

TEST REPORT

EN 61010-1:2010+A1:2019+AC:2019 EN IEC 61010-2-030:2021/A11:2021 Safety requirements for electrical equipment for measurement, control, and laboratory use -- Part 1: General requirements Part 2-030: Particular requirements for testing and measuring circuits

Report

Report reference No..... : SCC(22)-30311A-10-LVD

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Testing laboratory

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P. R. China

Testing location : No.45 Wenming Dong Road Longquanyi Chengdu 610100
P. R. China

Client

Name :

Address : No.2, Chunhui East Rd., Yongan Industrial, Xianju County, Zhejiang
Province, China.

Manufacturer

Name :

Address : No.2, Chunhui East Rd., Yongan Industrial, Xianju County, Zhejiang
Province, China.

Test specification

Standard : EN 61010-1 EN IEC 61010-2-030

Test procedure : LVD

Procedure deviation : N.A.

Non-standard test method : N.A.

Test report form/blank test report

Test report form No..... : SCC61010-1

TRF modified by..... : CHINA CEPREI (SICHUAN) LABORATORY.

Master TRF..... : PS_INFO\2-ELS.MES\REPORTS\CCA

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Test item	
Type of test object	Voltage Test Pen
Trademark	/
Model and/or type reference	SP18283
Manufacturer	
Address	No.2, Chunhui East Rd., Yongan Industrial, Xianju County, Zhejiang Province, China.
Equipment mobility	Fixed
Operating condition	Continuous
Tested for IT power systems	No
IT testing, phase-phase voltage (V)	N.A.
Class of equipment	Class III
Mass of equipment (kg)	N.A.
Protection against ingress of water	N.A.
Testing	
Date of receipt of test item(s)	Apr.10, 2022
Dates tests performed	Apr.10, 2022 – Apr.16, 2022
Possible test case verdicts	
Test case does not apply to the test object	N/A.
Test object was not evaluated for the requirements.:	N/E (Collateral standards only)
Test object does meet the requirement	P(Pass)
Test object does not meet the requirement	F(Fail)
General remarks	
"(see remark #)" refers to a remark appended to the report.	
"(see appended table)" refers to a table appended to the report.	
Throughout this report a comma is used as the decimal separator.	
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 testing laboratory.	
Summary of testing:	
Ambient temperature: (23-25)°C humidity: (55-62)%	
Complete test was conducted on SP18283	
SOUPS/DUPRO, SP9810, SP9811, SP9812, SP9813, SP9815, SP18230, SP18231, SP18208, SP17150, SP17151, SP0220, SP0221, SP9906, SP18160, SP18280, SP18281, SP18282, SP18283, SP9910, SP601, SP9963, 119, 7003, 7004, SP2002, SP2008, SP2009, SP18270, SP2021, SP0211, SP0212, SP0215, SP0216, SP0217, SP0218, SP8802, SP8803, SP22505, SP22506, SP9804, SP0228A, SP0228B, SP0228C, SP22305, SP22804, SP0236, SP0238A, SP0238B, SP0239, SP18650, SP18651, SP18751 are series products	
All tests are carried out in according to the EN 61010-1 , EN IEC 61010-2-030 and the test results meet the requirements specified in the above-mentioned standards.	

Clause	Requirement-Test	Result-Remark	Verdict
4.4	Testing in SINGLE FAULT CONDITIONS		P
4.4.1	Fault tests		P
4.4.2	SINGLE FAULT CONDITIONS not covered by 4.4.2.1 to 4.4.2.12		P
	Specific faults:		N/A
4.4.2.1	PROTECTIVE IMPEDANCE	See the rated clause	P
4.4.2.2	Protective conductor	See the rated clause	P
4.4.2.3	Equipment or parts for short-term or intermittent operation	Not applicable	N/A
4.4.2.4	Motors	Not applicable	N/A
4.4.2.5	Capacitors	Not applicable	N/A
4.4.2.6	Mains transformers	Not applicable	N/A
4.4.2.7	Outputs		N/A
4.4.2.8	Equipment for more than one supply		N/A
4.4.2.9	Cooling	Not applicable	N/A
4.4.2.10	Heating devices	Not applicable	N/A
4.4.2.11	Insulation between circuits and parts	See the rated clause	P
4.4.2.12	Interlocks	Not applicable	N/A

5	MARKING AND DOCUMENTATION		P
5.1.1	General		P
	Required equipment markings are:		—
	visible:		P
	From the exterior; or		P
	After removing a cover; or		N/A
	Opening a door		N/A
	After removal from a rack or panel		N/A
	Not put on parts which can be removed by an OPERATOR		P
	Letter symbols (IEC 60027) used	Pass muster	P
	Graphic symbols (IEC 61010-1: Table 1) used	Pass muster	P
5.1.2	Identification		P
	Equipment is identified by:		—
5.1.2a)	Manufacturer's or supplier's name or trademark	Soups Tools Co., Ltd.	P
5.1.2b)	Model number, name or other means	SP18283	P
	Manufacturing location identified		P
5.1.3	Mains supply		N/A
	Equipment is marked as follows:		—
5.1.3a)	Nature of supply:		—

Clause	Requirement-Test	Result-Remark	Verdict
	1) a.c. RATED mains frequency or range of frequencies		N/A
	2) d.c. with symbol 1		N/A
5.1.3b)	RATED supply voltage(s) or range		N/A
5.1.3c)	Max. RATED power (W or VA) or input current		N/A
	The measured value not more than 110 %	(see Form A.3)	N/A
	If more than one voltage range:	One voltage range	—
	Separate values marked; or		N/A
	Values differ by less than 20 %	(see Form A.3)	N/A
5.1.3d)	OPERATOR-set for different RATED supply voltages:	Not applicable	—
	Indicates the equipment set voltage		N/A
	PORTABLE EQUIPMENT indication is visible from the exterior		N/A
	Changing the setting changes the indication		N/A
5.1.3e)	Accessory mains socket-outlets accepting standard mains plugs are marked:	Not applicable	—
	With the voltage if it is different from the mains supply voltage		N/A
	For use only with specific equipment		N/A
	If not marked for specific equipment it is marked with:		—
	The maximum RATED current or power; or		N/A
	Symbol 14 with full details in the documentation		N/A
5.1.4	Fuses	Not applicable	N/A
	OPERATOR replaceable fuse marking (see also 5.4.5)		N/A
5.1.5	TERMINALS, connections and operating devices		P
	Where necessary for safety, indication of purpose of TERMINALS, connectors, controls and indicators marked		P
	If insufficient space, symbol 14 used		N/A
5.1.5.1	TERMINALS		P
	Mains supply TERMINALS identified		P
	Other TERMINAL marking		N/A
5.1.5.1a)	FUNCTIONAL EARTH TERMINALS (symbol 5 used)	Class III	N/A
5.1.5.1b)	PROTECTIVE CONDUCTOR TERMINALS:		N/A
	Symbol 6 is placed close to or on the TERMINAL; OR		N/A
	Part of appliance inlet		N/A
5.1.5.1c)	TERMINALS of measuring and control circuits (symbol 7 used)		N/A
5.1.5.1d)	HAZARDOUS LIVE TERMINALS supplied from the interior		N/A
	Standard MAINS socket outlet; or		N/A

Clause	Requirement-Test	Result-Remark	Verdict
	RATINGS marked; or		N/A
	Symbol 14 used		N/A
5.1.5.1e)	ACCESSIBLE FUNCTIONAL EARTH TERMINALS:	Not applicable	N/A
	Self-evident; or		N/A
	Indication (symbol 8 acceptable)		N/A
5.1.5.2	Measuring circuit TERMINALS		N/A
	Unless clear indication that below the limits of 50 V a.c. or 120 V d.c. to earth:		N/A
	Required markings are adjacent to TERMINALS; OR		N/A
	If insufficient space:		—
	On the RATING plate or scale plate; or		N/A
	TERMINAL is marked with symbol 14		N/A
5.1.5.2a)	For CAT I measurement circuits:		—
	RATED voltage		N/A
	Current marked if applicable		N/A
	Symbol 14 marked		N/A
5.1.5.2b)	For CAT II, CAT III or CAT IV measurement circuits:		P
	RATED voltage		P
	Current marked if applicable	DC	P
	Appropriate measurement category marked (CAT II, CAT III or CAT IV); or		N/A
	No marking required for:		N/A
	TERMINALS other than those permanently connected and not ACCESSIBLE with appropriate information in installation manual (see 5.4.3)		N/A
	For specific connection to other equipment TERMINALS only, and means for identifying provided		N/A
5.1.6	Switches and circuit breakers	Not applicable	N/A
	If disconnecting device, on or off position marked		N/A
5.1.7	Equipment protected by DOUBLE INSULATION or REINFORCED INSULATION		N
	Protected throughout (symbol 11 used)	Class III	N/A
	Only partially protected (symbol 11 not used)		N/A
5.1.8	Field-wiring terminal boxes	No such boxes	N/A
	If terminal or enclosure exceeds 60 °C:	(See Form A.20A)	N/A
	Cable temperature rating marked		N/A
	Marking visible before and during connection or beside terminal		N/A
5.2	Warning markings		P
	Visible when ready for normal use		P
	Are near or on applicable parts		P

Clause	Requirement-Test	Result-Remark	Verdict
	Symbols and text correct dimensions and colour		P
	If necessary marked with symbol 14		N
	Statement to isolate or disconnect		N
5.3	Durability of markings		P
	The required markings remain clear and legible in NORMAL USE	(see Form A.4)	P
5.4	Documentation		P
5.4.1	General		P
	Equipment is accompanied by documentation which includes:		—
5.4.1a)	Intended use		P
5.4.1b)	Technical specification	Pass muster	P
5.4.1c)	Instructions for use	Pass muster	P
5.4.1d)	Name and address of manufacturer or supplier	Pass muster	P
5.4.1e)	Information specified in 5.4.2 to 5.4.5		P
5.4.1f)	If marking of TERMINALS required, definition of measurement category		N/A
5.4.1g)	If CAT 1:		N/A
	Warning not to be used in CAT II, CAT III or CAT IV measurement circuits		N/A
	RATINGS including RATED transient overvoltages ... :		N/A
5.4.1	Warning statements and a clear explanation of warning symbols:		—
	Provided in the documentation; or		P
	Information is marked on the equipment	Pass muster	P
5.4.2	Equipment RATINGS		P
	Documentation includes:		—
5.4.2a)	Supply voltage or voltage range..... :		P
	Frequency or frequency range :		N/A
	Power or current RATING :		N/A
5.4.2b)	Description of all input and output connections	Provided in the Operator's Manual	P
5.4.2c)	RATING of insulation of external circuits, when such circuits are nowhere ACCESSIBLE	No external circuits	N/A
5.4.2d)	Statement of the range of environmental conditions	Provided in the Operator's Manual	P
5.4.2e)	Degree of protection (IEC 60529)		N/A
5.4.3	Equipment installation		P
	Documentation includes instructions for:		—
5.4.3a)	Assembly, location and mounting requirements	Provided in the Operator's Manual	P
5.4.3b)	Protective earthing	Not applicable	N/A

Clause	Requirement-Test	Result-Remark	Verdict
5.4.3c)	Connections to supply		P
5.4.3d)	permanently connected equipment:	Not applicable	N/A
	1) Supply wiring requirements		N/A
	2) If external switch or circuit-breaker, requirements and location recommendation		N/A
5.4.3e)	Ventilation requirements		N/A
5.4.3f)	Special services (e. g. air, cooling liquid)	Not applicable	N/A
5.4.3g)	Maximum sound power level		N/A
5.4.3h)	Instructions about sound pressure		N/A
5.4.3i)	Permanently connected measuring TERMINALS:	Not applicable	N/A
	Measurement category		N/A
	RATED maximum WORKING VOLTAGE or current		N/A
5.4.4	Equipment operation		P
	Instructions for use include:		—
5.4.4a)	Identification of operating controls		P
5.4.4b)	Positioning for disconnection		P
5.4.4c)	Interconnection		P
5.4.4d)	Specification of intermittent operation limits	Not applicable	N/A
5.4.4e)	Explanation of symbols used	Pass muster	P
5.4.4f)	Replacement of consumable materials	Not applicable	N/A
5.4.4g)	Cleaning and decontamination (see 11.2)		N/A
5.4.4h)	Listing of any poisonous or injurious gases and quantities		N/A
5.4.4i)	Risk-reduction procedures relating to flammable liquids		N/A
	A statement about protection impairment if used in a manner not specified by the manufacturer		N/A
5.4.5	Equipment maintenance		P
	Instructions for RESPONSIBLE BODY include:		—
	Sufficient preventive maintenance and inspection information		P
	Replacement of hoses or parts containing liquids, etc.	Not applicable	N/A
	Specific battery type of user replaceable batteries	No such battery	N/A
	Any manufacturer specified parts		P
	RATING and characteristics of fuses	Not applicable	N/A

6	PROTECTION AGAINST ELECTRIC SHOCK (see Form A.5)	P
6.1	General	P
6.1.1	Requirements	—

Clause	Requirement-Test	Result-Remark	Verdict
	Accessible parts not hazardous live in normal condition and single fault condition		P
	Conformity is checked by the determination of 6.2 and 6.3 followed by the tests of 6.4 to 6.11	See the rated clause	P
6.1.2	Exceptions		N/A
	Capacitance test	(see Forms A.6 and A.7)	N/A
	Parts not hazardous live 10 s after interruption of supply		N/A
6.2	Determination of accessible parts		P
6.2.1	General examination	(see Form A.6)	P
6.2.2	Openings above parts that are hazardous live		N/A
6.2.3	Openings for pre-set controls		N/A
6.3	Permissible limits for accessible parts		P
6.3.1	Values in normal condition	(see Form A.7)	N/A
6.3.2	Values in single fault condition	(see Form A.8)	N/A
6.4	Protection in normal condition (see 6.2, 6.3.1, 6.7, 6.8 and 8.1)	See the rated clause	P
6.4a)	Basic insulation (see annex D)		P
6.4b)	Enclosures and barriers		P
6.4c)	Impedance		N/A
6.5	Protection in single fault condition		P
	Additional protection is provided by:		—
	One or more of 6.5.1 to 6.5.3; or		P
	Automatic disconnection of the supply (6.5.4)		N
6.5.1	Protective bonding		P
	accessible conductive parts:		—
	Separated by double insulation or reinforced insulation; or		P
	Bonded to the protective conductor terminal; or	Not applicable	N/A
	Separated by screen or barrier bonded to protective conductor terminal from parts which are hazardous live	Not applicable	N/A
6.5.1.1	Integrity of protective bonding		P
6.5.1.1a)	protective bonding consists of directly connected structural parts or discrete conductors or both; and withstands thermal and dynamic stresses	Pass muster Comply with the requirements	P
6.5.1.1b)	Soldered connections:	Not applicable	N/A
	Independently secured against loosening		N/A
	Not used for other purposes		N/A
	Screw connections are secured		N/A
6.5.1.1c)	protective bonding not interrupted	Not applicable	N/A

Clause	Requirement-Test	Result-Remark	Verdict
6.5.1.1d)	Any moveable connection specifically designed, and meets 6.5.1.3	Not applicable	N/A
6.5.1.1e)	No external metal braid of cables used		N/A
6.5.1.1f)	If MAINS supply passes through:		N/A
	Means provided for passing protective conductor;		N/A
	Impedance meets 6.5.1.3.		N/A
6.5.1.1g)	Protective conductors bare or insulated, if insulated, green/yellow	Class III	N/A
	Exceptions:		—
	1) earthing braids;		N/A
	2) internal protective conductors etc.;		N/A
	Green/yellow not used for other purposes		N/A
6.5.1.1h)	terminal suitable, and meets 6.5.1.2		N/A
6.5.1.2	Protective conductor terminal	Not applicable	N/A
6.5.1.2a)	Contact surfaces are metal		N/A
6.5.1.2b)	Appliance inlet used		N/A
6.5.1.2c)	For rewirable cords and permanently connected equipment, protective conductor terminal is close to mains supply terminals		N/A
6.5.1.2d)	If no mains supply is required, any protective conductor terminal:		N/A
	Is near terminals of circuit for which protective earthing is necessary		N/A
	External if other terminals external		N/A
6.5.1.2e)	Equivalent current-carrying capacity to mains supply terminals	(see Form A.9)	N/A
6.5.1.2f)	If plug-in, makes first and breaks last		N/A
6.5.1.2g)	If also used for other bonding purposes, protective conductor:		N/A
	Applied first;		N/A
	Secured independently;		N/A
	Unlikely to be removed by servicing; or		N/A
	Warning marking requires replacement of protective conductor		N/A
6.5.1.2h)	PROTECTIVE CONDUCTOR of measuring circuit:		N/A
	1) Current RATING equivalent to measuring circuit TERMINAL;		N/A
	2) PROTECTIVE BONDING:		N/A
	Not interrupted; or		N/A
	Indirect bonding used (see 6.5.1.5)		N/A
6.5.1.2i)	FUNCTIONAL EARTH TERMINALS allow independent connection		N/A

Clause	Requirement-Test	Result-Remark	Verdict
6.5.1.2j)	If a binding screw used for PROTECTIVE CONDUCTOR TERMINAL:		N/A
	Suitable size for bond wire		N/A
	Not smaller than M 4 (No. 6)		N/A
	At least 3 turns of screw engaged		N/A
	Contact pressure not capable of reduction by deformation of materials		N/A
	Passes tightening torque test	(see Form A.9)	N/A
6.5.1.3	Impedance of protective bonding of plug-connected equipment	(see Form A.10)	N/A
6.5.1.4	Bonding impedance of permanently connected equipment	(see Form A.10)	N/A
6.5.1.5	Indirect bonding for measuring and test equipment	(see Form A.11)	N/A
6.5.2	double insulation and reinforced insulation (see 6.7, 6.8 and 6.9.2)		N/A
6.5.3	protective impedance		N/A
6.5.3a)	High-integrity single component used (s. 14.6); or		N/A
6.5.3b)	A combination of components used; or		N/A
6.5.3c)	A combination of basic insulation and current- or voltage-limiting device used		N/A
	Components, wires and connections are rated as required	(see Table 3 and Form A.12)	N/A
6.5.4	Automatic disconnection of the supply		N/A
	If used, it meets :		—
6.5.4a)	Supplied with the equipment; or		N/A
	Specified by installation instruction		N/A
6.5.4b)	Rated disconnecting time within limit specified		N/A
6.5.4c)	Rated for maximum rated load		N/A
6.6	Connections to external circuits		N/A
6.6.1	General		N/A
	Connections do not cause accessible parts of the following to become hazardous live in normal condition or single fault condition:		—
6.6.1a)	The external circuits		N/A
6.6.1b)	The equipment		N/A
	Separation of circuits provided; or		N/A
	Short circuit of separation does not cause a Hazard		N/A
	Instructions or markings include:		—
	1) rated conditions for terminal		N/A
	2) Required rating of external circuit insulation		N/A
6.6.2	terminals for external circuits		N/A

Clause	Requirement-Test	Result-Remark	Verdict
	TERMINALS which receive a charge from an internal capacitor are not HAZARDOUS LIVE	(see Form A.7)	N/A
	High voltage TERMINALS energized from the interior are:		—
	Not ACCESSIBLE if connected; or		N/A
	When unmated HAZARDOUS LIVE TERMINALS not ACCESSIBLE ; or		N/A
	marked with symbol 12		N/A
6.6.3	Circuits with TERMINALS which are HAZARDOUS LIVE		N/A
	These circuits are:		—
	Not connected to ACCESSIBLE conductive parts; or		N/A
	Connected to ACCESSIBLE conductive parts, but are not MAINS CIRCUITS and have one TERMINAL contact at earth potential		N/A
	No ACCESSIBLE conductive parts are HAZARDOUS LIVE		N/A
6.6.4	ACCESSIBLE TERMINALS for stranded conductors		N/A
6.6.4a)	No risk of accidental contact because:		N/A
	Located or shielded		N/A
	Self-evident or marked whether or not connected to ACCESSIBLE conductive parts		N/A
6.6.4b)	ACCESSIBLE TERMINALS will not work loose		N/A
6.7	CLEARANCES and CREEPAGE DISTANCES	(See Form A.5 and A.13)	P
6.8	Procedure for dielectric strength tests	(See Form A.5 and A.14)	P
6.9	Constructional requirements for protection against electric shock		P
6.9.1	General		
	If a failure could cause a HAZARD:		—
6.9.1a)	Security of wiring connections		P
6.9.1b)	Screws securing removable covers	No such covers	N/A
6.9.1c)	Accidental loosening		P
	Material not to be used for safety relevant insulation:		—
	1) Easily damaged materials not used		P
	2) Non-impregnated hydroscopic materials not used		P
6.9.2	ENCLOSURES of equipment with DOUBLE INSULATION or REINFORCED INSULATION		P
	ENCLOSURE surrounds all metal parts except for small metal parts which are separated		P
	ENCLOSURES or parts made of insulating material		P
	Protection for metal ENCLOSURES or parts by:		—
6.9.2a)	An insulating coating or BARRIER on the inside; or	Pass muster	P
6.9.2b)	CLEARANCES and CREEPAGE DISTANCES cannot be reduced by loosening of parts or wires	Pass muster	P
6.9.3	Over-range indication	No such indication	N/A

Clause	Requirement-Test	Result-Remark	Verdict
	Unambiguous		N/A
6.10	Connection to MAINS supply source and connections between parts of equipment		P
6.10.1	MAINS supply cords	Not applicable	N/A
6.10.1a)	RATED for maximum equipment current (see 5.1.3c)		N/A
	Cable complies with IEC 60227 or IEC 60245		N/A
6.10.1b)	Heat-resistant if likely to contact hot parts		N/A
6.10.1c)	Temperature RATING (cord and inlet) :		N/A
6.10.1d)	Green/yellow used only for connection to PROTECTIVE CONDUCTOR TERMINALS		N/A
	Detachable cords with IEC 60320 MAINS connectors:		—
	Conform to IEC 60799; or		N/A
	Have the current RATING of the MAINS connector		N/A
6.10.2	Fitting of non-detachable MAINS supply cords		P
	Non-detachable cord protection:		—
6.10.2a)	Inlet or bushing smoothly rounded; or	Pass muster	P
6.10.2b)	Insulated cord guard protruding >5D	Pass muster	P
	Protective earth conductor is the last to take the strain		P
6.10.2	Cord anchorages:		P
6.10.2a)	Cord is not clamped by direct pressure from a screw	Comply with the requirements	P
6.10.2b)	Knots are not used	Pass muster	P
6.10.2c)	Cannot push the cord into the equipment to cause a hazard	Pass muster	P
6.10.2d)	No failure of cord insulation in anchorage with metal parts	Not applicable	N/A
6.10.2e)	Compression bushing:		N/A
	1) Clamps all types and sizes of MAINS cords; and		N/A
	2) Is suitable:		N/A
	For connection to terminals provided; or		N/A
	It is designed for screened mains cord		N/A
6.10.2f)	Cord replacement does not cause a hazard and method of strain relief is clear		N/A
	Push-pull test	(see Form A.15)	N/A
6.10.3	Plugs and connectors	No such plugs and connectors	N/A
6.10.3a)	MAINS supply plugs, connectors etc., conform with relevant specifications		N/A
6.10.3b)	If equipment supplied at voltages below 6.3.2.a) or from a sole source:		N/A
	Plugs of supply cords do not fit MAINS sockets above RATED supply voltage		N/A
	MAINS-type plugs used only for connection to MAINS supply		N/A

Clause	Requirement-Test	Result-Remark	Verdict
610.3c)	Plug pins which receive a charge from an internal capacitor	(See Form A.7)	N/A
6.10.3d)	Accessory MAINS socket outlets:		N/A
	1) Marking if accepts a standard MAINS plug (see 5.1.3e)		N/A
	2) Input has a protective earth conductor if outlet has earth TERMINAL contact		N/A
6.11	Disconnection from supply source		P
6.11.1	General		P
	Disconnects all current carrying conductors		P
6.11.1.1	Exceptions		N/A
6.11.1.1a)	Equipment supplied by low energy source; or		N/A
6.11.1.1b)	Equipment connected to impedance protected supply; or		N/A
6.11.1.1c)	Equipment constitutes an impedance protected load		N/A
6.11.2	Requirements according to type of equipment		P
6.11.2.1	Permanently connected equipment and multi-phase equipment:	Not applicable	N/A
	Employs switch or circuit-breaker		N/A
	If switch or circuit-breaker is not part of the equipment, documentation specifies:		—
6.11.2.1a)	Switch or circuit-breaker to be included in building installation		N/A
6.11.2.1b)	Location		N/A
6.11.2.1c)	Marking		N/A
6.11.2.2	Single-phase cord-connected equipment		P
	Equipment is provided with:		—
6.11.2.2a)	Switch or circuit-breaker; or		N/A
6.11.2.2b)	Appliance coupler (disconnectable without TOOL); or		P
6.11.2.2c)	Separable plug (without locking device)		N/A
6.11.2.3	HAZARDS arising from function	Not applicable	N/A
	Emergency switch		N/A
	Emergency switch ≤ 1 m from the moving part		N/A
6.11.3	DISCONNECTING DEVICES	Not applicable	N/A
	ELECTRICALLY CLOSE TO THE SUPPLY		N/A
6.11.3.1	SWITCHES AND CIRCUIT-BREAKERS	No such switches and circuit-breakers	N/A
	WHEN USED AS DISCONNECTION DEVICE:		—
	MEETS IEC 60947-1 AND IEC 60947-3		N/A
	MARKED TO INDICATE FUNCTION		N/A
	NOT INCORPORATED IN MAINS CORD		N/A

Clause	Requirement-Test	Result-Remark	Verdict
	Does not interrupt protective earth conductor		N/A
	If has other contacts meets separation requirements of 6.6 and 6.7		N/A
6.11.3.2	Appliance couplers and plugs	No such couplers and plugs	N/A
	Where an appliance coupler or separable plug is used as the disconnecting device (see 6.11.2.2):		—
	Readily identifiable and easily reached by the operator		N/A
	Single-phase portable equipment cord length not more than 3 m		N/A
	Protective earth conductor connected first and disconnected last		N/A

7	PROTECTION AGAINST MECHANICAL HAZARDS		P
7.1	General		P
	Conformity is checked by 7.2 to 7.6		P
7.2	Moving parts	No moving parts	N/A
	Moving parts not able to crush, etc. (see also 6.11.2.3)		N/A
	If OPERATOR access permitted:		—
7.2a)	Access requires TOOL		N/A
7.2b)	Statement about training		N/A
7.2c)	Warning markings or symbol 14		N/A
7.3	Stability		N/A
	Marking of non-automatic means		N/A
	Conformity tests:		—
7.3a)	10° tilt test		N/A
7.3b)	multi-directional force test	<1m, and <25kg	N/A
7.3c)	downward force test		N/A
7.4	Provisions for lifting and carrying		N/A
	Handles or grips withstand four times weight		N/A
	Equipment more than 18 kg :	<18kg	—
	Has means for lifting or carrying; or		N/A
	Directions in documentation		N/A
7.5	Wall mounting	Not applicable	N/A
	Mounting brackets withstand four times weight		N/A
7.6	Expelled parts	Not applicable	N/A
	Equipment contains or limits the energy		N/A
	Protection not removable without the aid of a tool		N/A

Clause	Requirement-Test	Result-Remark	Verdict
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8	MECHANICAL RESISTANCE TO SHOCK AND IMPACT		P
8.1	ENCLOSURE rigidity test		P
8.2	Drop test		P
	After the tests of 8.1 to 8.2:		—
	Voltage tests	(see Form A.14)	P
	Inspections:		—
8a)	HAZARDOUS LIVE parts not accessible		P
8b)	ENCLOSURE shows no cracks (hazard)		P
8c)	CLEARANCES not less than their permitted values	(see Form A.13)	P
8d)	BARRIERS not damaged or loosened		P
8e)	No moving parts exposed, except permitted by 7.2		N
8f)	No damage which could cause spread of fire		P

9	PROTECTION AGAINST THE SPREAD OF FIRE		P
	Conformity for each source of HAZARD or area of the equipment is checked by one of the following:	(See Form A.16)	—
9a)	Fault test of 4.4; or	(See Forms A.1 and A.2)	P
9b)	Application of 9.1 (eliminating or reducing the sources of ignition); or	Pass muster	P
9c)	Application of 9.2 (containment of fire within the equipment)	Pass muster	P
9.1	Eliminating or reducing the sources of ignition within the equipment		P
9.1a)	1) Limited-energy circuit (see 9.3); or		P
	2) basic insulation provided for parts of different potential; or	(see Form A.5 and A.14)	P
	Bridging the insulation does not cause ignition	(see Form A.2)	N/A
9.1b)	Surface temperature of liquids and parts (see 9.4.a)	Not applicable	N/A
9.1c)	No ignition in circuits designed to produce heat	(see Form A.2)	N/A
9.2	Containment of the fire within the equipment, should it occur		P
9.2a)	Energizing of the equipment is controlled by an operator held switch		N/A
9.2b)	Enclosure is conform with constructional requirements of 9.2.1; and	Pass muster Comply with the requirements	P
	Requirements of 9.4b) or c) are met		P
9.2.1	Constructional requirements		P
9.2.1a)	Insulated wires have flammability classification FV1 or better	(see Form A.17)	P
	Connectors and insulating material have flammability classification FV2 or better	(see Form A.17)	P
9.2.1b)	The enclosure is constructed as follows :		P

Clause	Requirement-Test	Result-Remark	Verdict
	1) Bottom constructed with:		—
	No openings; or		P
	Extent as specified in figure 7; or		P
	Baffles as specified in figure 6; or		P
	Perforated as specified in Table 12; or		N/A
	Metal screen with a mesh		N/A
	2) Sides have no openings as specified in figure 7		P
	3) Material of ENCLOSURE and any baffle or flame barrier is made of:		—
	Metal (except magnesium); or		P
	Non metallic materials have flammability classification FV1 or better	(see Table: 3 or Form A.17)	P
	4) ENCLOSURE and any baffle or flame barrier have adequate rigidity	Pass muster Comply with the requirements	P
9.3	Limited-energy circuit	Not applicable	N/A
9.3a)	Potential not more than 30 r.m.s. and 42.4 V peak, or 60 V dc	(see Form A.18)	N/A
9.3b)	Current limited by one of following means:		N/A
	1) Inherently or by impedance; or		N/A
	2) Overcurrent protective device; or		N/A
	3) A regulating network limits also in SINGLE FAULT CONDITION		N/A
9.3c)	Is separated by at least BASIC INSULATION		N/A
	If overcurrent protective device used:		—
	Fuse or a non adjustable electromechanical device		N/A
9.4	Requirements for equipment containing or using flammable liquids		N
	Flammable liquids contained in or specified for use with equipment do not cause spread of fire	Not applicable	N/A
	Risk is reduced to a tolerable level :	(see Form A.19)	—
9.4a)	The temperature of surface or parts in contact with flammable liquids is 25 °C below fire point		N/A
9.4b)	The quantity of liquid is limited		N/A
9.4c)	Flames are contained within the equipment		N/A
	Detailed instructions for risk-reduction provided		N/A
9.5	Overcurrent protection	Not applicable	N/A
	Devices not in the protective conductor		N/A
	Fuses or single-pole circuit-breakers not fitted in neutral (multi-phase)		N/A
9.5.1	PERMANENTLY CONNECTED EQUIPMENT	Not applicable	N/A
	Overcurrent device:		—
	Fitted within the equipment; or		N/A

Clause	Requirement-Test	Result-Remark	Verdict
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	Specified in manufacturer's instructions		N/A
9.5.2	Other equipment	Not applicable	N/A
	Protection within the equipment		N/A

10	EQUIPMENT TEMPERATURE LIMITS AND RESISTANCE TO HEAT		P
10.1	Surface temperature limits for protection against burns		P
	Easily touched surfaces within the limits	(see Form A.20A)	P
	Heated surfaces necessary for functional reasons exceeding specified values:	Not applicable	—
	Are recognizable as such by appearance or function; or		N/A
	Are marked with symbol 13		N/A
	Guards are not removable without TOOL		N/A
10.2	Temperatures of windings		N/A
	Limits not exceeded in:	(see Form A.20B)	—
	NORMAL CONDITION		N/A
	SINGLE FAULT CONDITION		N/A
10.3	Other temperature measurements		N/A
	Following measurements conducted if applicable:	(see Form A.20A)	—
10.3a)	Value of 60 °C of field-wiring terminal box not exceeded	No such box	N/A
10.3b)	Surface of flammable liquids and parts in contact with this liquids	No such liquids	N/A
10.3c)	Surface of non-metallic enclosures	Pass muster	P
10.3d)	Parts made of insulating material supporting parts connected to mains supply	Pass muster	P
10.3e)	Terminals carrying a current more than 0.5 A	Pass muster No danger	P
10.4	Conduct of temperature test	(see Form A20)	P
10.5	Resistance to heat		P
10.5.1	Integrity of clearance and creepage distances	(See Form A.13)	P
10.5.2	Non-metallic enclosures	(See Forms A.21)	P
	After treatment:		—
	No hazardous live parts accessible;		P
	Tests of 8.1 and 8.2	(See Form A.13)	P
	In case of doubt, tests of 6.8 (without humidity preconditioning)	(See Form A.14)	N/A
10.5.3	Insulating material		P
10.5.3a)	Parts supporting parts connected to MAINS supply		P

Clause	Requirement-Test	Result-Remark	Verdict
10.5.3b)	TERMINALS carrying a current more than 0.5 A		P
	Examination of material data; or		P
	in case of doubt::		—
	1) Ball pressure test; or	0.47mm not exceed 2 mm. Pass muster	P
	2) Vicat softening test of ISO 306		N/A

11	PROTECTION AGAINST HAZARDS FROM FLUIDS		N/A
11.1	General		N/A
11.2	Cleaning	(See Form A.23)	N/A
11.3	Spillage	(See Form A.23)	N/A
11.4	Overflow	(See Form A.23)	N/A
11.5	Battery electrolyte		N/A
	Battery electrolyte leakage presents no hazard		N/A
11.6	Specially protected equipment	(See Form A.23)	N/A
11.7	Fluid pressure and leakage		N/A
11.7.1	Maximum pressure	(See Form A.24)	N/A
	Maximum pressure of any part does not exceed P_{RATED}		N/A
11.7.2	Leakage and rupture at high pressure	(See Form A.24)	N/A
	Test to IEC 60335 (refrigeration only)		N/A
11.7.3	1.1.1 Leakage from low-pressure parts	(See Form A.24)	N/A
11.7.4	Overpressure safety device		N/A
	Does not operate in NORMAL USE		N/A
	Meets ISO 4126-1; and		N/A
	It is conform with:		—
11.7.4a)	Connected as close as possible to parts intended to be protected		N/A
11.7.4b)	Easy access for inspection, maintenance and repair		N/A
11.7.4c)	Adjustment only with TOOL		N/A
11.7.4d)	No discharge towards person		N/A
11.7.4e)	No HAZARD from deposit of discharged material		N/A
11.7.4f)	Adequate discharge capacity		N/A
11.7.4g)	No shut-off valve between overpressure safety device and protected parts		N/A

12	PROTECTION AGAINST RADIATION, INCLUDING LASER SOURCES, AND AGAINST SONIC AND ULTRASONIC PRESSURE		N/A
12.1	General		N/A

Clause	Requirement-Test	Result-Remark	Verdict
	Equipment provides protection		N/A
12.2	Equipment producing ionizing radiation		N/A
12.2.1	Ionizing radiation	(See Form A.25)	N/A
12.2.2	Accelerated electrons		N/A
12.3	Ultra-violet (UV) radiation	(Conformity test under consideration)	N/A
	No unintentional and HAZARDOUS escape of UV radiation		N/A
12.4	Micro-wave radiation		N/A
	Power density does not exceed 10 W/m^2		N/A
12.5	Sonic and ultrasonic pressure		N/A
12.5.1	Sound level	(See Form A.26)	N/A
12.5.2	Ultrasonic pressure	(See Form A.26)	N/A
12.6	Laser sources (IEC 60825-1)		N/A

13	PROTECTION AGAINST LIBERATED GASES, EXPLOSION AND IMPLOSION		N/A
13.1	Poisonous and injurious gases		N/A
	Attached data/test reports demonstrate conformity		N/A
13.2	Explosion and implosion		N/A
13.2.1	Components		N/A
	Components liable to explode:		—
	Pressure release device provided; or		N/A
	Apparatus incorporates OPERATOR protection (see also 7.6)		N/A
	Pressure release device:		—
	Discharge without danger		N/A
	Cannot be obstructed		N/A
13.2.2	Batteries and battery charging		N/A
	If explosion or fire hazard could occur:		—
	Protection incorporated in the equipment; or		N/A
	Instructions specify batteries with built-in protection		N/A
	In case of wrong type of battery used:		—
	No HAZARD; or		N/A
	Warning by marking and within instructions		N/A
	Equipment with means to charge rechargeable batteries:		—
	Warning against the charging of non-rechargeable batteries; and		N/A
	Type of rechargeable battery indicated; or		N/A
	Symbol 14 used		N/A

Clause	Requirement-Test	Result-Remark	Verdict
	Battery compartment design	(See Form A.27)	N/A
	Single component failure		N/A
	Polarity reversal test		N/A
13.2.3	Implosion of cathode ray tubes		N/A
	If maximum face dimensions > 160 mm..... :		—
	Intrinsically protected and correctly mounted; or		N/A
	ENCLOSURE provides protection:		N/A
	If non-intrinsically protected:		—
	Screen not removable without TOOL		N/A
	If glass screen, not in contact with surface of tube		N/A
13.2.4	Equipment RATED for high pressure (See 11.7)		N/A

14	COMPONENTS		P
14.1	General		P
	Where safety is involved, components meet relevant requirements	(see Table list components)	P
14.2	Motors	No such motors	N/A
14.2.1	Motor temperatures		N/A
	Does not present a HAZARD when stopped or prevented from starting; or	(See Form A.20)	N/A
	Protected by overtemperature or thermal protection device conform with 14.3		N/A
14.2.2	Series excitation motors		N/A
	Connected direct to device, if overspeeding causes a HAZARD		N/A
14.3	Overtemperature protection devices		N/A
	Devices operating in a SINGLE FAULT CONDITION	(See Form A.28)	N/A
14.3a)	Reliable function is ensured	Pass muster	P
14.3b)	RATED to interrupt maximum current and voltage	Pass muster	P
14.3c)	Does not operate in NORMAL USE	Pass muster	P
14.4	Fuse holders	No such fuse	N/A
	No access to HAZARDOUS LIVE parts		N/A
14.5	Mains voltage selecting devices	Not applicable	N/A
	Accidental change not possible		N/A
14.6	HIGH INTEGRITY components	No such components	N/A
	Used in applicable positions (see Table 3)		N/A
	Conforms with IEC publications		N/A
	Single electronic device not used		N/A
14.7	Mains transformers tested outside equipment	(see Forms A.29 and A.30)	N/A

Clause	Requirement-Test	Result-Remark	Verdict
14.8	Printed circuit boards	The printed circuit boards approved	P
	Data shows conformity with FV-1 of IEC 60707 or better; or		P
	Test shows conformity with FV-1 of IEC 60707 or better; or	See Form A.17	P
	Thin film flexible PCB with limited-energy circuit used		P
14.9	Circuits or components used as transient overvoltage limiting devices		P
	After test, no sign of overload or degradation		P

15	PROTECTION BY INTERLOCKS		N/A
15.1	General		N/A
	Interlocks are designed to remove a hazard before OPERATOR exposed		N/A
15.2	Prevention of reactivation		N/A
15.3	Reliability		N/A
	Single fault unlikely to occur; or		N/A
	Cannot cause a HAZARD		N/A

16	TEST AND MEASUREMENT EQUIPMENT		P
16.1	Current measuring circuits	(see Form A.31)	N/A
16.2	Multifunction meters and similar equipment	(see Form A.32)	P
	No hazard from:		—
	rated input voltage combinations		P
	Settings of functions		P
	Settings of range controls		P

Clause	Requirement-Test	Result-Remark	Verdict
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4.4.2	TABLE: Summary of SINGLE FAULT CONDITIONS			Form A.1	-
Subclause	Title	Does not apply	Carried out	Comments	
4.4.2.1	PROTECTIVE IMPEDANCE	✓			
4.4.2.2	Protective conductor		✓	see Form A.8	
4.4.2.3	Equipment or parts for short-term or intermittent operation	✓		Continuous operation	
4.4.2.4	Motors	✓		No such motors	
4.4.2.5	Capacitors	✓		No such capacitors	
4.4.2.6	Mains transformers Attach drawing of MAINS TxS showing all protective devices (see Forms A.29 and A.30)		✓		
4.4.2.7	Outputs	✓		No outputs	
4.4.2.8	Equipment for more than one supply	✓		Only one supply	
4.4.2.9	Cooling – air holes closed – fans stopped – coolant stopped	✓		No openings No fans No coolant	
4.4.2.10	Heating devices – timer overridden – temperature controller overridden – loss of cooling liquid – overfilled or empty or both	✓		No such equipments	
4.4.2.11	Insulation between circuits and parts		✓		
4.4.2.12	Interlocks	✓		No such interlocks	
List below all SINGLE FAULT CONDITIONS not covered by 4.4.2.1 to 4.4.2.12:					
Supplementary information: (see Form A.2 for details of tests)					

4.4	TABLE: Testing in single fault condition – Results		Form A.2	P
Test subclause	Fault No.	Fault description	How was test terminated Comments	Meets 4.4.4
-	1	S-C	Test time : 10min Display digitals no damage no hazard	P
-	2			
-	3			
-	4			
	5			
-	6			
-	7			
-	8			

NOTE Td = Test duration in h:min:s
Record dielectric strength test on Form A.14 and temperature tests on Form A.20.
Record in the comments column for each test whether carried out during or after SINGLE FAULT CONDITION.

Supplementary information:

Clause	Requirement-Test	Result-Remark	Verdict
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5.1.3	TABLE: Mains supply		Form A.3	N/A
	Marked rating			—
	Phase			
	Frequency			—
Test voltage(V)		Frequency(Hz)		Comments
Note: Measurements are only required for marked ratings.				

Clause	Requirement-Test	Result-Remark	Verdict
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5.3	TABLE: Durability of markings				Form A.4	P		
Marking method (see NOTE)			Agent					
1) paint type			A Water					
2)			B Isopropyl alcohol					
3)			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)			paint type					
Mains supply (5.1.3)			paint type					
Fuses (5.1.4)			---					
terminals and operating devices (5.1.5.1)			---					
Measuring circuit terminals (5.1.5.2)			---					
Switches and circuit breakers (5.1.6)			paint type					
Double/reinforced equipment (5.1.7)			paint type					
Field wiring Terminal boxes (5.1.8)			---					
Warning marking (5.2)			---					
Battery charging (13.2.2)			---					
Method	Test agent	Remains legible	Label loose	Curled edges	Comments			
		Verdict	Verdict	Verdict				
1)	A B	P	P	P				
1)	A B	P	P	P				
1)	A B	P	P	P				
1)	A B	P	P	P				
Supplementary information:								

Clause	Requirement-Test	Result-Remark	Verdict
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6	TABLE: Protection against electric shock - Block diagram system Form A.5							P
Pollution degree :		II		Measurement category (overvoltage category) .. :				
Location or	Insulation type	Maximum working Creepage Distance (NOTE 3)				Clearance (NOTE 3)	Test voltage	Comments
description	(NOTE 1)	PWB mm	CTI	Other mm	CTI	mm	(NOTE 2) V	
Different polarity	RI	---	---	7.4	---	7.4	---	---
NOTE 1 – Type of insulation: BI = Basic Insulation DI = Double Insulation PI = Protective Impedance RI = Reinforced Insulation SI = Supplementary Insulation			NOTE 2 - Types of voltage Peak impulse test voltage (pulse) r.m.s. d.c. peak			NOTE 3 - installation categories (overvoltage categories) or pollution degrees which differ from these should be shown under "Comments".		
Supplementary Information:								

6.3.2	TABLE: Values in single fault condition											Form A.8	N/A
Item	Subclause and	Voltage			Transient (see NOTE)		Current			Capacitance			
(See Form A.6)	fault No. (see FormA.2)	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 (NOTE)	Comments	
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Clause	Requirement-Test	Result-Remark	Verdict
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6.5.1.1	TABLE: Cross-sectional area of bonding conductors			Form A.9	N/A
Conductor location		Cross-sectional area mm ²		Verdict	
6.5.1.2	TABLE: Tighting torque test				
Conductor location		Size of Screw	Tighting torque Nm	Verdict	
Supplementary information:					

Clause	Requirement-Test	Result-Remark	Verdict
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[illegible]

Clause	Requirement-Test	Result-Remark	Verdict
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6.5.3	TABLE: protective impedance	Form A.12	N/A
A high integrity single component			
Component	Location	Comments	
A combination of components			
Component	Location	Comments	
A combination of basic insulation and a current or voltage limiting device			
Component	Location	Comments	
Supplementary information:			

[illegible]

Clause	Requirement-Test	Result-Remark	Verdict
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6.8	TABLE: Dielectric strength tests					Form A.14	P
4.4.4.1 b)	Conformity after application of fault conditions1						P
6.4	Protection in normal condition						P
6.5.2	double insulation and reinforced insulation						P
6.6.1	Connections to external circuits						N/A
6.7.3.1 c)	clearance values – General: reduced clearances for homogeneous construction						N/A
6.10.2.5	Fitting of non-detachable mains supply cords1						N/A
8	Mechanical resistance to shock and impact						P
9.1 a) 2)	Eliminating or reducing the sources of ignition within the equipment						N/A
9.3 c)	Limited-energy circuit						N/A
11.2	Cleaning1						N/A
11.3	Spillage1						N/A
11.4	Overflow1						N/A
11.6	Specially protected equipment1						N/A
1 Record the fault, test or treatment applied before the dielectric strength test							
		Test site altitude.....:			m		—
		Test voltage correction factor (see Table 10)					—
Location or references from Forms A.2 and A.5		Clause or sub-clause	Humidity Yes/No	Working voltage V	Test voltage r.m.s./peak/d. cV	Comments	Verdict
Different polarity		4.4.4.1 b); 6.4; 6.5.2; 8;	Yes Except for 8	<50	Impulse voltage : 1289.6	No breakdown;	P
Supplementary information:							

Clause	Requirement-Test	Result-Remark	Verdict
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6.10.2	TABLE: Cord anchorage					Form A.15	N/A
Location		Mass kg	Pull N	Verdict	Torque Nm	Verdict	Comment
Supplementary information:							

9	TABLE: Protection against the spread of fire			Form A.16	P
Item	Source of hazard or area of the equipment considered (circuit, component, liquid etc.)	Protection Method (9a, 9b or 9c)	Protection details	Verdict	
	Single fault condition test	9a	Testing in the single fault conditions that could cause the spread of fire outside the equipment	P	
	Circuit on PCB	9c	PCB of V-0	P	
Supplementary information:					

Clause	Requirement-Test	Result-Remark	Verdict
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9.2.1	TABLE: Constructional requirements			Form A.17	N/A
14.8	Printed circuit boards				
Material tested..... :					—
Generic name..... :					—
Material manufacturer					—
Type					—
Colour					—
Conditioning details					—
		Sample 1	Sample 2	Sample 3	
Thickness of specimen	mm				
Duration of flaming after first Application	s				
Duration of flaming plus glowing After second application	s				
Specimen burns to holding clamp	Yes/No				
Cotton ignited	Yes/No				
Sample result	Pass/Fail				
Supplementary information:					

9.3	TABLE: Limited-energy circuit						Form A.18	N/A
Item	9.3 a)	9.3 b) Current and power limitation			9.3 c)	Decision		
or Location (see Form A.16)	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 separation	Yes/No	Comments	
Supplementary information:								

9.4	TABLE: Requirements for equipment containing or using flammable liquids		Form A.19	N/A
Type of liquid		9.4 Flammable liquids		Verdict
		b) quantity	c) Containment	
Supplementary information:				

Clause	Requirement-Test	Result-Remark	Verdict
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10	TABLE: temperature rise measurements		Form A.20A	P
	Voltage	DC12V		—
	Test voltage	DC12V		
	Frequency			—
	Ambient temperature	22°C		
Monitored point:		dT (K)	Permitted dT (K)	
Enclosure		5.1	80	
Button		7.2	80	
Display		8.2	80	
PCB		15.2	130	

Clause	Requirement-Test	Result-Remark	Verdict
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[illegible]

Clause	Requirement-Test	Result-Remark	Verdict
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10.5.3	TABLE: Insulating Materials			Form A.22	P
10.5.3a)	Ballpressure test				P
	Max. allowed impression diameter:		2 mm		—
Part		Test temperature °C	Impression Diameter (mm)		Verdict
enclosure		125	0.57		P
Supplementary information:					
10.5.3b)	Vicat softening test (ISO 306)				N
Part		Vicat softening temperature °C	Thickness of sample (mm)		Verdict
Supplementary information:					

8	TABLE: Mechanical resistance to shock and impact										Form A.23	P
11	Protection against hazards from fluids										P	
Voltage tests can be carried out once after performing the tests of clause 8 and clause 11. However, if voltage tests are carried out separately after each set of tests, two forms can be used.												
	Clause 8 tests				Clause 11 tests							
Location (see form A.5)	Static	Dynamic	Normal	Handheld Plug-in	Cleaning (11.2)	Spillage (11.3)	Overflow (11.4)	IEC 60529 (11.6)	Working voltage V	Test voltage V	Verdict	Comments
Top enclosure	✓	✓							<50	1120	P	
Sides of enclosure	✓	✓							<50	1120	P	
NOTE – Use r.m.s., d.c. or peak to indicate the used test voltage.												
Supplementary information:												

Clause	Requirement-Test	Result-Remark	Verdict
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11.7.2	TABLE: Leakage and rupture at high pressure					Form A.24	N/A
Part	Maximum permissible working pressure Mpa	Test pressure MPa	Leakage YES / NO	Burst YES / NO	Comments		
Supplementary information:							
11.7.3	Leakage from low-pressure parts					N/A	
Part	Test pressure Mpa	Leakage YES / NO	Comments				
Supplementary information:							

Clause	Requirement-Test	Result-Remark	Verdict
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12.2.1	TABLE: Ionizing radiation		Form A 25	N/A
Locations tested	Measured values μSv/h	Verdict	Comments	
Supplementary information:				

Clause	Requirement-Test	Result-Remark	Verdict
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12.5.1	TABLE: Sound level	Form A.26	N/A
Locations tested	Measured values dBA	Calculated maximum sound pressure level	
At operator's normal position and at bystanders' positions			
a)			
b)			
c)			
d)			
e)			
Supplementary information:			
12.5.2	Ultrasonic pressure		N/A
Locations tested	Measured values		Comments
	dB	kHz	
At operator's normal position			
At 1 m from the enclosure			
a)			
b)			
c)			
d)			
e)			
NOTE – No limit is specified at present, but a limit of 110 dB above the reference pressure value of 20 μ Pa is under consideration for applicable frequencies between 20 kHz and 100 kHz.			
Supplementary information:			

Clause	Requirement-Test	Result-Remark	Verdict
4.4.2.6	TABLE: Mains transformer	Form A.29	N/A
4.4.2.6.1	Short circuit		
14.7.1	Mains transformers tested outside equipment		
Type			—
Manufacturer			—
Test in equipment			
Test on bench			
Test repeated inside equipment (see 14.7)			
Optional – Insulation class (IEC 60085) of the lowest rated winding			—
Winding identification			
Type of Protector for winding (Note 1)			
Elapsed time			
Current, A	primary		
	secondary		
Winding temperature, °C primary			
(see Note 2)	secondary		
Tissue paper / cheesecloth OK ? (Pass / Fail)			
Voltage tests (see Note 3)			
primary to secondary	_____ V _____		
primary to core	_____ V _____		
secondary to secondary	_____ V _____		
secondary to core	_____ V _____		
Verdict			
Note 1:	Primary fuse	- PF / () A	
	Secondary fuse	- SF / () A	
	Overtemperature protection	- OP / () °C	
	Impedance protection	- Z	
Note 2:	Indicate method of measurement	TC = with thermocouple R = resistance method	
	If resistance method is used, record resistance in cold and warm condition in Form A.20B!		
Note 3:	Record the voltage applied and the type of voltage (r.m.s. / d.c. / peak) and for results use NB = no breakdown or B = breakdown		
Supplementary information:			

Clause	Requirement-Test	Result-Remark	Verdict
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4.4.2.6	TABLE: Mains transformer	Form A.30	N/A
14.7.2	Overload tests (for mains transformers)		
Type			—
Manufacturer			—
Test in equipment			
Test on bench			
Test repeated inside equipment (see 14.7)			
Optional – Insulation class (IEC 60085) of the lowest rated winding			—
Winding identification			
Type of Protector for winding (Note 1)			
Elapsed time			
Current, A	primary		
	secondary		
Winding temperature, °C primary			
(see Note 2)	secondary		
Tissue paper / cheesecloth OK ? (Pass / Fail)			
Voltage tests (see Note 3)			
primary to secondary	_____ V _____		
primary to core	_____ V _____		
secondary to secondary	_____ V _____		
secondary to core	_____ V _____		
Verdict			
Note 1:	Primary fuse	- PF / () A	
	Secondary fuse	- SF / () A	
	Overtemperature protection	- OP / () °C	
	Impedance protection	- Z	
Note 2:	Indicate method of measurement	TC = with thermocouple R = resistance method	
	If resistance method is used, record resistance in cold and warm condition in Form A.20B!		
Note 3:	Record the voltage applied and the type of voltage (r.m.s. / d.c. / peak) and for results use NB = no breakdown or B = breakdown		
Supplementary information:			

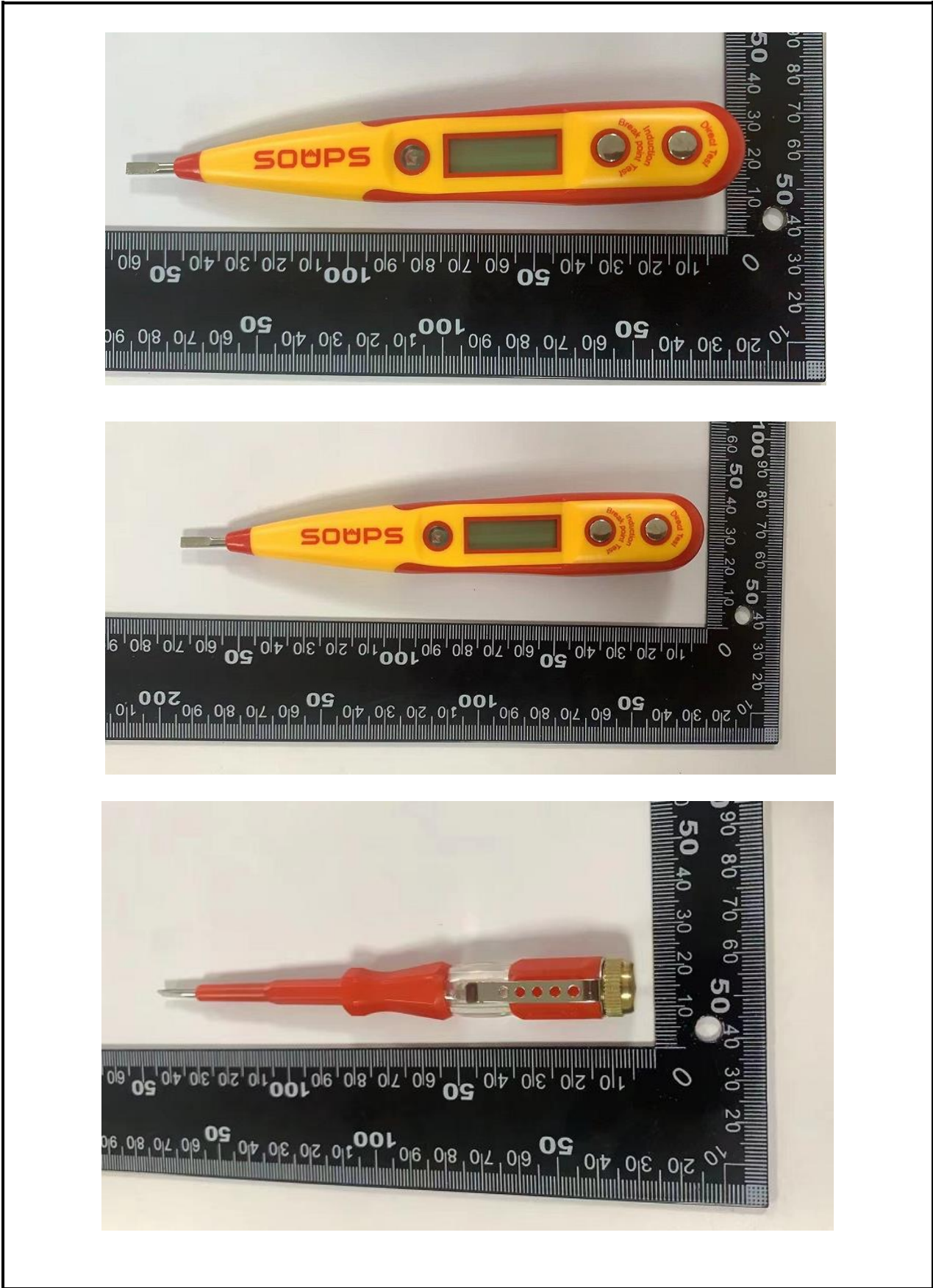
Clause	Requirement-Test	Result-Remark	Verdict
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16.1	TABLE: Current measuring circuits	Form A.31	N/A		
These tests are performed with all types and models of current transformers without internal protection, and which are specified by the manufacturer for use with the equipment					
a) Current transformers					
Type/Model	rated current A	Test current A	Interrupt Yes / No	Verdict	Comments
Supplementary information:					
b) Range changing switches					
Type / Model	Maximum rated current of switch A	Cycling test Verdict	Comments		
Supplementary information:					

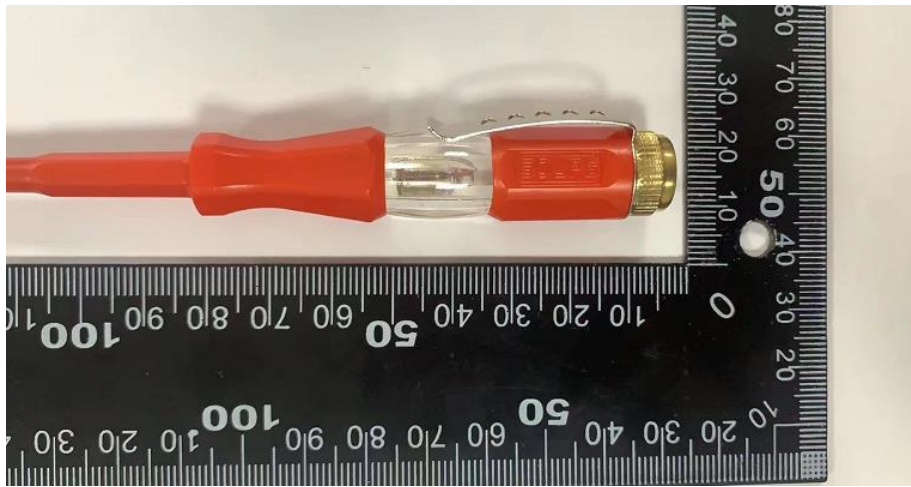
Clause	Requirement-Test	Result-Remark	Verdict
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16.2	TABLE: Multifunctional meters and similar equipment		Form A. 32	N/A
	Operating conditions.....:			—
	Maximum rated voltage (V)			—
	Measurement category			—
	Test source limit (KVA).....:			—
Position of test probe		Setting of function	Input voltage	Verdict
Supplementary information:				

Photos of the sample



Photos of the sample



Photos of the sample



LIST OF INSTRUMENTS

NO	Equipment name	Type	Serial NO	period of validity
1	Digital AC Power Source	6200 series	Angui-004	2022.11.15
2	Radiation Tester	440RF/D	Angui-006	2022.12.9
3	Line Leakage Tester	7620	Angui-008	2022.11.14
4	Electrical Safety Compliance analyzer	7452	Angui-011	2022.11.14
5	Safely-testing instrument	ST-1001	Angui-012	2022.11.22
6	Digital display caliper	0.01mm	Angui-014	2022.11.23
7	Dual display LCR instrument	ELC-131D	Angui-161	2022.11.22
8	Impact testing hammer	ST-1002	Angui-017	2022.11.29
9	Surge-insulation tester	NF2675	Angui-019	2022.9.19
10	Lecroy Storage Oscilloscope	9304A	Angui-020	2022.11.7
11	Trillion-Ohm Instrument	ZC25B-3	Angui-022	2022.11.15
12	Digital temperature tester	DR030	Angui-024	2022.11.7
13	Program control combustion Instrument	CS-1	Angui-032	2022.11.29
14	Torque driver	RTD60CN	Angui-036	2022.11.23
15	Digital micrometer		Angui-013	2022.11.14
16	Pushing Tube-shaped ergometer	KL-10	Angui-038	2022.11.14
17	Noncontact thermometer	ST60	Angui-156	2022.11.14
18	Dynamometer	KL-2	Angui-040	2022.11.23
19	Dynamometer	TK-30	Angui-044	2022.11.23

LIST OF INSTRUMENTS

20	Alternating Moisture testing instrument	SDJ020	Angui-050	2022.11.23
21	Measuring instrument for temperature raise of live windings	RC-3	Angui-150	2022.11.23
22	Audio analyzer	VP-7720A	YPL03-01	2022.11.14
23	FM/AM signal generator	VP-8179B10	YXH01-01	2022.11.14
24	FM/AM signal generator	VP-8179B10	YXH01-02	2022.11.14
25	Frequency counter	500A	YPL-05-01	2022.11.23
26	Multiplex srereo modulator	VP-7633A	YQT23-01	2022.11.23
27	WOW flutter meter	MK-668E	YDBW03-01	2022.11.23

Notice

- 1. This Test Report shall be invalid without the stamp of the testing laboratory.**
- 2. Any copy of this Report shall be invalid without the seal of the testing laboratory.**
- 3. This Report shall be invalid without Tester, Reviewer and Approver signature.**
- 4. Any alteration of this Report shall invalidate the entire Report.**
- 5. Client shall put forward any objections to the contents of this Report within 15 (fifteen) days of receipt. Thereafter the Report contents and conclusions remain accepted and agreed and no further changes will be considered.**
- 6. The test results presented in this report relate only to the object tested.**

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