; or	See above	N/A
	Connected to ACCESSIBLE conductive parts, but are not MAINS CIRCUITS and have one TERMINAL contact at earth potential	See above	N/A
	No ACCESSIBLE conductive parts are HAZARDOUS LIVE	See above	N/A
6.6.4	ACCESSIBLE TERMINALS for stranded conductors	No ACCESSIBLE TERMINALS for stranded conductors	N/A
	No risk of accidental contact because:	See above	N/A
	Located or shielded	See above	N/A
	Self-evident or marked whether or not connect- ed to ACCESSIBLE conductive parts	See above	N/A
	ACCESSIBLE TERMINALS will not work loose	See above	N/A
6.7	Insulation requirements	(see Form A.14)	N/A
6.7.1	The nature of insulation	Creepage and clearance as well as sol- id insulation used throughout the equipment	N/A
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 above, accessible parts are properly separated (double or rein- forced insulation is used within the transformer and on PCBs)	N/A
6.7.1.2	CLEARANCES		N/A
	Required CLEARANCES reflecting factors of 6.7.1.1	All factors considered as per clause, operating altitude of max. 2000m assumed (see Form A.14, A.15)	N/A
	Equipment rated for operating altitude greater than 2000 m correction factor of Table 3 of 61010-1 applied	See above	N/A
6.7.1.3	CREEPAGE DISTANCES	See above	N/A
	Required CREEPAGE reflecting factors of 6.7.1.1 a) to d)	(see Form A.14, A.15)	—
	CTI material group reflected by requirements	Material Group IIIb assumed	N/A
	CTI test performed	See above	N/A
6.7.1.4	Solid insulation		—

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Clause	Requirement – Test	Result – Remark	Verdict
	Required CLEARANCES reflecting factors of 6.7.1. 1 a) to d)	Not relied upon (see Form A.14, A.15)	N/A
6.7.1.5	Requirements for insulation according to type of circuit	(see Form A.14, A.15)	N/A
	a) 6.7.2 MAINS circuits of OVERVOLTAGE CATEGORY II up to nominal supply voltage of 300 V	Considered, see 6.7.2 below	N/A
	b) 6.7.3 Secondary circuits separated from circuits defined in a) by transformer	Considered, see 6.7.3 below	N/A
	c) K.1 MAINS circuits of OVERVOLTAGE CATEGORY III and IV or OVERVOLTAGE CATEGORY II over 300 V	See above, OVIII/IV not considered	N/A
	d) K.2 Secondary circuits separated from circuits defined in a) by transformer	See above	N/A
	e) K.3 Circuits having one or more of:		N/A
	1) maximum TRANSIENT OVERVOLTAGE is limited to known level below the level of MAINS CIRCUIT	See above	N/A
	2) maximum TRANSIENT OVERVOLTAGE above the level of MAINS CIRCUIT	See above	N/A
	3) WORKING VOLTAGE is the sum of more than one circuit or a mixed voltage	See above	N/A
	4) WORKING VOLTAGE includes recurring peak voltage, may include non-sinusoidal or non-periodic waveform	See above	N/A
	5) WORKING VOLTAGE with a frequency above 30 kHz	See above	N/A
6.7.2	Insulation for MAINS CIRCUITS of OVERVOLTAGE CATEGORY II with a nominal supply voltage up to 300 V	Insulation guaranteed within isolation transformer (mains transformer) and between Primary to Secondary on AC Distribution Board and between Primary to Chassis GND on Heater Board	—
6.7.2.1	CLEARANCES and CREEPAGE DISTANCES	(see Form A.14, A.15)	N/A
	Values for MAINS CIRCUITS of table 4 are met	See above	N/A
	Coatings to achieve reduction to POLLUTION DEGREE I comply with requirements of Annex H	Not relied on coatings	N/A
6.7.2.2	Solid insulation	No solid insulation	N/A

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Clause	Requirement – Test	Result – Remark	Verdict
6.7.2.2.1	Withstands electrical and mechanical stresses in normal use and all RATED environmental conditions of 1.4	See Clause 6.8.3	N/A
	Equipment passed voltage tests of 6.8.3 with values of Table 5	(see Form A.18)	N/A
	Complies as applicable:		—
	a) ENCLOSURE or PROTECTIVE BARRIER of Clause 8	See clause 8	N/A
	b) moulded and potted parts requirements of 6.7.2.2.2	See clause 6.7.2.2.2	N/A
	c) inner layers of printed wiring boards requirements of 6.7.2.2.3	See clause 6.7.2.2.3	N/A
	d) thin-film insulation requirements of 6.7.2.2.4	See clause 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	No moulded or potted parts	N/A
6.7.2.2.3	Inner insulation 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:		N/A
	a) thickness at least 0,4 mm	Proper thickness of PCB guaranteed	N/A
	b) insulation is assembled of minimum two separate layers, each RATED for test voltage of Table 5 for BASIC INSULATION	See above, one layer considered	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	See above	N/A
6.7.2.2.4	Thin-film insulation		—
	Conductors between same two layers are separated by applicable CLEARANCES and CREEPAGE DISTANCES of 6.7.2.1	No thin film insulation used, transformer is an approved component	N/A
	REINFORCED INSULATION have adequate electric strength; one of following methods used:	See above	N/A
	a) thickness at least 0,4 mm		N/A

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Clause	Requirement – Test	Result – Remark	Verdict
	b) insulation is assembled of min two separate layers, each RATED for test voltage of Table 5 for BASIC INSULATION		N/A
	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	(see Form A.18)	N/A
6.7.3	Insulation for secondary circuits derived from MAINS of OVERVOLTAGE CATEGORY II up to 300 V	No such circuitries which require basic, double / reinforced insulation	—
6.7.3.1	Secondary circuits where separation from MAINS CIRCUITS is achieved by a transformer providing:	See above	—
	- REINFORCED INSULATION	See above	N/A
	- DOUBLE INSULATION	See above	N/A
	- screen connected to the PROTECTIVE CONDUCTOR TERMINAL	No screen used	N/A
6.7.3.2	CLEARANCES	See 6.7.3	N/A
	a) meet the values of Table 6 for BASIC INSULATION and SUPPLEMENTARY INSULATION; or	See above	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:	(see Form A.18)	N/A
	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	See above	N/A
	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

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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
6.7.3.4	Solid insulation	See above	N/A
6.7.3.4.1	Withstands electrical and mechanical stresses in normal use and all RATED environmental conditions of 1.4		N/A
	a) Equipment passed voltage test of 6.8.3.1 for 5 s with VALUES of Table 6 for BASIC and SUPPLEMENTARY INSULATION	(see Form A.18)	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	(see Form A.18)	N/A
	value for REINFORCED INSULATION are twice the WORKING VOLTAGE		N/A
	Complies as applicable:		N/A
	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		N/A
	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		N/A
	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:		N/A
	a) thickness at least applicable distance of Table 8		N/A

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Clause	Requirement – Test	Result – Remark	Verdict
	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		N/A
	Conductors between same two layers are separated by applicable CLEARANCES and CREEPAGE DISTANCES of 6.7.3.2 and 6.7.3.3		N/A
	REINFORCED INSULATION have adequate electric strength; one of following methods used:		N/A
	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
	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:	(see Form A.18)	N/A
	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	(see Forms A.14 and A.18)	N/A
6.9	Constructional requirements for protection against electric shock		N/A
6.9.1	If a failure could cause a HAZARD:		—
	a) Security of wiring connections	Wiring connections are reliably fixed and secured. No wiring connections subject to mechanical stresses	N/A
	b) Screws securing removable covers	No screws securing removable covers for which length determines safety critical spacings	N/A
	c) Accidental loosening	Wiring connections are reliably fixed and secured so that accidental loosening will not cause accessible parts to become hazardous live	N/A

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Clause	Requirement – Test	Result – Remark	Verdict
	d) CREEPAGE and CLEARANCES not reduced below the values of basic insulation by loosening of parts or wires	Wiring connections are reliably fixed and secured so that creepage and clearances are not reduced below 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:		N/A
	a) Easily damaged materials not used	Easily damaged materials not used. Safety critical insulation is certified	N/A
	b) Non-impregnated hygroscopic materials not used	Non-impregnated hygroscopic material not used. Safety critical insulation is UL Recognized.	N/A
6.9.3	Colour coding		N/A
	Green-and-yellow insulation shall not be used except:	Green-yellow only used for PE or bonding throughout the equipment	—
	a) protective earth conductors;	See above	N/A
	b) PROTECTIVE BONDING conductors;	See above	N/A
	c) potential equalization conductors;	Not used	N/A
	d) functional earth conductors	Not used	N/A
6.10	Connection to MAINS supply source and connections between parts of equipment		N/A
6.10.1	MAINS supply cords	See below	N/A
	RATED for maximum equipment current (see 5.1.3 c)	See separate Construction Data Form	N/A
	Cable complies with IEC 60227 or IEC 60245	See above	N/A
	Heat-resistant if likely to contact hot parts	Not likely to contact hot parts	N/A
	Temperature RATING (cord and inlet) :	Non-detachable power cord used	N/A
	Green/yellow used only for connection to PROTECTIVE CONDUCTOR TERMINALS	By inspection	N/A
	Detachable cords with IEC 60320 MAINS connectors:	Not used	—
	Conform to IEC 60799; or	See above	N/A
	Have the current RATING of the MAINS connector	See above	N/A
6.10.2	Fitting of non-detachable MAINS supply cords	See above	N/A
6.10.2.1	Cord entry		N/A

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Clause	Requirement – Test	Result – Remark	Verdict
	a) Inlet or bushing with a smoothly rounded opening; or	By inspection	N/A
	b) Insulated cord guard protruding >5 D	No such cord guard provided	N/A
6.10.2.2	Cord anchorage	See below	N/A
	Protective earth conductor is the last to take the strain	By inspection	N/A
	a) Cord is not clamped by direct pressure from a screw	Bushing used	N/A
	b) Knots are not used	By inspection	N/A
	c) Cannot push the cord into the equipment to cause a HAZARD	By inspection	N/A
	d) No failure of cord insulation in anchorage with metal parts	Cord anchorage does not have metal	N/A
	e) Not to be loosened without a tool	Complies	N/A
	f) Cord replacement does not cause a HAZARD and method of strain relief is clear	By inspection, bushing fitted to cord size used	N/A
	Push-pull test	Tested 25 times per Table 11	N/A
6.10.3	Plugs and connectors	See below	P
	MAINS supply plugs, connectors etc., conform with relevant specifications	See separate Construction Data Form	P
	If equipment supplied at voltages below 6.3.2 a) or from a sole source:	AC mains connection required	—
	Plugs of supply cords do not fit MAINS sockets above RATED supply voltage	See above	N/A
	MAINS type plugs used only for connection to MAINS supply	See above	N/A
	Plug pins which receive a charge from an internal capacitor	Decays to 0V in 40ms	P
	Accessory MAINS socket outlets:		P
	a) Marking if accepts a standard MAINS plug (see 5.1.3 e)	See above, marking provided	P
	b) Input has a protective earth conductor if outlet has EARTH TERMINAL CONTACT		N/A

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Clause	Requirement – Test	Result – Remark	Verdict
6.11	Disconnection from supply source	Disconnect device required and provided. Plug on non-detachable power cord is considered disconnect device.	N/A
6.11.1	Disconnects all current carrying conductors	Removal of plug from mains outlet dis- connects all conductors	N/A
6.11.2	Exceptions	No exceptions	N/A
6.11.3	Requirements according to type of equipment	See below	N/A
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	See above	N/A
	If switch or circuit-breaker is not part of the equipment, documentation specifies:		—
	a) Switch or circuit-breaker to be included in building installation	Not PERMANENTLY CONNECTED or multi-phase equipment	N/A
	b) Suitable location easily reached	See above	N/A
	c) Marking as disconnecting for the equipment	See above	N/A
6.11.3.2	Single-phase cord-connected equipment	Not regarding as disconnecting device	N/A
	Equipment is provided with one of the following:		—
	a) Switch or circuit-breaker	Not regarding as disconnecting device	N/A
	b) Appliance coupler (disconnectable without TOOL)	None provided	N/A
	c) Separable plug (without locking device)	By inspection	N/A
6.11.4	Disconnecting devices	By inspection	N/A
6.11.4.1	Disconnecting device part of equipment		N/A
	Electrically close to the SUPPLY	By inspection	N/A
	Power-consuming components not electrically located between the supply source and the disconnecting device	See above	N/A
	Except electromagnetic interference suppression circuits permitted to be located on the supply side of the disconnecting device	No such circuit exist in the equipment	N/A
6.11.4.2	Switches and circuit-breakers	Not regarded as disconnecting device	N/A
	When used as disconnection device:		—
	Meets IEC 60947-1 and IEC 60947-3	Not regarded as disconnecting device	N/A

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Clause	Requirement – Test	Result – Remark	Verdict
	Marked to indicate function..... :	See above	N/A
	Not incorporated in MAINS cord	See above	N/A
	Does not interrupt PROTECTIVE EARTH CONDUCTOR	See above	N/A
6.11.4.3	Appliance couplers and plugs	By inspection	N/A
	Where an appliance coupler or separable plug is used as the disconnecting device (see 6.11.3.2):		N/A
	Readily identifiable and easily reached by the OPERATOR	By inspection	N/A
	Single-phase PORTABLE EQUIPMENT cord length not more than 3 m	Not considered portable in intended	N/A
	PROTECTIVE EARTH CONDUCTOR connected first and disconnected last	By inspection	N/A

7	PROTECTION AGAINST MECHANICAL HAZARDS		P
7.1	Equipment does not cause a mechanical HAZARD in NORMAL nor in SINGLE FAULT CONDITION		N/A
	Conformity is checked by 7.2 to 7.7		N/A
7.2	Sharp edges		N/A
	Easily touched parts are smooth and rounded		N/A
	Do not cause injury during NORMAL USE and		N/A
	Do not cause injury during SINGLE FAULT CONDITION		N/A
7.3	Moving parts	See below	P
7.3.1	HAZARDS from moving parts limited to a tolerable level with the conditions specified in 7.3.2 and 7.3.5		P
	RISK assessment in accordance with 7.3.3 carried out	Risk assessment not required. See above	N/A

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict
7.3.2	Exceptions	No exceptions. The OPERATOR is not allowed to remove the bottom of the enclosure.	N/A
	Access to HAZARDOUS moving parts permitted under following circumstances:	See above	N/A
	a) obviously intended to operate on parts or materials outside of the equipment	See above	N/A
	inadvertent touching of moving parts minimized by equipment design (e.g. guards or handles)	See above	N/A
	b) If operator access is unavoidable outside normal use following precautions have been taken:	See above	N/A
	1) Access requires TOOL	No such considerations required	N/A
	2) Statement about training in the instructions	No such considerations required	N/A
	3) Warning markings on covers prohibiting access by untrained operators	See below	N/A
	or symbol 14 with full details in documentation	No such considerations required	N/A
7.3.3	RISK assessment for mechanical HAZARDS to body parts	Accessibility to fans evaluated: M, E1, P1 => no action required	P
	RISK is reduced to a tolerable level by protective measures as specified in Table 12	See above, no further measures required	N/A
	Minimum protective measures:	See above	—
	A. Low level measures	See above	N/A
	B. Moderate measures	See above	N/A
	C. Stringent measures	See above	N/A
7.3.4	Limitation of force and pressure	No such forces and pressures from the equipment	N/A
	Following levels are met in NORMAL and SINGLE FAULT CONDITION:	See above	N/A
	Continuous contact pressure below 50 N / cm ² with force below 150 N		N/A
	Temporary force below 250 N for an area at least of 3 cm ² for a maximum duration of 0,75 s		N/A
7.3.5	Gap limitations between moving parts	Fans are properly guarded (see Form A.20)	N/A
7.3.5.1	Access normally allowed	See above	N/A

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Clause	Requirement – Test	Result – Remark	Verdict
	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	See above	N/A
	Maximum gap as specified in Table 14 assured in NORMAL and in SINGLE FAULT CONDITION		N/A
7.4	Stability	No such means required	P
	Equipment not secured to building structure is physical stable	No such means required	P
	Stability maintained after opening of drawers etc. by automatic means, or	No such means required	P
	warning marking requires the application of means	See above, no marking required	N/A
	Compliance checked by following tests as applicable:		—
	a) 10° tilt test for other than handheld equipment	No overbalance	P
	b) multi-directional force test for equipment exceeds height of 1 m and mass of 25 kg	Height less than 1m and mass less than 25kg and not floor-standing equipment	N/A
	c) downward force test for floor-standing equipment	Equipment is not floor-standing	N/A
	d) overload test with 4 times maximum load for castor or support that supports greatest load	No such components to be evaluated	N/A
	e) castor or support that supports greatest load removed from equipment	See above	N/A
7.5	Provisions for lifting and carrying	No handle or grips	N/A
7.5.1	Equipment more than 18 kg :		—
	Has means for lifting or carrying; or	No direct means for lifting/carrying	N/A
	Directions in documentation	Equipment mass < 18kg	N/A
7.5.2	Handles or grips	See below	N/A
	Handles or grips withstand four times weight	No handle or grips	N/A
7.5.3	Lifting devices and supporting parts	No lifting devices	N/A
	RATED for maximum load; or	See above	N/A
	tested with four times maximum static load	See above	N/A
7.6	Wall mounting	No wall mounted equipment	N/A

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Clause	Requirement – Test	Result – Remark	Verdict
	Mounting brackets withstand four times weight	See above	N/A
7.7	Expelled parts	There are no parts which can be expelled	N/A
	Equipment contains or limits the energy	See above	N/A
	Protection not removable without the aid of a TOOL	See above	N/A

8	RESISTANCE TO MECHANICAL STRESSES		P
8.1	Equipment does not cause a HAZARD when subjected to mechanical stresses in NORMAL USE	Mechanical resistance to shock and impact is adequate. Equipment has enclosure made of rigid metal with sufficient clearances and creepage distances between any hazardous live parts and enclosures. It was obvious due to construction that the tests of 8.1 and 8.2 would not affect safety due to these reasons. Based on the considerations above the tests were waived	N/A
	Normal protection level is 5 J	See above	N/A
	Levels below 5 J but not less than 1 J are acceptable if all of following criteria are met:	See above	N/A
	a) lower level justified by RISK assessment of manufacturer	See above	N/A
	b) equipment installed in its intended application is not easily touched	See above	N/A
	c) only occasional access during NORMAL USE	See above	N/A
	d) IK code in accordance to IEC 62262 marked or symbol 14 used with full information in the documentation	See above	N/A
	For non-metallic ENCLOSURES rated below 2 °C ambient temperature value chosen for minimum RATED temperature	See above	N/A
	Impact energies between IK values, the IK code marked for nearest lower value	See above	N/A
	Conformity is checked by performing following tests:	See above	N/A
	1) static test of 8.2.1	See above	N/A
	2) impact test of 8.2.2 with 5 J except for HAND-HELD EQUIPMENT	See above	N/A

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Clause	Requirement – Test	Result – Remark	Verdict
	if impact energy not selected to 5 J alternate method of IEC 62262 used	See above	N/A
	3) drop test of 8.3.1 or 8.3.2 except for FIXED and EQUIPMENT with mass over 100 kg	See above	N/A
	Equipment rated with an impact rating of IK 08 that obviously meets the criteria	See above	N/A
	After the tests inspection with following results:	See below	—
	- HAZARDOUS LIVE parts above the limits of 6.3.2 not ACCESSIBLE	See 8.1 above	N/A
	- insulation pass the voltage tests of 6.8	See above	N/A
	i)no leaks of corrosive and harmful substances	See above	N/A
	ii)ENCLOSURE shows no cracks resulting in a HAZARD	See above	N/A
	iii) CLEARANCES not less than their permitted values	See above	N/A
	iv) insulation of internal wiring remains undamaged	See above	N/A
	v) PROTECTIVE BARRIERS not damaged or loosened	See above	N/A
	vi) No moving parts exposed, except permitted by 7.3	See above	N/A
	vii) No damage which could cause spread of fire	See above	N/A
8.2	ENCLOSURE rigidity test	See above	N/A
8.2.1	Static test	See above	N/A
	- 30 N with 12 mm rod to each part of ENCLOSURE	See above	N/A
	- in case of doubt test conducted at maximum RATED ambient temperature	See above	N/A
8.2.2	Impact test	See above	N/A
	Impact applied to any part of ENCLOSURE causing a HAZARD if damaged	See above	N/A
	Impact energy level and corresponding IK code	See above	N/A
	Non-metallic ENCLOSURES cooled to minimum RATED ambient temperature if below 2 °C	See above	N/A
8.3	Drop test	Test waived	N/A

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Clause	Requirement – Test	Result – Remark	Verdict
8.3.1	Other than HAND-HELD and DIRECT-PLUG-IN EQUIPMENT	See above	N/A
	Tests conducted with a drop height or angle of :	See above	N/A
8.3.2	HAND-HELD and DIRECT-PLUG-IN EQUIPMENT	See above	N/A
	Non-metallic ENCLOSURES cooled to minimum RATED ambient temperature if below 2 °C	See above	N/A
	Drop test conducted with an height of 1 m	See above	N/A

9	PROTECTION AGAINST THE SPREAD OF FIRE		P
9.1	No spread of fire in NORMAL and SINGLE FAULT CONDITION		N/A
	MAINS supplied equipment meets requirements of 9.6 additionally	See clause 9.6	N/A
	Conformity is checked by minimum one or a combination of the following (see Figure 11):	(see Form A.22)	N/A
	a) Fault test of 4.4; or	Transformer overload and short test performed, ventilation blocked or fans stalled	N/A
	b) Application of 9.2 (eliminating or reducing the sources of ignition); or	This method is applied	N/A
	c) Application of 9.3 (containment of fire within the equipment)	This method is applied	N/A
9.2	Eliminating or reducing the sources of ignition within the equipment		N/A
	a) 1) Limited-energy circuit (see 9.4); or	Not applied	N/A
	2) BASIC INSULATION provided for parts of different potential; OR	Minimum of basic insulation provided between parts of hazardous and non-hazardous potentials	N/A
	Bridging the insulation does not cause ignition	Not applied	N/A
	b) Surface temperature of liquids and parts (see 9.5)	No liquids	N/A
	c) No ignition in circuits designed to produce heat	No ignition of material or components possible when they are coming into contact with the heaters	N/A
9.3	Containment of the fire within the equipment, should it occur		N/A

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Clause	Requirement – Test	Result – Remark	Verdict
9.3.1	Spread of fire outside equipment reduced to a tolerable level if:	See below	N/A
	a) Energizing of the equipment is controlled by an OPERATOR held switch	Not used	N/A
	b) ENCLOSURE is conform with constructional requirements of 9.3.2; and	Enclosure is conform with constructional requirements of 9.3.2 (no liquids)	N/A
	Requirements of 9.5 are met	No flammable liquids	N/A
9.3.2	Constructional requirements	See below	N/A
	a) Connectors and insulating material have flammability classification V-2 or better	Connectors and insulating material are certified and have flammability classification V-2 min	N/A
	b) Insulated wires and cables are flame retardant (VW-1 or equivalent)	Insulated wires are certified and have flammability classification V-1 min.	N/A
	c) ENCLOSURE meets following requirements:	See below	N/A
	1) Bottom and sides in arc of 5 ° (see Figure 13) to non-limited circuits (9.4) meets:		---
	i) no openings; or	Bottom is metal and has no openings	N/A
	ii) perforated as specified in Table 16; or	No openings	N/A
	iii) metal screen with a mesh; or	No openings	N/A
	iv) baffles as specified in Figure 12	No openings	N/A
	2) Material of ENCLOSURE and any baffle or flame barrier is made of:	See below	N/A
	Metal (except magnesium); or	All fire enclosure is metal	N/A
	Non-metallic materials have flammability classification V-1 or better	All fire enclosure is metal	N/A
	3) ENCLOSURE and any baffle or flame barrier have adequate rigidity	Fire enclosure is made of rigid metal	N/A
9.4	Limited-energy circuit	No accessible limited-energy circuits	N/A
	a) Potential not more than 30 r.m.s. and 42.4 V peak, or 60 V dc	See above	N/A
	b) Current limited by one of following means:	See above	N/A
	1) Inherently or by impedance (see Table 17); or	See above	N/A
	2) Over current protective device (see Table 18); or	See above	N/A

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict
	3) A regulating network limits also in SINGLE FAULT CONDITION (see Table 17)	See above	N/A
	c) Is separated by at least BASIC INSULATION	See above	N/A
	Fuse or a nonadjustable electromechanical device is used	See above	N/A
9.5	Requirements for equipment containing or using flammable liquids		N/A
	Flammable liquids contained in or specified for use with equipment do not cause spread of fire	No flammable liquids	N/A
	Risk is reduced to a tolerable level:		N/A
	a) The temperature of surface or parts in contact with flammable liquids is 25 °C below fire point	Not used	N/A
	b) The quantity of liquid is limited	Not used	N/A
	c) Flames are contained within the equipment	Not used	N/A
	Detailed instructions for RISK-reduction provided	Not used	N/A
9.6	Overcurrent protection	Overcurrent protection is part of the equipment: One circuit breaker in line and one in transformer primary. One additional fuse in line at AC outlet	N/A
9.6.1	MAINS supplied equipment protected		---
	BASIC INSULATION between MAINS parts of opposite polarity provided	(see Forms A.14 and A.15)	N/A
	Devices not in the protective conductor	Devices not in the protective conductor	N/A
	Fuses or single-pole circuit-breakers not fitted in neutral (multi-phase)	Single phase equipment	N/A
9.6.2	PERMANENTLY CONNECTED EQUIPMENT	Not PERMANENTLY CONNECTED EQUIPMENT	N/A
	Overcurrent protection device:	See above	N/A
	Fitted within the equipment; or	See above	N/A
	Specified in manufacturer's instructions	See above	N/A
9.6.3	Other equipment	No considered 'other equipment'	N/A
	Protection within the equipment	[Overcurrent protection is part of the equipment]	N/A

10	EQUIPMENT TEMPERATURE LIMITS AND RESISTANCE TO HEAT	P
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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict
10.1	Surface temperature limits for protection against burns		P
	Easily touched surfaces within the limits in NORMAL and in SINGLE FAULT CONDITION:	Easily touched surfaces within the limits. There are no surfaces considerably hot except for the surfaces or parts of the heaters which are properly marked (see Form A.26A for temperatures)	P
	- at an specified ambient temperature of 40 °C	Considered, see 'general product information'	P
	- for equipment rated above 40 °C ambient temperature limits not exceeded raised by the difference to 40 °C	The equipment is not rated for above 40 °C ambient temperature limits, however measured temperatures are calculated for 40°C	N/A
	Heated surfaces necessary for functional reasons exceeding specified values:	Easily touched surfaces within the limits. There are no surfaces considerably hot except for the surfaces or parts of the heaters which are properly marked (see Form A.26A for temperatures)	P
	Are recognizable as such by appearance or function; or	Heated surface at upper compartment is accordingly marked	P
	Are marked with symbol 13	Symbol of IEC60417-5041 provided	P
	Guards are not removable without TOOL	Inspected	P
10.2	Temperatures of windings	No excessive temperatures produced in normal or single-fault conditions	N/A
	Limits not exceeded in:	(see Form A.26B)	N/A
	NORMAL CONDITION	See above	N/A
	SINGLE FAULT CONDITION	See above	N/A
10.3	Other temperature measurements	See above	N/A
	Following measurements conducted if applicable:	(see Form A.26A)	N/A
	a) Value of 60 °C of field-wiring TERMINAL box not exceeded	No field-wiring terminal box	N/A
	b) Surface of flammable liquids and parts in contact with this liquids	No flammable liquids	N/A
	c) Surface of non-metallic ENCLOSURES	No non-metallic enclosures	N/A
	d) Parts made of insulating material supporting parts connected to MAINS supply	Insulating materials of primary components are still all part of approved assemblies (e.g. power switch, relay, distribution terminal), or have appropriate UL approval	N/A

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict
	e) TERMINALS carrying a current more than 0.5 A	Terminal do not exceed maximum specified temperatures	N/A
10.4	Conduct of temperature test	Considerations applied	N/A
10.4.1	Tests conducted under reference test conditions and manufacturer's instructions	(see Form A.26A)	N/A
10.4.2	Temperature measurement of heating equipment	Considered	N/A
	Tests conducted in test corner	(see Form A.26A)	N/A
10.4.3	Equipment intended for installation in a cabinet or wall	Equipment not intended for installation in a cabinet or wall	N/A
	Equipment built in as specified in installation instructions	(see Form A.26A)	N/A
10.5	Resistance to heat	Equipment has adequate resistance to heat	P
10.5.1	Integrity of CLEARANCE and CREEPAGE DISTANCES	No likelihood of reduction of safety critical clearances and creepage distances when equipment operates, see below	P
10.5.2	Non-metallic ENCLOSURES		P
	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	All insulating materials are provided as part of certified components adequately rated for application	P
	a) Parts supporting parts connected to MAINS supply	Parts supporting parts connected to MAINS supply are certified and used in accordance with ratings	P
	b) TERMINALS carrying a current more than 0,5 A	Approved components, see above	P
	Examination of material data; or	See above	P
	in case of doubt:	See above	P
	1) Ball pressure test; or	See above, no further testing necessary	N/A
	2) Vicat softening test of ISO 306	See above	N/A
11	PROTECTION AGAINST HAZARDS FROM FLUIDS		N/A
11.1	Protection to OPERATORS and surrounding area provided by EQUIPMENT		N/A

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict
	All fluids specified by manufacturer considered	Equipment does not contain fluids nor is used in measurements of processes on fluids	N/A
11.2	Cleaning	Cleaning has no safety relevant impact, no access to internal areas is required	N/A
11.3	Spillage	See above	N/A
11.4	Overflow	See above	N/A
11.5	Battery electrolyte	No batteries	N/A
	Battery electrolyte leakage presents no HAZARD	See above	N/A
11.6	Specially protected equipment	Equipment not defined as such	N/A
11.7	Fluid pressure and leakage	See above	N/A
11.7.1	Maximum pressure :	See above	N/A
	Maximum pressure of any part does not exceed PRATED	See above	N/A
11.7.2	Leakage and rupture at high pressure	See 11.1 and 14.2.1	N/A
	Fluid containing parts subjected to hydraulic test if:	Equipment not defined as such (see Form A.31)	N/A
	a) product of pressure and volume > 200 kPa; and	See above	N/A
	b) pressure > 50 kPa	See above	N/A
	Parts of refrigerating systems meets pressure-related requirements of IEC 60335-24 or IEC 60335- 24	See above	N/A
11.7.3	Leakage from low-pressure parts	See 11.1 and 14.2.1	N/A
11.7.4	Overpressure safety device	See 11.1 and 14.2.1	N/A
	Does not operate in NORMAL USE	See above	N/A
	a) Connected as close as possible to parts intended to be protected	See above	N/A
	b) Easy access for inspection, maintenance and repair	See above	N/A
	c) Adjustment only with TOOL	See above	N/A
	d) No discharge towards person	See above	N/A
	e) No HAZARD from deposit of discharged material	See above	N/A
	f) Adequate discharge capacity	See above	N/A

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Clause	Requirement – Test	Result – Remark	Verdict
	No shut-off valve between overpressure safety device and protected parts	See above	N/A

12	PROTECTION AGAINST RADIATION, INCLUDING LASER SOURCES, AND AGAINST SONIC AND ULTRASONIC PRESSURE		N/A
12.1	Equipment provides protection	No laser sources, however an optional Nickel 63 radioactive source (ECD detector) may be used which is a sealed device. The ECD is not provided by the applicant and as such is not part of this investigation and not listed on the critical component list. A separate NRC license is available from the vendor which controls the labelling for this item. No further protection necessary	N/A
12.2	Equipment producing ionizing radiation	See above, ECD detector is fully contained and is an approved device	N/A
12.2.1	Ionizing radiation	See above	N/A
12.2.1.1	Equipment meets the following requirements:	See above	N/A
	a) if intended to emit radiation meets requirements of 12.2.1.2; or	See above	N/A
	tested, classified and marked in accordance to IEC 60405	See above	N/A
	b) if only emits stray radiation meets requirements of 12.2.1.3	See above	N/A
12.2.1.2	Equipment intended to emit radiation	See above	N/A
	Effective dose rate of radiation measured..... :	See above	N/A
	If dose rate exceeds 5 μ Sv/h marked with the following:	See above	N/A
	a) Symbol 17 (ISO 361)	See above	N/A
	b) Abbreviations of the radionuclides..... :	See above	N/A
	c) With maximum dose at 1 m; or :	See above	N/A
	with dose rate value between 1 μ Sv/h and 5 μ Sv/h in m..... :	See above	N/A
12.2.1.3	Equipment not intended to emit radiation	See above, (see Form A.34)	N/A
	Limit for unintended stray radiation of 1 μ Sv/h at any easily reached point kept :	See above	N/A

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Clause	Requirement – Test	Result – Remark	Verdict
12.2.2	Accelerated electrons	No accelerated electrons	N/A
	Compartments opened only by the use of a TOOL	See above	N/A
12.3	Ultraviolet (UV) radiation	Conformity test under consideration	N/A
	No unintentional HAZARDOUS escape of UV radiation:	No UV radiation	N/A
	- checked by inspection; and	See above	N/A
	- evaluation of RISK assessment documentation		N/A
12.4	Microwave radiation	No micro-wave radiation	N/A
	Power density does not exceed 10 W/m2 :	See above	N/A
12.5	Sonic and ultrasonic pressure	Equipment does not produce considerable amount of sound	N/A
12.5.1	Sound level	See above	N/A
	No HAZARDOUS sound emission	See above	N/A
	Maximum sound pressure level measured and calculated for maximum sound power level as specified in ISO 3746 or ISO 9614-1	See above	N/A
	Instruction describes measures for protection	See above	N/A
12.5.2	Ultrasonic pressure	Equipment does not produce considerable amount of sound	N/A
	Equipment not intended to emit ultrasound does not exceed limit of 110 dB between 20 kHz and 100 kHz	See above	N/A
	Equipment intended to emit ultrasound:	See above	N/A
	Outside useful beam does not exceed limit of 110 dB between 20 kHz and 100 kHz	See above	N/A
	If inside useful beam above values exceeded:	See above	N/A
	Marked with Symbol 14 of Table 1	See above	N/A
	and following information in the documentation:	See above	N/A
	a) dimensions of useful beam	See above	N/A
	b) area where ultrasonic pressure exceed 110 dB	See above	N/A
	c) maximum sound pressure inside beam area	See above	N/A
12.6	Laser sources	No laser sources	N/A
	Equipment meets requirements of IEC 60825-1	See above	N/A

13	PROTECTION AGAINST LIBERATED GASES, EXPLOSION AND IMPLOSION	N/A
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Clause	Requirement – Test	Result – Remark	Verdict
13.1	Poisonous and injurious gases	Proper labelling for hydrogen gas is provided on the product. However external connection with flow limiting device and quick shut-off is not part of this evaluation. Proper instructions need to be followed by trained personnel setting up the equipment.	N/A
	No poisonous or injurious gases or substances liberated in NORMAL CONDITION	See above	N/A
	Attached data/test reports demonstrate conformity	See above	N/A
13.2	Explosion and implosion	See above	N/A
13.2.1	Components	No such components	N/A
	Components liable to explode:		—
	Pressure release device provided; or	See above	N/A
	Apparatus incorporates OPERATOR protection (see also 7.7)	See above	N/A
	Pressure release device:		—
	Discharge without danger	See above	N/A
	Cannot be obstructed	See above	N/A
13.2.2	Batteries and battery charging	No batteries	N/A
	If explosion or fire hazard could occur:		—
	Protection incorporated in the equipment; or	See above	N/A
	Instructions specify batteries with built-in protection	See above	N/A
	In case of wrong type of battery used:		—
	No HAZARD; or	See above	N/A
	Warning by marking and within instructions	See above	N/A
	Equipment with means to charge rechargeable batteries:		—
	Warning against the charging of non-rechargeable batteries; and	See above	N/A
	Type of rechargeable battery indicated; or	See above	N/A
	Symbol 14 used	See above	N/A
	Battery compartment design	See above	N/A
	Single component failure	See above	N/A
	Polarity reversal test	See above	N/A

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Clause	Requirement – Test	Result – Remark	Verdict
13.2.3	Implosion of cathode ray tubes	No CRTs	N/A
	If maximum face dimensions > 160 mm		—
	Intrinsically protected and correctly mounted; or	See above	N/A
	ENCLOSURE provides protection:	See above	N/A
	If non-intrinsically protected:		—
	Screen not removable without TOOL	See above	N/A
	If glass screen, not in contact with surface of tube	See above	N/A

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict

4.4	TABLE: Testing in single FAULT CONDITION – Results				Form A.1	N/A
Test subclause	FaultNo.	Fault description	Td 4.4.3 (NOTE)	How was test terminated	Comments	Meets 4.4.4
4.4.2.2	1	---	---	---		---
4.4.2.9	2	---	---	---		---
4.4.2.6	3	---	---	---		---

NOTE Td = Test duration in hh:mm:ss

Record dielectric strength test on Form A.18 and temperature tests on Form A.20A.

Record in the comments column for each test whether carried out during or after SINGLE FAULT CONDITION.

Supplementary information: 253VAC, 50Hz

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict

5.1.3 c)	TABLE: MAINS supply					Form A.2	P
	Marked rating :		85-330			V	—
	Phase :		Single phase				—
	Frequency :		50/60			Hz	—
	Current :		5			A	—
	Power :		--			W	—
	Power :		--			VA	—
Test No.	Voltage V	Frequency Hz	Current A	Power in W	Power in VA	Comments	
1	85	50	1.1	92.0	--	<+10%	
2	85	60	1.1	91.8	--	<+10%	
3	330	50	0.9	256.4	--	<+10%	
4	330	60	0.9	255.2	--	<+10%	
Note: Measurements are only required for marked ratings.							
Supplementary information:							

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict

5.3	TABLE: Durability of markings				Form A.3	P
Marking method (see NOTE)				Agent		
1) silk screen into enclosure metal				A Water		
2) warning labels at several areas, e.g. 'CAUTION – hot surface'				B Isopropyl alcohol 70%		
3) AC outlet ratings, including fuse rating				C (specify agent)		
4)				D (specify agent)		
5)				E (specify agent)		
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)				3		
TERMINALS and operating devices (5.1.5.2)				N/A		
Switches and circuit breakers (5.1.6)				Approved components		
DOUBLE/REINFORCED equipment (5.1.7)				N/A		
Field wiring TERMINAL boxes (5.1.8)				N/A		
Warning marking (5.2)				2		
Battery charging (13.2.2)				N/A		
Method	Test agent	Remains legible	Label loose	Curled edges	Comments	
		Verdict	Verdict	Verdict		
1	A, B	YES	N/A	N/A	Pass	
2	A, B	YES	No	No	Pass	
3	A, B	YES	No	No	Pass	
Supplementary information:						

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict

6.2	TABLE: List of ACCESSIBLE parts		Form A.4	N/A
6.1.2	Exceptions		None applied	—
6.2	Determination of accessible parts		See below	—
Item	Description	Determination method (NOTE 5)	Exception under 6.1.2 (NOTE 4)	
--	--	--		
--	--	--		
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:				

6	TABLE: Values in NORMAL CONDITION										Form A.5			---
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	Voltage			Current				Capacitance		10 / 5 s test (NOTE)			Comments	
(see Form A.4)	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	---	---	---	---	---	---	---	---	---	---	---	---	
2	--	---	---	---	---	---	---	---	---	0	---	---	After 5 s	
3	--	0	---	---	---	---	---	---	---	---	---	---	---	
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 and/or EN 61010-1.														
Supplementary information: Input voltage 330V, 50Hz														

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EN 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		
(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)	Comments	
1	---	---	---	---	---	---	---	---	---	---	---	---	
2	---	---	---	---	---	---	---	---	---	---	---	Max available power	

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 and/or EN 61010-1.

Supplementary information: Input voltage 253V, 50Hz

6.5.2.2	TABLE: Cross-sectional area of bonding conductors			Form A.7	N/A
Conductor location		Cross-sectional area mm ²		Verdict	
---		---		N/A	
6.5.2.3	TABLE: Tighting torque test			Form A.8	N/A
Conductor location		Size of Screw	Tighting torque Nm	Verdict	
---		---	---	N/A	
Supplementary information:					

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EN 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
---		---	---	---	N/A

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:

Not permanently connected

6.5.2.6	TABLE: Transformer PROTECTIVE BONDING screen			Form A.11	N/A
ACCESSIBLE part under test		Test current (see NOTE) A	Voltage attained after 1 min (maximum 10V) V	Calculated resistance (Maximum 0,1 Ω) Ω	Verdict

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	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:			

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: no such a device								

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EN 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:							

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)	

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict

6.7	TABLE: Insulation requirements - Block diagram of system						Form A.14	N/A
		(NOTE 1)	RMS V	Peak V	Frequency kHz	(NOTE 2) V		
A	L to N on Power board	BI	250Vrm s	353Vpk	0.06	1390VAC/ 1970VDC		
B	Primary to Secondary on Power board	DI/RI	250Vrm s	353Vpk	0.06	2210VAC/ 31324VDC		
C	Primary to Gnd on Power board	BI	250Vrm s	353Vpk	0.06	1390VAC/ 1970VDC		
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 from these should be shown under "Comments".				
Supplementary Information: See Attachment 3 for transformer details.								
*) based on input voltage rating of 230V(European application)								

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EN 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										—
Area	Location (see Form A.14)	Insulation type	Working Voltage (NOTE 2)			CLEARANCE		CREEPAGES		CTI	Verdict	Comments
		(NOTE 1)	RMS V	PeakV	FrequencykHz	Required mm	Measured mm	Required mm	Measured mm			
A	L-N on Power board	BI	250Vrms	353Vpk	0.06	1.5	2.9	1.5	2.9	>100	P	
B	Pri – Sec on Power board	DI/RI	250Vrms	353Vpk	0.06	3.0	12.5	6.0	12.5	>100	P	
C	Pri - Gnd on Power board	BI	250Vrms	353Vpk	0.06	1.5	3.1	1.5	3.1	>100	P	
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.....:			AC 230 (European configuration)				V	50		Hz		
Supplementary information: All hazardous voltages contained within metal fire enclosure. No compromising of required creepages and clearances.												

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict

6.7		TABLE: Insulation requirements - CLEARANCES and CREEPAGES								Form A.16		N/A	
8	Mechanical resistance to shock and impact					10.5.1		Integrity of CLEARANCES and CREEPAGE distances				—	
9.6.1	Overcurrent protection basic insulation between MAINS parts											—	
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	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	L-N on Power board	BI	--	--	--	--	--	--	--	--	--	--	
B	Pri – Sec on Power board	DI/RI	--	--	--	--	--	--	--	--	--	--	
c	Pri - Gnd on Power board	BI	--	--	--	--	--	--	--	--	--	--	
NOTE – Refer to Form A.19 for dielectric strength tests following the above tests.													
Supplementary information: All hazardous voltages contained within metal fire enclosure. No compromising of required creepages and clearances. No further testing deemed necessary.													

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict

6.7.2.2.2	TABLE: Reliability of potted components	Form A.17	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.					
Additional insulation _____ V r.m.s.					
Reinforced insulation _____ V r.m.s.					

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict
Supplementary information:			

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

¹ Record the fault, test or treatment applied before the dielectric strength test. ² Humidity preconditioning required.

	Test site altitude	Approx.. 100 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 Yes/No	Working voltage V	Test voltage r.m.s./peak/d.c V	Comments (NOTE)	Verdict
--	--	--	--	--	--	--

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:						
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EN 61010-1								
Clause	Requirement – Test				Result – Remark		Verdict	
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:								

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													—	
	Clause 7.3.4		Clause 7.3.5.1								Clause 7.3.5.2				
	Continuous	Temporary	Minimum gaps (mm)								Maximum gaps (mm)				
Part / Location	Contact pressure max. 50 N/cm ² @ max. 150 N	max. 250N / 3cm ² @ max. 0,75s	Torso 500	Head 300	Leg 180	Foot 120	Toes 50	Arm 120	Hand 100	Finger 25	Head 120	Foot 35	Finger 4	Verdict	Comments
Supplementary information:															

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EN 61010-1						
Clause	Requirement – Test			Result – Remark		Verdict
8.2	ENCLOSURE rigidity test			Form A.21		N/A
8.2.1	Static test					N/A
	Material of enclosure :			Metal / non-metallic		—
	Preparation for the test:					—
	Operated at ambient temperature :			° C	h	—
Location			Comments			Verdict
1)						N/A
2)						N/A
8.2.2	Impact test					N/A
	Material of enclosure :			Metal / non-metallic		—
	Corresponding IK-code :					—
	Preparation for the test:					—
	Cooled to (temperature) :			° C		—
Location			Comments			Verdict
1) Top						N/A
2) Side left / right						N/A
3) Bottom						N/A
8.3	Drop test					N/A
8.3.1	Other equipment					N/A
Location		Raised up to		Comments		—
		mm	30 °			—
1)						N/A
2)						N/A
3)						N/A
4)						N/A
8.3.2	Hand-held EQUIPMENT and direct plug-in equipment					N/A
	Material of enclosure :			Metal / non-metallic		—
	Preparation for the test:					—
	Cooled to (temperature) :			° C		—
Location			Comments			Verdict

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict
1) Side			N/A
2) Edge			N/A
3) Corner			N/A
Supplementary information:			

9.4	TABLE: Limited-energy circuit					Form A.24	N/A
Item	9.4 a)	9.4 b) Current limitation (NOTE)			9.4 c)	Decision	
or Location (see Form A.17)	Maximum potential in circuit voltage r.m.s./ d.c. V	Maximum available current A	Maximum available power VA	Overload protection after 120 s A	Circuit sepa- ration	Yes / No	Comments
NOTE – Maximum values see Tables 17 and 18. of 61010-1							
Supplementary information: no limited energy circuits							

10.5.2	TABLE: Resistance to heat of non-metallic enclosures		Form A.27	N/A
	Test method used			—
	Non operative treatment.....	[]		
	Empty ENCLOSURE	[]		
	Operative treatment	[]		
	Temperature during tests			—
Description		Material	Comments	Verdict

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict
	Dielectric strength test (6.8) :	V	r.m.s./peak/d.c.
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: Metal enclosure provided.			

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EN 61010-1			
Clause	Requirement – Test	Result – Remark	Verdict

10.5.3	TABLE: Insulating Materials		Form A.28	P
10.5.3 1)	Ball pressure test			
	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:

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EN 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		
Single component failures		Verdict	
Component		Open circuit	Short circuit
Supplementary information:			

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Clause	Requirement – Test	Result – Remark	Verdict

Summary of Group & National Differences

List of Countries:	Group Differences	National Differences	List of Countries:	Group Differences	National Differences
AT=Austria	--	YES ¹⁾	IL=Israel	--	--
BE=Belgium	--	--	IS=Iceland	--	--
BG=Bulgaria	--	--	IT=Italy	--	--
CA=Canada	--	YES ²⁾	JP=Japan	--	YES ⁶⁾
CH=Switzerland	--	YES ³⁾	KR=Korea, Republic	--	--
CY=Cyprus	--	--	LT=Lithuania	--	--
CZ=Czech Republic	--	--	LU=Luxembourg	--	--
DK=Denmark	--	YES ⁴⁾	LV=Latvia	--	--
DE=Germany	--	--	MT=Malta	--	--
EE=Estonia	--	--	NL=The Netherlands	--	--
ES=Spain	--	--	NO=Norway	--	--
FI=Finland	--	--	PL=Poland	--	--
FR=France	--	--	PT=Portugal	--	--
GB=United Kingdom	--	YES ⁵⁾	RO=Romania	--	--
GR=Greece	--	--	SE=Sweden	--	YES ⁷⁾
HU=Hungary	--	--	SK=Slovakia	--	--
HR=Croatia	--	--	SI=Slovenia	--	YES ⁸⁾
IE=Ireland	--	--	US=United States	--	YES ⁹⁾

Notes:

- 1) Shown on IEC EE website as national difference. Austria national standard (EN 61010-1:2010).
- 2) National differences from latest attachment to test report. Canada national standard (CSA C22.2 No. 61010-1:2012).
- 3) National differences from latest attachment to test report, and regulatory requirements of Switzerland.
- 4) Shown on IEC EE website as national difference. Denmark national standard (DS/EN 61010-1:2010).
- 5) Shown on IEC EE website as national difference. United Kingdom national standard (BS/EN 61010-1:2010).
- 6) National differences from attachment to test report. Japan national standard (IEC 61010-1 and/or EN 61010-1:2010).
- 7) Shown on IEC EE website as national difference. Sweden national standard (SS-EN 61010-1:2010).
- 8) Shown on IEC EE website as national difference. Slovenia national standard (SIST EN 61010-1).
- 9) National differences from attachment to test report. United States of America national standard (UL 61010-1:2012).

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Attachment 1: Product photos



Photo 1 Overall view of the EUT

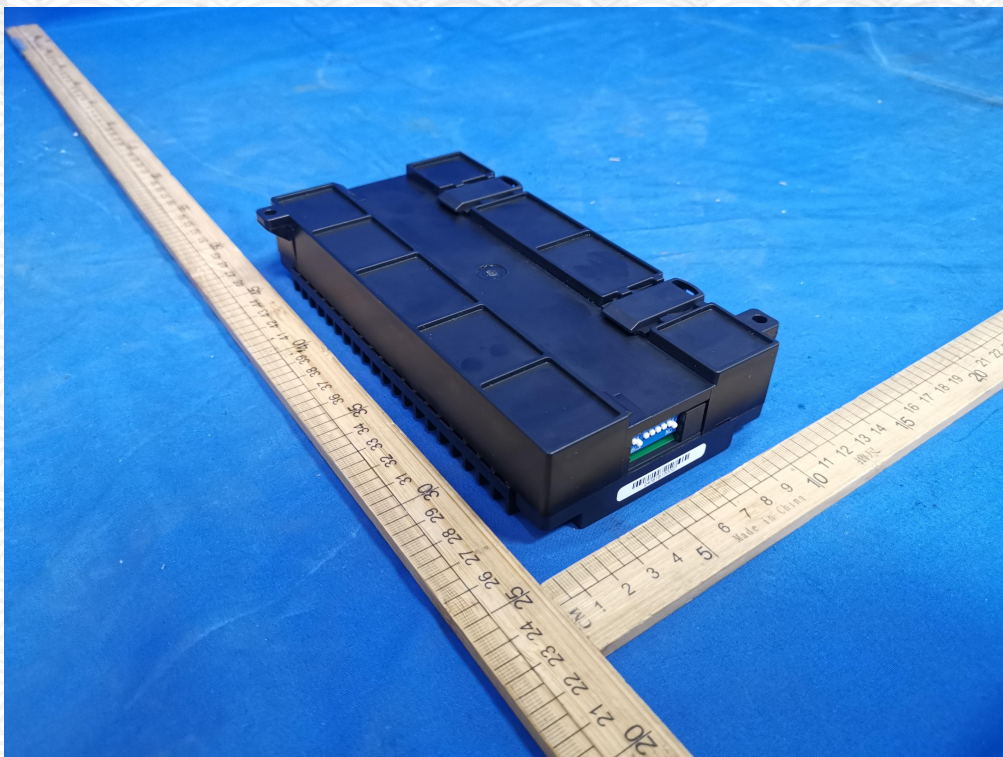


Photo 2 Overall view of the EUT

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STATEMENT

1. The equipment lists are traceable to the national reference standards.
2. The test report can not be partially copied unless prior written approval is issued from our lab.
3. The test report is invalid without the "special seal for inspection and testing".
4. The test report is invalid without the signature of the approver.
5. The test process and test result is only related to the Unit Under Test.
6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.
7. The quality system of our laboratory is in accordance with ISO/IEC17025.
8. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

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*****End of Test Report*****

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