







# TEST REPORT IEC 61010-1

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

Report Number.....: PTC23070310003S-IE01

Date of issue....: 2023-07-20

Total number of pages .....: 77

Name of Testing Laboratory Precise Testing & Certification (Guangdong) Co., Ltd.

preparing the Report .....: Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan,

Guangdong, China

Applicant's name ...... Infitek Co., Ltd.

Address ......: RM.2014, BLDG.3, LIGAOGUOJIHUAYUAN, NO.1222, WEST

AOTI ROAD, LIXIA DISTRICT, JINAN, SHANDONG

Test specification:

Standard .....: IEC 61010-1:2010, IEC 61010-1:2010/AMD1:2016

Test procedure .....: PTC
Non-standard test method .....: N/A

TRF template used.....: IECEE OD-2020-F1:2020, Ed.1.3

Test Report Form No. .....: IEC61010\_1P

Test Report Form(s) Originator ....: VDE Prüf- und Zertifizierungsinstitut GmbH

Master TRF .....: 2021-04-12

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

#### General disclaimer:

The test results presented in this report relate only to the object tested.

Projects marked with "\( \sigma\)" in the report have not been qualified or recognized, and are only used for research, teaching or internal quality control.





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Test item description	: Refrige	erator	X0 X0	XO XO X	0 10
Trade Mark(s)	: INFITE	≣K			
Manufacturer	: Infitek	Co., Ltd.			
	20 7	14, BLDG.3, LIGAOG		20 20 2	EST
6, 6, 6, 6, 6, 6,		ROAD, LIXIA DISTRIC		NDONG	
		15 (other models see			
Ratings	: Input:	AC 220V, 50Hz, 294V	V, 1.3A	× × ×	
Responsible Testing Laboratory (as	applical	ole), testing procedu	re and testing	location(s):	.G ~G
	Ý Ý	Precise Testing & Ce	ertification (Guar	ngdong) Co., L	td.
Testing location/ address	<u> </u>	Building 1, No. 6, To Dongguan, Guangdo		ocheng Stree	to & c
Tested by (name, function, signature	'e):	Ringo Chen Project Engineer	Plays	PTG	
Approved by (name, function, signa	ature) :	Alan Ao Reviewer	ANTINO.		
☐ Testing procedure: CTF Stage	1:,0	G 2G 2G 2C	144	*	6 26
Testing location/ address		रे रे रे	8 8	री री र	Q
Tested by (name, function, signatur	'e):	0 40 40 40	10 NO	0 00 0	0 40
Approved by (name, function, signa	ature):	0 0 0 0	0 0	,	, O , O
☐ Testing procedure: CTF Stage	2:	0 0 0 0		-0 -0	.CiCi
Testing location/ address		\$ \$ \$ \$	8, 8,	\$ \$ \$	2
Tested by (name, function, signatur	'e):	6 40 40 40	1 KO KO	X0 X0 X	6 40
Witnessed by (name, function, sign	ature).:	c	- X	× × ×	c
Approved by (name, function, signa	ature):	5 40 40 40			600
☐ Testing procedure: CTF Stage	3:	·	Q	6, 6, 6	. 4.
☐ Testing procedure: CTF Stage	4: 0	0 00 00 00	, 40 x0	40 40 A	0 0
Testing location/ address:		6, 6, 6,	0 0	5, 6, 6	, 6,
Tested by (name, function, signature):		- 40 40 40	1000	<del>\(\frac{1}{2}\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</del>	600
Witnessed by (name, function, signature) . :		0 20 20 20	20 20	20 20 a	0 ,0
Testing location/ address  Tested by (name, function, signature)  Witnessed by (name, function, signature)  Approved by (name, function, signature)  Testing procedure: CTF Stage 3:  Testing procedure: CTF Stage 4:  Testing location/ address  Tested by (name, function, signature)		4 4 4	5, 6,	6, 6, 6	4
Supervised by (name, function, sign	nature) :	6 26 26 36	10 NO	10 10 8	0 10
			1		



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List of Attachments (including a total number o	f pages in each attachment):
ATTACHMENT 1: Photo Documentation (6 page	es).
Summary of testing:	to to to to to to to to
Tests performed (name of test and test clause):	Testing location:
Based on general product information, full tests were carried out on model PR5-315.	Precise Testing & Certification (Guangdong) Co., Ltd. Building 1, No. 6, Tongxin Road, Dongcheng Street,
The submitted samples fulfilled the requirements of specified standards.	Dongguan, Guangdong, China
	to to to to to to to to
Summary of compliance with National Difference N/A  The product fulfils the requirements of	
Statement concerning the uncertainty of the me	× × × × × × × ×
(may be required by the product standard or client)	X OX OX OX OX OX OX
☐ Internal procedure used for type testing thro uncertainty has been established:	ough which traceability of the measuring
Procedure number, issue date and title:	
Calculations leading to the reported values are on the testing.	file with the NCB and testing laboratory that conducted
☐ Statement not required by the standard used	d for type testing
	ning the uncertainty of the measurement systems used for tests, this hould be delete in both cases after selecting the applicable option)

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Cop	y of m	arking	plate: The below markin	ng is only for r	representative.
		Ý Ý	Infitek <sup>2</sup>	2-8°C R	efrigerator R5-315
		ć ć	Add.: Rm. 2014, Bldg. 3, Ligao guoj ihuayuan, No. 1222, W est Aoti Road, Lixia Disti	Voltage: Production	AC 220V/50Hz 294W /1.3A Date: 2023/07
		é <sup>r</sup>	Jinan, Shandong Made In China	Serial No.:	
		ó'	Tel: +86-531-88982330 Fax: +86-531-88983691 W eb: https://infitek.com		<u>₹</u> (€

#### Remark:

- 1. As declared by the applicant, the importer (and manufacturer, if it is different)'s name, registered trade name or registered trademark and the postal address will be marked on the products before being place on the market. The contact details shall be in a language easily understood by end-users and market surveillance authorities.
- 2. Marking on the packaging or in a document accompanying the electrical equipment is only acceptable if it is not possible to place such markings on the product.
- 3. Height of "CE" symbol shall be at least 5mm.
- 4. Labels of other models are identical with Label of model PR5-315 except for model name.



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Test item particulars:	0
Type of item	Refrigerator
Description of equipment function:	See general product information for detail.
Connection to MAINS supply	Power cord with pulg
Overvoltage category	
POLLUTION DEGREE	20 10 10 10 10 10 10 10
Means of protection	Class I
Environmental conditions	Normal
For use in wet locations	No 20 20 20 20 20 20 20 20
Equipment mobility:	Movable
Operating conditions	Continuous
Overall size of equipment (W x D x H)	1220mm*650mm*1885mm
Mass of equipment (kg)	See manual
Marked degree of protection to IEC 60529	IPX0 CO CO CO CO CO CO
Possible test case verdicts:	4. 4. 4. 4. 4. 4. 4. 4. 4.
- Test case does not apply to the test object:	N/A (Not Applicable)
- Test object does meet the requirement:	P (Pass)
- Test object does not meet the requirement:	F (Fail)
Testing:	to to to to to to to to
Date of receipt of test item:	2023-07-03
Date (s) of performance of tests:	2023-07-03 to 2023-07-10
General remarks:	AC AC AC AC AC AC AC AC
The test results presented in this report relate only to the This report shall not be reproduced, except in full, without "(see ENCLOSURE #)" refers to additional information ap "(see Form A.xx)" refers to a Table appended to the report of the test of the report of the test of the	out the written approval of the issuing testing laboratory. pended to the report. ort. otional if used as record.
Manufacturer's Declaration per sub-clause 4.2.5 of IE	ECEE 02:
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided	☐ Yes ☑ Not applicable
When differences exist; they shall be identified in the	e general product information section.
Name and address of factory (ies):	Infitek Co., Ltd. RM.2014, BLDG.3, LIGAOGUOJIHUAYUAN, NO.1222, WEST AOTI ROAD, LIXIA DISTRICT, JINAN, SHANDONG



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General product information and other remarks:

- 1. This Refrigerator is used to for indoor use.
- 2. Input: AC 220V, 50Hz, 294W, 1.3A

### Description of model differences:

#### 1.Model list:

PR5-315, CLR-2, CLR-8, CLR-1.5, CLR-54, CLR-5, CLR-30, CLR-12, CLR-10, CLR-6, CLR-18, CLR-45, CLR-65, BR4-110, BR4-210, BR4-370, BR4-1000, CRF10-S97, MCFR-1000, MCFR-2000, MCFR-3000E, MCFR-3000, MCFR-4000, MCFR-6000, CRF25-300, CRF25-370, CRF40-370, CR-20, CR-25, CR-30-X, CR-35-F, CR-40-X, CR-30, CR-45-F, CR-50-X, CR-55-F, CR-40, CR-50, CR-75, CR-15-B, CR-20-B, MFR25-30, MFR25-80, MR4-700, CLR-2, CLR-8, CLR-1.5, CLR-54, CLR-5, CLR-30, CLR-12, CLR-10, CLR-6, CLR-18, CLR-45, CLR-65, PR5-60, PR5-100F, PR5-100, PR5-250, PR5-320, PR5-310, PR5-420, PR5-415, PR5-1000, PR5-1500, PR5-660, LF25-H110, LF25-100, LF40-H110, LF25-280W, LF25-H310, LF25-270E, LF25-H490, LF40-280E, LF25-330E, LF40-270E, LF40-H310, LF40-330E, LF60-H110, LF40-H490, LF25-360, LF25-530, ULF86-60E, LF60-H490, LF40-360, LF40-530, LF45-408, ULF86-H110, ULF86-190E, ULF86-340E, ULF86-340E, ULF86-410E, ULF86-H490, ULF86-590E, ULF86-410, LF25-940, ULF86-590P, ULF86-730E, LF40-940, ULF86-410P, ULF86-840E, ULF86-590P, ULF86-730, ULF86-840P, ULF8

Models PR5-315 and other models are identical except for model name and colors. These models have the same construction, circuits designed and electrical components.

## Description of special features:

(HV circuits, high pressure systems etc.)

N/A

Summary of testing:			
Clause	Comment		
5 Language of safety markings/instructions	Instructions and equipment marking related to safety is applied and checked in English, the instruction and marking should be checked again when marketed in the countries using other language.		

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Clause	Requirement + Test	Result - Remark	Verdict
4	TESTS	0 40 40 40 40	O PC
4.4	Testing in single fault conditions	X X X X	Р
4.4.1	Fault tests	(see Form A.1)	₹ P
4.4.2	Application of single fault conditions	0 20 20 20 0	√G P∠G
4.4.2.1	single fault conditions not covered by 4.4.2.2 to 4.4.2.14	(see Form A.1)	<u> </u>
4.4.2.2	Protective impedance	yo yo yo yo	Р
4.4.2.3	Protective conductor	0 20 20 20 20	o P.o
4.4.2.4	Equipment or parts for short-term or intermittent operation		N/A
4.4.2.5	Motors	4. 6. 6. 6.	- P
500 5	- stopped while fully energized	you do the the	SO BO
20 2	- prevented from starting	0 0 0 0	o Po
6, 6,	– one phase interrupted (multi-phase)	6, 6, 6, 6,	P
4.4.2.6	Capacitors	1 KO KO KO KO	O PO
4.4.2.7	Mains transformers		P
4.4.2.7.2	Short circuit	10 10 10 10 10	₹ P
4.4.2.7.3	Overload	0x 0x 0x 0	o Pao
4.4.2.8	Outputs	4 4 4 4	Р
4.4.2.9	Equipment for more than one supply	1 20 20 20 20	N/A
4.4.2.10	Cooling	0 20 20 20 20	Р
6, 6	– air holes closed	6, 6, 6, 6,	P
50 5	- fans stopped	you to to to	NO BO
.0	- coolant stopped		P
6 6	– loss of cooling liquid	4 4 4 4	P
4.4.2.11	Heating devices	0 20 02 02	N/A
× ×	- timer overridden	X X X X	N/A
1 1	- temperature controller overridden	Service Service Service	N/A
4.4.2.12	Insulation between circuits and parts	0 20 20 20 0	G Pag
4.4.2.13	Interlocks	8, 8, 8, 8,	N/A
4.4.2.14	Voltage selectors	, the the the	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.18)	P
5° 5		o ko ko ko ko	NO NO
5	MARKING AND DOCUMENTATION		Р
5.1.1	Required equipment markings	The second second	⟨î —
χO χ	- visible from the exterior; or	0x 0x 0x 0x 0	o Po
6. 6	- visible after removing cover or opening door	4. 4. 4. 4.	N/A
500 5	visible after removal from a rack or panel	, the the the the	N/A

Not put on parts which can be removed by an operator

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Clause	Requirement + Test	Result - Remark	Verdic
6, 6,	1 4, 4, 4, 4, 4, 4, 4, 4,	6, 6, 6,	Q 1
5° 5	Letter symbols (IEC 60027) used	See marking label	6 PS
.0	Graphic symbols (IEC 61010-1: Table 1) used	See marking label	P
5.1.2	Identification	4, 4, 4, 4,	P
XC X	Equipment is identified by:	0 40 40 40	<u> </u>
× ×	a) Manufacturer's or supplier's name or trademark	See marking label	Р
10 1	b) Model number, name or other means	See marking label	P
20 Z	Manufacturing location identified	See marking label	O P
5.1.3	Mains supply	6, 6, 6, 6,	P
50 5	Equipment is marked as follows:	, to to to	<i>6</i> –
	a) Nature of supply:		_
₹` ₹`	a.c. rated mains frequency or range of frequencies:	See marking label	<   -
6, 6,	2) d.c. with symbol 1:	6, 6, 6, 6,	< −
10 X	b) rated supply voltage(s) or range:	See marking label	<i>i</i> –
× ×	c) Max. rated power (W or VA) or input current :	See marking label	_
€ €	The marked value not less than 90 % of the maximum value	\$ \$ \$ \$ \$	P
8 8	If more than one voltage range:	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	< −
X 0 X	Separate values marked; or	0 00 00 00	N/A
4 4	Values differ by less than 20 %	X X X X	N/A
10 1	d) operator-set for different rated supply voltages:	100000000000000000000000000000000000000	< −
20 Z	Indicates the equipment set voltage	0, 0, 0, 0, 0	N/A
40 V	Portable equipment indication is visible from the exterior	2 YO YO YO YO	N/A
4 4	Changing the setting changes the indication	4 4 4 4	N/A
10 1	e) Accessory mains socket-outlets accepting standard mains plugs are marked:	40 40 40 40	< −
€ €	With the voltage if it is different from the mains supply voltage:	40 40 40 40	é –
10 1	For use only with specific equipment	Section Section	N/A
of of	If not marked for specific equipment it is marked with:	to to to to	< −
20 X	The maximum rated current or power; or	0 0 0 0 0	N/A
4. 4	Symbol 14 with full details in the documentation	4. 4. 4. 4.	N/A
5.1.4	Fuses	See the the the	é° R
élo é	Operator replaceable fuse marking (see also 5.4.5)	1 10 10 10 10	é –
5.1.5	Terminals, connections and operating devices	5 20 20 20 20	o P
5.1.5.1	General	5 5 5 5	₹ _
éro ér	Where necessary for safety, indication of purpose of terminals, connectors, controls and indicators marked	, 40 40 40 40	₹ P

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Clause	Requirement + Test	Result - Remark	Verdict
4. 4		6. 6. 6. 6.	4 4
60 6	If insufficient space, symbol 14 used	o do do do do	N/A
50 S	Push-buttons and actuators of emergency stop devices and indicators:		<u> </u>
	used only to indicate a warning of danger; or	0 0 0 0 0	N/A
é é	- the need for urgent action	4, 4, 4, 4,	N/A
X0 X	- coloured red	0 40 40 40	N/A
4 4	- coded as specified in IEC 60073	4 4 4 4	N/A
€ €	Supplementary means of coding provided, if meaning of colour relates (see IEC 60073):	1 40 40 40 40	< −
é é	- to safety of persons; or	Secretary Secretary	N/A
χO χ	- safety of the environment	0 00 00 00	N/A
5.1.5.2	Terminals	6.6.6.6.	× _
50 5	Mains supply terminal identified	1 20 20 20 20	S PS
.Ci	Other terminal marking:	0 0 0 0 0	_
6 6	a) functional earth terminals (symbol 5 used)	5, 5, 5, 5,	N/A
A0 A	b) protective conductor terminals:	0 40 40 40	<i>^</i> -
~ ~	Symbol 6 is placed close to or on the terminal; or	X X X X	N/A
é é	Part of appliance inlet	1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	P
χG χ	c) terminals of control circuits (symbol 7 used)	0 00 00 00 0	N/A
6. 6	d) Hazardous live terminals supplied from the interior	6. 6. 6. 6.	N/A
40 E	Standard mains socket outlet; or	o the the the the	N/A
20	Ratings marked; or	0 70 70 70 70	N/A
6, 6	Symbol 14 used	6. 6. 6. 6.	N/A
5.1.6	Switches and circuit breakers	o ko ko ko ko	SO BO
· .	If disconnecting device, off position clearly marked		Р
Q Q	If push-button used as power supply switch:	1 1 1 1 1 1 1 1	€ _
XO X	– symbol 9 and 15 used for on-position	0 00 00 00 0	N/A
4. 4	– symbol 10 and 16 used for off-position	4 4 4 4	N/A
6 6	– pair of symbols 9, 15 and 10, 16 close together	1 10 10 10 10 10	N/A
5.1.7	Equipment protected by double insulation or reinforced insulation	to the the the	o Po
χG χ	Protected throughout (symbol 11 used)	0 20 20 20 0	O PAO
4. 6	Only partially protected (symbol 11 not used)	4 4 4 4	Р
5.1.8	Field-wiring terminal boxes	ye do de de	6 B
20 2	If terminal or enclosure exceeds 60 °C:	(see Form A.26A)	_
6. 6	Cable temperature rating marked:	8 8 8 8	₹ _
éro é	Marking visible before and during connection or beside terminal	, 40, 40, 40, 40	N/A
5.2	Warning markings	y the the the	SO BO

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Clause	Requirement + Test	Result - Remark	Verdict
érc é	Visible when ready for normal use	On the surface of the appliance	S S
NO 8	Are near or on applicable parts	o do do do do	SO BO
- C-	Symbols and text correct dimensions and colour:		_
₹\ ₹	a) symbols min 2,75 mm and text 1,5 mm high and contrasting in colour with background	8, 8, 8, 8,	N/A
₹) ₹	b) symbols and text moulded, stamped or engraved in material min. 2,0 mm high and		N/A
6, 6	0,5 mm depth or raised if not contrasting in colour	6, 6, 6, 6,	N/A
60 6	If necessary marked with symbol 14	o do do do do	N/A
1º 1	Statement to isolate or disconnect if access by using a tool to hazardous live parts is permitted		N/A
5.3	Durability of markings	0 0 0 0 0	Р
₹\ ₹	The required markings remain clear and legible in normal use	(see Form A.3)	Р
5.4	Documentation	See the user manual	P
5.4.1	General	0 40 40 40 40	O PO
5° 5	Equipment is accompanied by documentation for safety purposes for operator or responsible body		P
50 8	Safety documentation for service personnel authorized by the manufacturer	0 %0 %0 %0 %0	Р
60 6	Documentation necessary for safe operation is provided in printed media or	o to to to to	P
-0	in electronic media if available at any time	0 0 0 0 0	N/A
6 6	Documentation includes:	4 6 6 6	Ý _
XG X	a) intended use	0 40 40 40 40	AO PAO
4	b) technical specification		Р
é é	c) name and address of manufacturer or supplier	ALL SEC SEC SEC	€ E
χG ,	d) information specified in 5.4.2 to 5.4.6	0 00 00 00 0	χο Pχο
X0 X	e) information to mitigate residual RISK (see also subclause 17)		P
XC X	f) accessories for safe operation of the equipment specified		P
₹° ₹	g) guidance provided to check correct function of the equipment, if incorrect reading may cause a HAZARD from harmful or corrosive substances of HAZARDOUS live parts		P
8 8	h) instructions for lifting and carrying	\$ \$ \$ \$ \$ \$	Р
é é	Warning statements and a clear explanation of warning symbols:	40 40 40 40	∢ −
50 S	- provided in the documentation; or	o to to to to	SO BO
· C.	- information is marked on the equipment		Р
5.4.2	Equipment ratings	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Р

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Clause	Requirement + Test	Result - Remark	Verdict	
XO .	Documentation includes:	0 00 00 00	<u> </u>	
Q . Q	a) Supply voltage or voltage range:	0 0 0	_	
Q Q	Frequency or frequency range:	1 10 10 10 10 10		
χG χ	Power or current rating:	0 00 00 00 0	_	
X0 X	b) Description of all input and output connections in accordance to 6.6.1 a)	) YO YO YO YO	N/A	
YO Y	c) rating of insulation of external circuits in accordance to 6.6.1 b)		N/A	
50 6	d) Statement of the range of environmental conditions (see 1.4)	1 40 40 40 40	N/A	
× . ×	e) Degree of protection (IEC 60529)	IPX0 only	N/A	
é é	f) If impact rating less than 5 J:	Secondary Secondary	₹ <u> </u>	
20 2	IK code in accordance to IEC 62262 marked; or	0 00 00 00 0	N/A	
4 4	symbol 14 of table 1 marked, with	4. 4. 4. 4.	N/A	
2 d	rated energy level and test method stated	Sec Sec Sec Sec.	N/A	
5.4.3	Equipment installation	0 20 20 20 20	G Pac	
6, 6	Documentation includes instructions for:	6, 6, 6, 6,	₹	
50 5	a) assembly, location and mounting requirements	20 40 40 40	SO BO	
-6	b) protective earthing		N/A	
Q Q	c) connections to supply	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N/A	
20 2	d) permanently connected equipment:	0 00 00 00 0	<u> </u>	
4 4	Supply wiring requirements	4 4 4 4	N/A	
é é	If external switch or circuit-breaker, requirements and location recommendation	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N/A	
é é	e) ventilation requirements	Sign of the sign sign	N/A	
χO ,	f) special services (e. g. air, cooling liquid)	0 20 20 20 0	N/A	
4 4	g) instructions relating to sound level	4.4.6.6.	N/A	
5.4.4	Equipment operation	y to to to to	S BC	
JG .	Instructions for use include:	0 0 0 0 0	_	
6 6	a) identification and description of operating controls	5, 5, 5, 5,	Q P	
50 S	b) positioning for disconnection	o se se se se	SO BO	
-	c) instructions for interconnection	C. C. C. C. C.	N/A	
é é	d) specification of intermittent operation limits	Se Se Se Se	₹ P	
XO 2	e) explanation of symbols used	0 X0 X0 X0 X0	O P	
6. 6	f) replacement of consumable materials	4. 6. 6. 6.	N/A	
é 6	g) cleaning and decontamination	1 40 40 40 40	€ B	
of of	h) listing of any poisonous or injurious gases and quantities	ate to te to	N/A	
6° 6	i) risk reduction procedures relating to flammable liquids (see 9.5)	TO SO SO SO	N/A	

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Clause	Requirement + Test	Result - Remark	Verdict
Clause	Requirement + Test	Result - Remark	verdici
érc é	j) risk reduction procedures relating burn from surfaces permitted to exceed limits of 10.1	, de de de de	N/A
éic é	Additional precautions for IEC 60950 conforming equipment in regard to moistures and liquids	, 40 40 40 40	N/A
é é	A statement about protection impairment if used in a manner not specified by the manufacturer	1 40 40 40 40	P
5.4.5	Equipment maintenance and Service	you do do do	SO BY
20	Instructions for responsible body include:	0 0 0 0 0	_
₹° ₹	Instructions sufficient in detail permitting safe maintenance and inspection and continued safety:	0 YO YO YO YO	٧ _
ζC	Instruction against the use of detachable mains supply cord with inadequate rating		N/A
6, 6	Specific battery type of user replaceable batteries	6, 6, 6, 6,	N/A
50 6	Any manufacturer specified parts	, to to to to	SO BO
C	Rating and characteristics of fuses	0 0 0 0	o P
⟨\ ⟨\ ⟨\ ⟨\ ⟨\ ⟨\ ⟨\ ⟨\ ⟨\ ⟨\ ⟨\ ⟨\ ⟨\ ⟨	Instructions include following subjects permitting safe servicing and continued safety:	6, 6, 6, 6,	Ý –
6, 6	a) product specific risks may affect service personnel	6, 6, 6, 6,	N/A
X6 8	b) protective measures for these risks	0 40 40 40 40	N/A
-	c) verification of the safe state after repair		N/A
5.4.6	Integration into systems or effects resulting from special conditions		Р
Q Q	Aspects described in documentation	6 6 6 6	P
X0 X		0 40 40 40 6	X0 X0
6	PROTECTION AGAINST ELECTRIC SHOCK	X X X X	Р
6.1	General	1 40 40 40 40	P
6.1.1	Requirements	0 20 20 20 0	χο P <sub>χ</sub> ο
₹° ₹	Protection against electric shock maintained in normal condition and single fault condition	) XO XO XO XO	P
4 4	accessible parts not hazardous live	6. 6. 6. 6.	Р
of o	Voltage, current, charge or energy below the limits in normal condition and in single fault condition between:	1 40 40 40 40	é –
é é	accessible parts and earth	1 1/2 1/2 1/2 1/2 1/2	₹ P
é é	two accessible parts on same piece of the equipment within a distance of 1,8 m	o to to to	o Po
é <sup>lo</sup> é	Conformity is checked by the determination of 6.2 and 6.3 followed by the tests of 6.4 to 6.11	to to to to	o P.c
6.1.2	Exceptions	0 0 0 0 0	o Po
ζ° ς	Following hazardous live parts may be accessible to an operator:	2 4 4 4 4	× =
4. 4	a) parts of lamps and lamp sockets after lamp removal	4 4 4 4	N/A
र्श र	b) parts to be replaced by operator only by the use of tool and warning marking	No such parts	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6, 6	16, 6, 6, 6, 6, 6, 6, 6, 8	3, 6, 6, 6,	6 6,
éro é	Those parts not hazardous live 10 s after interruption of supply	a to to to t	C & C PC
र्रे र	Capacitance test if charge is received from internal capacitor	4° 4° 4° 4°	o Ko Bo
6.2	Determination of accessible parts	to the the the	O YO BK
6.2.1	General	0 20 20 20 2	o o Po
₹) ₹	Unless obviously determination of accessible parts as specified in 6.2.2 to 6.2.4		P P
6.2.2	Examination	6, 6, 6, 6,	P P
60 á	– with jointed test finger (as specified B.2)	0 40 40 40 4	0 0 PC
50 6	<ul> <li>with rigid test finger (as specified B.1) and a force of 10 N</li> </ul>		P
6.2.3	Openings above parts that are hazardous live	No opening	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	6, 6, 6, 6,	P
é é	test pin with length of 100 mm and 3 mm in diameter applied	4° 4° 4° 4°	C SC BYC
6.3	Limit values for accessible parts	0 00 00 00	O AO PC
6.3.1	Levels in normal condition	X X X X	
₹° ₹	a) Voltage limits less than 33 V r.m.s. and 46,7 V peak or 70 V d.c.		P
\$ \$	for wet locations voltage limits less than 16 V r.m.s. and 22,6 V peak or 35 V d.c.		P
6 6	Voltages are not hazardous live the levels of:	6, 6, 6, 6,	· (v)
€° €	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		
20	for wet locations measuring circuit A.4 used	0 20 20 20 2	o o Po
₹° ₹	70 mA r.m.s. when measured with circuit A.3 for higher frequencies	0 YO YO YO Y	O ZO ZO
6. 6	or	6, 6, 6, 6	· · · · · · ·
50 6	c) Levels of capacitive charge or energy less:	to the the the	· 6 -
60 6	1) 45 μC for voltages up to 15 kV peak or d.c. or line A of Figure 3	o do do do d	N/A
6° 6	350 mJ stored energy for voltages above     15 kV peak or d.c.	o to to to t	N/A
6.3.2	Levels in single fault condition	0 20 20 20 2	Р
₹` ₹	a) Voltage limits less than 55 V r.m.s. and 78 V peak or 140 V d.c.	0 20 20 20 2	6 6 6
XO >	for wet locations voltage limits less than 33 V r.m.s. and 46,7 V peak or 70 V d.c.	0 ×0 ×0 ×0 ×	O ZO ZO
6, 6	Voltages are not hazardous live the levels of:	6, 6, 6, 6,	8

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Clause	Requirement + Test	Result - Remark	Verdict
₹° ₹	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		
χC _	for wet locations measuring circuit A.4 used	0 0 0 0 0	G PO
X X	500 mA r.m.s. when measured with circuit A.3 for higher frequencies		P
× ×	or	X X X X	_
€ €	c) Levels of capacitive charge or energy less line B of Figure 3	1 40 40 40 40	N/A
6.4	Primary means of protection	Section Section Section	€ P
6.4.1	Accessible parts prevented from being hazardous live by one or more of following means:	to to to to	< −
χO λ	a) enclosures or protective barriers (see 6.4.2)	0 20 20 20 0	χο Pχο
6. 6	b) basic insulation (see 6.4.3)	6, 6, 6, 6,	P
500 5	c) Impedance (see 6.4.4)	, the the the the	S BC
6.4.2	enclosures or protective barriers	0 0 0 0 0	_
6 6	- meet rigidity requirements of 8.1	6, 6, 6, 6,	Q P
érc é	meet requirements for basic insulation, if protection is provided by insulation	40 40 40 40	& BC
of of	- meet requirements of 6.7 for creepage and - clearances between accessible parts and - hazardous live parts, if protection is provided by - limited access	, 40, 40, 40, 40 , 40, 40, 40, 40	40 KG
6.4.3	Basic insulation	0 20 20 20 0	_
<del>₹</del> ₹	- meet clearance, creepage distance and solid - insulation requirements of 6.7	7	Р
6.4.4	Impedance	6, 6, 6, 6,	< <u>-</u>
do d	Impedance used as primary means of protection meets all of following requirements:	1 40 40 40 40	< −
6° 6	a) limits current or voltage to level of 6.3.2	Se to the te	P
\$ 6 8	b) rated for maximum working voltage and the amount of power it will dissipate	10 40 40 40	o Po
é é	c) clearance, creepage distance between terminations of the impedance meet requirements of basic insulation of 6.7	40 40 40 40	O P.O
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:		
,O	a) protective bonding (see 6.5.2)	0 20 20 20 20	o Po
6, 6	b) supplementary insulation (see 6.5.3)	5, 5, 5, 5,	P
50 X	c) automatic disconnection of the supply (see 6.5.5)	30 X0 X0 X0	N/A
× ×	d) current- or voltage-limiting device (see 6.5.6)	X X X X	Р

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Clause	Requirement + Test	Result - Remark	Verdict
XO X	Alternatively one of the single means of protection is	) XO XO XO XO	
8, 8	used:	6, 6, 6, 6,	9
60 8	e) reinforced insulation (see 6.5.3)	So so so so	SO BO
ر م	f) protective impedance (see 6.5.4)		Р
6.5.2	Protective bonding	4, 4, 4, 4,	P
6.5.2.1	Accessible conductive parts, may become hazardous live in single fault condition:	, 40 40 40 40	√ √ √ √ √ √ √ √ √ √ √ √ √ √ √ √ √ √ √
5º 5	Bonded to the protective conductor terminal; or	0 40 40 40 40	O PO
	Separated by conductive screen or barrier bonded to protective conductor terminal		N/A
6.5.2.2	Integrity of protective bonding		_
€ € 60 6	a) protective bonding consists of directly connected structural parts or discrete conductors or both; and withstands thermal and dynamic stresses		P P
	b) Soldered connections:		_
Q Q	Independently secured against loosening	4 4 4 4	P
X° X	Not used for other purposes	0 00 00 00	G PAC
4 4	c) Screw connections are secured	X X X X	P
é é	d) protective bonding not interrupted; or	40 40 40 40	₹ P
61° 6	exempted as removable part carries mains supply input connection	, 40 40 40 40	O P.C
élo é	e) Any movable protective bonding connection specifically designed, and meets 6.5.2.4	, 40 40 40 40	N/A
élo é	f) No external metal braid of cables used (not regarded as protective bonding)	40 40 40 40	N/A
10 1	g) If mains supply passes through:	y do do do do	<u> </u>
4	Means provided for passing protective conductor;		Р
de d	Impedance meets 6.5.2.4	ALL SEC SEC SEC	€ P
éro é	h) Protective conductors bare or insulated, if insulated, green/yellow	, 40 40 40 40	o Po
X0 X	Exceptions:	0 0 0 0 0	
V V	1) earthing braids;	X . X . X . X	N/A
of of	2) internal protective conductors etc.;	, the ten the ten	N/A
2G 2	Green/yellow not used for other purposes	0 20 20 20 20	<sub>2</sub> o P <sub>2</sub> o
√0 × 6, 6	terminal suitable for connection of a protective conductor, and meets 6.5.2.3	2 YO YO YO YO 4, 6, 6, 6,	R P
6.5.2.3	Protective conductor terminal	6, 6, 5, 6,	9
60 6	a) Contact surfaces are metal	, to the the the	N/A
La l	b) Appliance inlet used		N/A
40 X	c) For rewirable cords and permanently connected equipment, protective conductor terminal is close to mains supply terminals		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
é é	d) If no mains supply is required, any protective conductor terminal:	o se se se se	é –
éic é	Is near terminals of circuit for which protective earthing is necessary	e de de de de	N/A
50 S	External if other terminals external	6 % % % % X	N/A
1º 1	e) Equivalent current-carrying capacity to mains supply terminals		Po
20	f) If plug-in, makes first and breaks last	0 20 20 20 20	, P
₹` ₹	g) If also used for other bonding purposes, protective conductor:		۷ <u>–</u>
6, 6	Applied first;	6, 6, 6, 6,	P
50 5	Secured independently;	o do do do de	SO BO
-0	Unlikely to be removed by servicing	0 -0 -0 -0 -0	Р
र्शे र्	h) Protective conductor of measuring circuit:	4 4 4 4	₹ -
é <sup>C</sup> é	Current rating equivalent to measuring circuit terminal;	e to to to to	O P.C
é é	protective bonding: not interrupted by any switch or interrupting device	e to to to to	O PC
é é	i) functional earth terminals allow independent connection	a de de de de	S P C
10 0	j) If a binding screw used for Protective conductor terminal	40 40 40 40	√ √ <del>-</del>
50 5	Suitable size for bond wire	in the the the the	SO BO
-0	Not smaller than M 4	0 0 0 0 0	P
é é	At least 3 turns of screw engaged	6, 6, 6, 6,	P
50 S	Passes tightening torque test	o do do do de	P.O
50 5	k) Contact pressure not capable being reduced by deformation of materials		P
6.5.2.4	Impedance of protective bonding of plug-connected equipment		, <u> </u>
é é	Impedance between protective conductor terminal and each accessible part where protective bonding is specified, is:	6 40 40 40 40	- ×
10 0	- less than 0,1 Ohm; or	to the the the	S B
1º 1	<ul> <li>less than 0,2 Ohm if equipment is provided with non- detachable cord</li> </ul>		N/A
6.5.2.5	Bonding impedance of permanently connected equipment	e to to to te	· (2)
6.5.2.6	Transformer protective bonding screen	0 40 40 40 40	·
6, 6	Transformer provided with screen for protective bonding:	6, 6, 6, 6,	⟨
€° €	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:	, by by by by	N/A
50 5	-Independently secured against loosening	1 %0 %0 %0 %0	N/A
× ×	-Not used for other purposes	X X X X	N/A
6.5.3	Supplementary and reinforced insulation	1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	P
4° 6	Meet clearance, creepage distance and solid insulation requirements of 6.7	, 40, 40, 40, 40	O PC
6.5.4	Protective impedance	0 40 40 40 40	O PO
5° 5	Limits current or voltage to level of 6.3.1 in normal and to level of 6.3.2 in single fault condition		P
de d	clearance, creepage distance between terminations of the impedance meet requirements of double or reinforced insulation of 6.7	40 40 40 40	P PC
de de	The protective impedance consists of one or more of the following:	1 10 10 10 10 10 10 10 10 10 10 10 10 10	é –
4° 4	a) appropriate single component suitable for safety and reliability for protection, it is:	1 10 10 10 10 10	é –
60 6	rated twice the maximum working voltage	1 10 10 10 10 10	P
€° €	resistor rated for twice the power dissipation for maximum working voltage	to to to to	N/A
20 Z	b) combination of components	0 20 20 20 0	o Po
40 X	Single electronic device not used as protective impedance	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	P
6.5.5	Automatic disconnection of the supply	4, 4, 4, 4,	N/A
of of	a) rated to disconnect the load within time specified in Figure 2	\$ \$10 \$10 \$10 \$10	N/A
10 1	b) rated for the maximum load conditions of the equipment	, to to to to	N/A
6.5.6	Current- or voltage-limiting devices		P
χO χ	Device complies with all of:	0 00 00 00 0	<sub>2</sub> –
XO X	a) rated to limit the current or voltage to the level of 6.3.2	6, 6, 6, 6,	P P
6. 6	b) rated for the maximum working voltage; and	6. 6. 6. 6.	P
10 5°	rated for the maximum operational current if applicable	, to to to to	& BC
€ € € 4	c) clearance, creepage distance between terminations of the impedance meet requirements of supplementary insulation of 6.7		₹° R°
6.6	Connections to external circuits	X X X X	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:		
	- the external circuits		N/A
2 0	- the equipment	AND AND AND AND	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
XO X	Protection achieved by separation of circuits; or	0 XO XO XO	N/A
6, 6	short circuit of separation does not cause a hazard	6, 6, 6, 6,	N/A
000	Instructions or markings for each terminal include:		<i>√</i> (1.10
2G /	a) rated conditions for terminal		N/A
4 4	b) Required rating of external circuit insulation	47 47 47	N/A
6.6.2	Terminals for external circuits	1 10 10 10 10 10	N/A
é <sup>c</sup> é	Terminals which receive a charge from an internal capacitor are not hazardous live after 10 s of interrupting supply connection	40 40 40 40	N/A
6.6.3	Circuits with terminals which are hazardous live	100 400 400 4V	N/A
χO ,	These circuits are:	0 0 0 0 0	, <u> </u>
6, 6	Not connected to accessible conductive parts; or	6, 6, 6, 6,	N/A
	Connected to accessible conductive parts, but are not mains circuits and have one terminal contact at earth potential		N/A
4 4	No accessible conductive parts are hazardous live	* * * *	Р
6.6.4	Accessible terminals for stranded conductors	1 40 40 40 40	N/A
2G 2	No risk of accidental contact because:	0 20 02 02 0	· _
6, 6	- Located or shielded	6, 6, 6, 6,	N/A
10 0	Self-evident or marked whether or not connected to accessible conductive parts	, by by by by	N/A
500	Accessible terminals will not work loose	a see see see se	N/A
6.7	Insulation requirements	0 20 20 20 20	, o Po
6.7.1	The nature of insulation	6, 6, 6, 6,	< _
6.7.1.1	Insulation between accessible parts or between separate circuits consist of clearances, creepage distances and solid insulation if provided as protection against a hazard	See form A.15	P
6.7.1.2	Clearances	6, 6, 6, 6,	₹ _
60 6	Required clearances reflecting factors of 6.7.1.1	NO NO NO NO	SO BC
50 6	Equipment rated for operating altitude greater than 2000 m correction factor of Table 3 of 61010-1 applied	10 40 40 40	N/A
6.7.1.3	Creepage distances	0 20 20 20 20	_
₹ ₹	Required creepage distances reflecting factors of 6.7.1.1 a) to d)	8 8 8 8 8	8 P
6, 6	CTI material group reflected by requirements	6, 6, 6, 6,	P
50 5	CTI test performed	o se se se se	N/A
6.7.1.4	Solid insulation	C C C C	_
₹ ₹	Required solid insulation reflecting factors of 6.7.1.1 a) to d)		₹ R
6.7.1.5	Requirements for insulation according to type of circuit	4 4 4 4 4	( <u> </u>
á <sup>C</sup> á	a) 6.7.2 mains circuits of overvoltage category II up to nominal supply voltage of 300 V	to to to to	O PC

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Clause	Requirement + Test	Result - Remark	Verdict
Clause	requirement / rest	rtesuit - Itemark	Verdict
of of	b) 6.7.3 secondary circuits separated from circuits defined in a) by transformer	to to to the	S S S
of of	c) K.1 mains circuits of overvoltage category III and IV or overvoltage category II over 300 V	6, 40, 40, 40, 40	N/A
of of	d) K.2 secondary circuits separated from circuits defined in c) by transformer	10 40 40 40 40	N/A
10 0	e) K.3 circuits having one or more of:	to the tenth to	ý —
of of	maximum transient overvoltage is limited to known level below the level of mains circuit	in the ten the	N/A
é <sup>c</sup> é	maximum transient overvoltage above the level of mains circuit	to to to to	N/A
de de	Working voltage is the sum of more than one circuit or a mixed voltage	6 40 40 40 40	N/A
€° €	Working voltage includes recurring peak     voltage, may include non-sinusoidal or     non-periodic waveform	6 40 40 40 40	N/A
₹ ₹	5) Working voltage with a frequency above 30 kHz		N/A
6.7.2	Insulation for mains circuits of overvoltage category II with a nominal supply voltage up to 300 V		R R
6.7.2.1	Clearances and creepage distances	0 0 0 0 0	_
6, 6	Values for mains circuits of Table 4 are met	6, 6, 6, 6,	P
de de	Coatings to achieve reduction to pollution degree 1 comply with requirements of Annex H	o de de de de	N/A
6.7.2.2	Solid insulation	to the ten the	6 -
6.7.2.2.1	Withstands electrical and mechanical stresses in normal use and all rated environmental conditions of 1.4		P
60 6	Equipment passed voltage tests of 6.8.3 with values of Table 5		P
20 2	Complies as applicable:	0 0 0 0 0	, <u> </u>
6, 6,	a) enclosure or protective barrier of Clause 8	6, 6, 6, 6,	P
50 5	b) moulded and potted parts requirements of 6.7.2.2.2	0 x0 x0 x0 x	N/A
30 S	c) inner layers of printed wiring boards requirements of 6.7.2.2.3		N/A
	d) thin-film insulation requirements of 6.7.2.2.4	0 0 0 0	P
6.7.2.2.2	Moulded and potted parts	1 1 1 1 1 1 1	€ _
of of	Conductors between same two layers are separated by at least 0,4 mm after moulding is completed	e de de de de de	N/A
6.7.2.2.3	Inner insulating layers of printed wiring boards	0 00 00 00 0	5 / -
4 4	Separated by at least 0,4 mm between same two layers	Y Y Y Y	N/A
4° 4	Reinforced insulation have adequate electric strength; one of following methods used:	a to to to the	( <del>-</del>
60 6	a) thickness of insulation is at least 0,4 mm	1 20 20 20 20	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
\$ 6 8	b) insulation is assembled of minimum two separate layers, each rated for test voltage of Table 5 for basic insulation		N/A
de de	c) insulation is assembled of minimum two separate layers, where the combination is rated for test voltage of Table 5 for reinforced insulation		N/A
6.7.2.2.4	Thin-film insulation	)	0 / -
X0 X	Conductors between same two layers are separated by applicable clearances and creepage distance of 6.7.2.1		P
X0 X	Reinforced insulation have adequate electric strength; one of following methods used:	1 XO XO XO X	0 / -
4 4	a) thickness through the insulation at least 0,4 mm	7 7 7 7	N/A
€ 6° 6°	b) insulation is assembled of min two separate layers, each rated for test voltage of Table 5 for basic insulation		N/A
\$ 6° \$	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		
6.7.3	Insulation for secondary circuits derived from mains circuits of overvoltage category II up to 300 V	2	P
6.7.3.1	Secondary circuits where separation from mains circuits is achieved by a transformer providing:	X	o 3 =
4. 4	- reinforced insulation	4 4 4 4	Р
60° 6	- double insulation	1 40 40 40 40 40	€ P
20 Z	- screen connected to the Protective conductor terminal	0 0 0 0 C	N/A
6.7.3.2	Clearances	6. 6. 6. 6	٧
éro ér	a) meet the values of Table 6 for basic insulation and supplementary insulation; or	, 40, 40, 40, 40	S Sec
60 6	twice the values of Table 6 for reinforced insulation		S S BC
2G 2	or o o o o o	0 20 20 20 2	G / -
30 3 4, 4,	b) pass the voltage tests of 6.8 with values of Table 6;	5 YO YO YO Y	(
8, 8,	with following adjustments:	6, 6, 6, 6,	
of of	values for reinforced insulation are 1,6 times the values for basic insulation	, the the the t	N/A
40 4	2) if operating altitude is greater than 2000 m values of clearances multiplied with factor of Table 3	, the tent to the	N/A
4° 4	3) minimum clearance is 0,2 mm for pollution degree 2 and 0,8 mm for pollution degree 3	1 40 40 40 40	N/A
6.7.3.3	Creepage distances	10 40 40 40 V	· 🔬 🗕
4° 6	Based on working voltage meets the values of Table 7 for basic and supplementary insulation	, 40 40 40 4	o do Po
50 S	Values for reinforced insulation are twice the values of basic insulation	1 10 10 10 10 1	O PC

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Clause	Requirement + Test	Result - Remark	Verdict
do d	Coatings to achieve reduction to pollution degree 1 comply with requirements of Annex H	, to to to to	N/A
6.7.3.4	Solid insulation	o do do do do	<i>ő</i> –
6.7.3.4.1	Withstands electrical and mechanical stresses in normal use and all rated environmental conditions of 1.4	to to to to	<u> </u>
4° 6	Equipment passed voltage test of 6.8.3.1 for 5 s with values of Table 6 for basic and supplementary insulation	40 40 40 40	Po
	values for reinforced insulation are 1,6 times the values of basic insulation	The second	€ B
र्ग र र्ग र्	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		Ø P°
Sic Si	value for reinforced insulation are twice the working voltage	, 40 40 40 40	& SC
5° 5	Complies as applicable:	o se se se se	<i>ő</i> –
-01	1) enclosure or protective barrier of Clause 8		P
\$ \$	2) moulded and potted parts requirements of 6.7.3.4.2	8, 8, 8, 8,	N/A
\$ 8°	3) inner layers of printed wiring boards requirements of 6.7.3.4.3	6, 6, 6, 6,	N/A
6, 6,	4) thin-film insulation requirements of 6.7.3.4.4	6, 6, 6, 6,	₹ P
6.7.3.4.2	Moulded and potted parts	o se se se se	<i>6</i> –
50 5	Conductors between same two layers are separated by applicable distances of Table 8	10 10 10 10	N/A
6.7.3.4.3	Inner insulation layers of printed wiring boards		_
\$ \$	Separated by at least by applicable distances of Table 8 between same two layers	8, 8, 8, 8,	N/A
₹) ₹)	Reinforced insulation have adequate electric strength; one of following methods used:	8, 8, 8, 8,	⟨ −
6, 6,	a) thickness at least applicable distance of Table 8	6, 6, 6, 6,	N/A
€ <sup>C</sup> €	b) insulation is assembled of minimum two separate layers, each rated for test voltage of Table 6 for basic insulation		N/A
8 8 8	c) insulation is assembled of min two separate layers, where the combination is rated for 1,6 times the test voltage of Table 6	1 40 40 40 40 4 4 4 4 4	N/A
6.7.3.4.4	Thin-film insulation	0 20 20 20 20	_
\$ \$	Conductors between same two layers are separated by applicable clearances and creepage distance of 6.7.3.2 and 6.7.3.3	\$ \$ \$ \$ \$ \$ \$	P
of of	Reinforced insulation have adequate electric strength; one of following methods used:	to the the the	< −
χO χ	a) thickness at least applicable distance of Table 8	0 0 0 0 0	O PO

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Clause	Requirement + Test	Result - Remark	Verdict
4. 4		4 4 4 4	X X
	b) insulation is assembled of min. two separate layers, each rated for test voltage of Table 6 for basic insulation		
\$ \$	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:		~ <del>_</del>
é é	a.c. test of 6.8.3.1; or	\$ \$ \$ \$ \$	P
é <sup>C</sup> é	d.c. test of 6.8.3.2 for circuits stressed only by d.c. voltages	, 40 40 40 40	N/A
6.8	Procedure for dielectric strength tests	0 20 02 0	O AO PAO
6.9	Constructional requirements for protection against electric shock		O O
6.9.1	If a failure could cause a hazard:		
€ 6	a) security of wiring connections	410 410 410 4	P
20 ,	b) screws securing removable covers	x 0x 0x 0x 0	O O PAO
6 6	c) accidental loosening	6. 6. 6. 6	P
₹ <sup>6</sup> ₹	d) clearances and creepage distances not reduced below the values of basic insulation by loosening of parts or wires		0 0 0
6.9.2	Insulating materials	6, 6, 6, 6	Р
10 1	Material not to be used for safety relevant insulation:	1 40 40 40 4	° (1 – 1
20	a) easily damaged materials not used	0 x 0 x 0 x	G G P
4, 4	b) non-impregnated hygroscopic materials not used	6, 6, 6, 6	P
6.9.3	Colour coding	, to to to t	O SO BO
-0	Green-and-yellow insulation shall not be used except:	5 20 20 20 2	G
6, 6	a) protective earth conductors;	6, 6, 6, 6	P
50 5	b) protective bonding conductors;	3 50 50 50 5	N/A
-	c) potential equalization conductors;		N/A
€ 6	d) functional earth conductors	1 1 1 1 1 1 1	N/A
6.10	Connection to mains supply source and connections between parts of equipment	, &c &c &c &	O PO
6.10.1	Mains supply cords	0 00 00 00	O / -
4 4	rated for maximum equipment current (see 5.1.3 c)	X X X X	Р
é é	Cable complies with IEC 60227 or IEC 60245	1 40 40 40 4	C SO BLO
χ0 ,	Heat-resistant if likely to contact hot parts	0 00 00 00 0	G O PO
6, 6	Temperature rating (cord and inlet):	6, 6, 6, 6	. 6 —
éto é	Green/yellow used only for connection to protective conductor terminals	, 40 40 40 4	€ & B
é10 6	Detachable cords with IEC 60320 mains connectors:	, the ten the te	( ) ( —
2G	Conform to IEC 60799; or	0 20 20 20 2	N/A
6, 6	Have the current rating of the mains connector	6, 6, 6, 6,	P P

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Clause	Requirement + Test	Result - Remark	Verdict
6, 6	. 4. 6. 6. 6. 6. 6. 6. 6. 6.	6, 6, 6, 6,	6 6,
6.10.2	Fitting of non-detachable mains supply cords	, to to to to	<i>á</i> –
6.10.2.1	Cord entry		_
Ŷ Ŷ	a) inlet or bushing with a smoothly rounded opening; or		N/A
20 X	b) insulated cord guard protruding >5 D (diameter)	02 02 02 02	N/A
6.10.2.2	Cord anchorage	X X X X	_
1 1	Protective earth conductor is the last to take the strain		N/A
χO χ	a) cord is not clamped by direct pressure from a screw	0 20 20 20 20	N/A
6, 6	b) knots are not used	6, 6, 6, 6,	N/A
élo é	c) cannot push the cord into the equipment to cause a hazard	, 40 40 40 40	N/A
of of	d) no failure of cord insulation in anchorage with metal parts	40 40 40 40	N/A
20 S	e) not to be loosened without a tool	The second	N/A
6° 6	f) cord replacement does not cause a hazard and method of strain relief is clear	40 40 40 40	N/A
20 z	Push-pull and or torque test	0 20 20 20 20	N/A
6.10.3	Plugs and connectors	6, 6, 6, 6,	P
of of	Mains supply plugs, connectors etc., conform with relevant specifications	40 40 40 40	S BC
do d	If equipment supplied at voltages below 6.3.2.a) or from a sole source:	, 40, 40, 40, 40	⟨î –
10 1	Plugs of supply cords do not fit mains sockets above rated supply voltage	, to to to to	N/A
€ €	Mains type plugs used only for connection to mains supply		€ B
de de	Plug pins which receive a charge from an internal capacitor		N/A
á á	Accessory mains socket outlets:		< − −
\$1° \$1	a) marking if accepts a standard mains supply plug (see 5.1.3e)	40 40 40 40	N/A
1° 1	b) input has a protective earth conductor if outlet has earth terminal contact	\$ \$0 \$0 \$0 \$0	N/A
6.11	Disconnection from supply source	0 10 00 00 0	O PC
6.11.1	Disconnects all current-carrying conductors	X X X X	P
6.11.2	Exceptions		N/A
6.11.3	Requirements according to type of equipment	0 20 20 20 0	_
6.11.3.1	Permanently connected equipment and multi-phase equipment	6 6 6 6 6	N/A
6. 6	Employs switch or circuit-breaker	4 4 4 4	N/A
of of	If switch or circuit-breaker is not part of the equipment, documentation requires:	40 40 40 40	<^ _
of of	a) switch or circuit-breaker to be included in building installation	40 40 40 40	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2	The desirement of the second o		51
5° 5	b) suitable location easily reached	o do do do do	N/A
.0.	c) marking as disconnecting for the equipment	0 0 0 0	N/A
6.11.3.2	Single-phase cord-connected equipment	\$ \$ \$ \$ \$ \$	Р
20 X	Equipment is provided with one of the following:	0 40 40 40	3 -
X X	a) switch or circuit-breaker	X X X X	N/A
20 E	b) appliance coupler (disconnectable without tool)	THE STORES OF THE	₹ P
χO χ	c) separable plug (without locking device)	O 20 20 20 20	N/A
6.11.4	Disconnecting devices	6, 6, 6, 6,	P
6.11.4.1	Disconnecting device part of equipment	yo to to to	Yo Be
-0	Electrically close to the supply	0 0 0 0 0	P
4° 4°	Power-consuming components not electrically located between the supply source and the disconnecting device		N/A
4° 4	Except electromagnetic interference suppression circuits permitted to be located on the supply side of the disconnecting device	1 40 40 40 40 A	N/A
6.11.4.2	Switches and circuit-breakers	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	P
2G 2	When used as disconnection device:	0 40 40 40 40	_
8, 8	Meets IEC 60947-1 and IEC 60947-3	6, 6, 6, 6,	Р
50 5	Marked to indicate function	o the the the	ś –
20	Not incorporated in mains cord	0 0 0 0 0	N/A
6, 6,	Does not interrupt protective earth conductor	6, 6, 6, 6,	N/A
6.11.4.3	Appliance couplers and plugs	0 x0 x0 x0 x0	O PO
50 S	Where an appliance coupler or separable plug is used as the disconnecting device (see 6.11.3.2):		_
	Readily identifiable and easily reached by the operator	0 0 0 0	Р
₹ ₹	Single-phase portable equipment cord length not more than 3 m		N/A
₹ ₹	Protective earth conductor connected first and disconnected last		Р
4, 4,		6, 6, 6, 6,	5, 6,
7,0 ,	PROTECTION AGAINST MECHANICAL HAZARDS	o do do do do	O P
7.1	Equipment does not cause a mechanical hazard in normal nor in single fault condition	Operation cannot lead to a mechanical in normal condition or single fault condition	P
6, 6	Conformity is checked by 7.2 to 7.7	4, 4, 4, 4, 4	Р
7.2	Sharp edges	All easily-touch parts of the equipment are smooth and rounded	P
6, 6,	Easily touched parts are smooth and rounded	4 4 4	Р

Do not cause injury during normal use and

Do not cause injury during single fault condition

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Clause	Requirement + Test	Result - Remark	Verdict
8, 8	. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6.	5, 5, 5, 5,	. 6 6,
7.3	Moving parts	, 20 20 20 V	N/A
7.3.1	Hazards from moving parts limited to a tolerable level with the conditions specified in 7.3.2 and 7.3.5		N/A
o Ci	Risk assessment in accordance with 7.3.3 carried out		N/A
7.3.2	Exceptions	4 4 4 4	N/A
of o	Access to hazardous moving parts permitted under following circumstances:	of the the te	e 🤞 –
é é	a) obviously intended to operate on parts or materials external of the equipment	to the the te	N/A
é é	inadvertent touching of moving parts minimized by equipment design (e .g. guards or handles)	1 10 10 10 10 1	N/A
é <sup>C</sup> é	b) If operator access is unavoidable outside normal use following precautions have been taken:	, see see see se	e 🤞 🗕
60 6	1) access requires tool	1 40 40 40 4	N/A
.0	2) statement about training in the instructions	1 (0 (0 (0 (0	N/A
₹ ₹	warning markings on covers prohibiting access by untrained operators	\$ \$ \$ \$	N/A
6 6	or symbol 14 with full details in documentation	6, 6, 6, 6,	N/A
7.3.3	Risk assessment for mechanical hazards to body parts	X OX OX OX	N/A
5° 6	Risk is reduced to a tolerable level by protective measures as specified in table 12		N/A
~ ~ ×	Minimum protective measures:		
Q Q	A. Low level measures	\$ \$ \$ \$	N/A
XO X	B. Moderate measures	0 0 0 0 C	N/A
4 4	C. Stringent measures	4 4 4 4	N/A
7.3.4	Limitation of force and pressure	1 10 10 10 10 10 10 10 10 10 10 10 10 10	N/A
6° 6	Following levels are met in normal and single fault condition:	40 40 40 4	O 6
of o	Continuous contact pressure below 50 N / cm² with force below 150 N	1 40 40 40 40	N/A
é é	Temporary force below 250 N for an area at least of 3 cm² for a maximum duration of 0,75 s		N/A
7.3.5	Gap limitations between moving parts		N/A
7.3.5.1	Access normally allowed	X X X X	
₹° ₹	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		
र्रे र	Maximum gap as specified in table 14 assured in normal and in single fault condition		N/A
7.4	Stability	1 1 1 1 1 1 1	P
6° 6	Equipment not secured to building structure is physical stable	10 10 10 10 1	O PC

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Clause	Requirement + Test	Result - Remark	Verdict
Clause	Requirement + Test	Result - Remark	verdict
élo é	Stability maintained after opening of drawers etc. by automatic means, or	o to to to to	N/A
No 3	warning marking requires the application of means	to to to to to	N/A
-C1	Compliance checked by following tests as applicable:	0 20 20 20 20	_
Q 0	a) 10° tilt test for other than handheld equipment	\$ \$ \$ \$ \$	Р
élo é	b) multi-directional force test for equipment exceeds height of 1 m and mass of 25 kg	6 40 40 40 40	N/A
100	c) downward force test for floor-standing equipment	to the the the the	N/A
éro é	d) overload test with 4 times maximum load for castor or support that supports greatest load	6 40 40 40 40	N/A
ésc é	e) castor or support that supports greatest load removed from equipment	6 40 40 40 40	N/A
7.5	Provisions for lifting and carrying	0 0 0 0 0	N/A
7.5.1	Equipment more than 18 kg :	6, 6, 6, 6,	₹ _
600	Has means for lifting or carrying; or	to the test to	N/A
.0.	Directions in documentation	C	N/A
7.5.2	Handles and grips	4 4 4 4	€ _
χC ,	Handles or grips withstand four times weight	0 00 00 00	N/A
7.5.3	Lifting devices and supporting parts	X X X X	_
10 d	Rated for maximum load; or	to the ten the	N/A
,O,	tested with four times maximum static load	0 0 0 0 0	N/A
7.6	Wall mounting	6, 6, 6, 6,	N/A
10 d	Mounting brackets withstand four times weight	to the the the	N/A
7.7	Expelled parts	0 0 0 0 0	N/A
6, 6	Equipment contains or limits the energy	6, 6, 6, 6,	N/A
6° 6	Protection not removable without the aid of a tool	to see see see	N/A
8	RESISTANCE TO MECHANICAL STRESSES		P
8.1	Equipment does not cause a hazard when subjected to mechanical stresses in normal use	6 40 40 40 40	Q PO
XC X	Normal protection level is 5 J	0 00 00 00 00	O PO
40 X	Levels below 5 J but not less than 1 J are acceptable if all of following criteria are met:		
X X	a) lower level justified by risk assessment of manufacturer		P
10 h	b) equipment installed in its intended application is not easily touched	0 10 10 10 10	P
0	c) only occasional access during normal use	G G G G	Р
₹	d) IK code in accordance to IEC 62262 marked or symbol 14 used with full information in the documentation	0 x0 x0 x0 x0 x0	₹ P

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Clause	Requirement + Test	Result - Remark	Verdict
€° €	for non-metallic enclosures rated below 2 °C ambient temperature value chosen for minimum rated temperature		N/A
40 X	impact energies between IK values, the IK code marked for nearest lower value	2	P
4, 4,	Conformity is checked by performing following tests:	6, 6, 6, 6,	<del>(</del> )
50 5	1) static test of 8.2.1	I do to to to	S B
6° 6	impact test of 8.2.2 with 5 J except for hand-held equipment	1 40 40 40 40 A	Po
€° €	if impact energy not selected to 5 J alternate method of IEC 62262 used	of to to to	N/A
éro é	3) drop test of 8.3.1 or 8.3.2 except for fixed equipment and equipment with mass over 100 kg	TO TO TO TO	N/A
élo é	Equipment rated with an impact rating of IK 08 that obviously meets the criteria	, 40 40 40 40	Po
χO - χ	After the tests inspection with following results:	0 20 20 20 20	<sub>4</sub> –
70 X	hazardous live parts above the limits of 6.3.2 not accessible	) XO XO XO XO	P
6. 6	- insulation pass the voltage tests of 6.8	4. 4. 4. 4.	Р
of of	i) no leaks of corrosive and harmful substances	1 20 20 20 20 E	P
2G 2	ii) enclosure shows no cracks resulting in a hazard	0 20 20 20 20	, O P, O
8, 8	iii) clearances not less than their permitted values	6, 6, 6, 6,	P
50 5	iv) insulation of internal wiring remains undamaged	o do do do do	SO BO
-0	v) protective barriers not damaged or loosened	0 0 0 0 0	P
6 6	vi) No moving parts exposed, except permitted by 7.3	6 6 6 6	P
X 0 X	vii) no damage which could cause spread of fire	0 40 40 40 40	O PO
8.2	Enclosure rigidity test	X X X X	Р
8.2.1	Static test	1 40 40 40 40 A	P
χO - χ	- 30 N with 12 mm rod to each part of enclosure	See form A.16	, o P, o
X0 X	in case of doubt test conducted at maximum rated ambient temperature	2 XO XO XO XO	P AO AO
8.2.2	Impact test	4 4 4 4	Р
5° 5	Impact applied to any part of enclosure causing a hazard if damaged	1 10 10 10 10 10 10 10 10 10 10 10 10 10	Р
1 1 1	Impact energy level and corresponding IK code:	THE STORES	√ −
6° 6	Non-metallic enclosures cooled to minimum rated ambient temperature if below 2 °C	to to to to	N/A
8.3	Drop test	See form A.16	N/A
8.3.1	Other than hand-held and direct-plug-in equipment	6, 6, 6, 6,	N/A
50 S	Tests conducted with a drop height or angle of:	of the tento	<i>i</i> –
8.3.2	hand-held and direct-plug-in equipment		_
₹` ₹	Non-metallic enclosures cooled to minimum rated ambient temperature if below 2 °C	See form A.16	N/A

IEC 61010-1

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7	IEC 61010-1		Y Y
Clause	Requirement + Test	Result - Remark	Verdict
70 /	Drop test conducted with an height of 1 m	0 40 40 40	N/A
0. 0	1 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,	0. 0. 0. 0.	Q F Q -
9	PROTECTION AGAINST THE SPREAD OF FIRE	C 40 40 40 40	₹ P
9.1 🔾	No spread of fire in normal and single fault condition	0 x 0 x 0 x 0	G Pag
X0 X	Mains supplied equipment meets requirements of 9.6 additionally		P
VC 4	Conformity is checked by minimum one or a combination of the following (see Figure 11):	0 40 40 40 40	<u> </u>
· ·	a) Single Fault test of 4.4; or		P
Ý Ý	b) Application of 9.2 (eliminating or reducing the sources of ignition); or		₹ P
₹ ₹	c) Application of 9.3 (containment of fire within the equipment)		P
9.2	Eliminating or reducing the sources of ignition within the equipment		R R
6 6	a) 1) Limited-energy circuit (see 9.4); or	4, 4, 4, 4, 4,	P
é é	b) 2) basic insulation provided for parts of different potential; or	to the test	& P.C
50 S	Bridging the insulation does not cause ignition	o do do do do	N/A
-	c) Surface temperature of liquids and parts (see 9.5)	C. C. C. C. C.	N/A
Q Q	d) No ignition in circuits designed to produce heat	Se Se Se Se	P
9.3	Containment of the fire within the equipment, should it occur	40 40 40 40	o Po
9.3.1	Spread of fire outside equipment reduced to a tolerable level if:	of the test	é –
és é	Energizing of the equipment is controlled by an operator held switch	and the testing	N/A
é é	b) Enclosure is conform with constructional requirements of 9.3.2; and	10 40 40 40 40	Sec.
5° 6	Requirements of 9.5 are met	o so so so so	SO BO
9.3.2	Constructional requirements		_
₹ ₹	a) Connectors and insulating material have flammability classification V-2 or better		R R
री री	b) Insulated wires and cables are flame retardant (VW- 1 or equivalent)		P
( )	c) Enclosure meets following requirements:	4 4 4 4	୧ _
é é	1) Bottom and sides in arc of 5 ° (see Figure 13) to non-limited circuits (9.4) meets:	o he he he he	Ý –
50 6	i)no openings; or	o do do do do	N/A
	ii) perforated as specified in table 16; or		N/A
é é	iii) metal screen with a mesh; or	4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	N/A
χO	iv) baffles as specified in Figure 12	0 20 20 20 20	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
é <sup>ro</sup> é	Material of enclosure and any baffle or flame barrier is made of:	, de de de de	é –
60 8	Metal (except magnesium); or	NO NO NO NO	SO BO
50 8	Non-metallic materials have flammability classification V-1 or better	16 16 16 16	N/A
1º 6	Enclosure and any baffle or flame barrier have adequate rigidity	, 40 40 40 40	Po
9.4	Limited-energy circuit	0 70 70 70 70	o Po
₹° ₹	a) Potential not more than 30 r.m.s. and 42,4 V peak, or 60 V dc	5	P
6, 6	b) Current limited by one of following means:	6, 6, 6, 6,	< _
50 S	1) Inherently or by impedance (see table 17); or	you do do do	N/A
· .	2) Overcurrent protective device (see table 18); or	See table 18	N/A
₹	A regulating network limits also in single fault condition (see table 17)	8 8 8 8 8 8 B	P
6 6	c) Is separated by at least basic insulation	6, 6, 6, 6,	N/A
é é	Fuse or a nonadjustable electromechanical device is used	1 40 40 40 40	N/A
9.5	Requirements for equipment containing or using flammable liquids	, 40 40 40 40	N/A
élo é	Flammable liquids contained in or specified for use with equipment do not cause spread of fire	, 40, 40, 40, 40	N/A
50 6	Risk is reduced to a tolerable level:	yo to to to	<i>ő</i> –
60 6	a) The temperature of surface or parts in contact with flammable liquids is 25 °C below fire point	to to to to	N/A
-0	b) The quantity of liquid is limited	0 0 0 0 0	N/A
6, 6	c) Flames are contained within the equipment	6, 6, 6, 6,	N/A
X0 X	Detailed instructions for risk-reduction provided	0 X0 X0 X0 X0	N/A
9.6	Overcurrent protection	X X X X	Р
9.6.1	Mains supplied equipment protected	AL SO SO SO	₹ P
é é	Basic insulation between mains parts of opposite polarity provided	, 40 40 40 40	O PO
χG ,	Devices not in the protective conductor	0	O PO
X0 X	Fuses or single-pole circuit-breakers not fitted in neutral (multi-phase)	) X0 X0 X0 X0	P
9.6.2	permanently connected equipment	4 4 4 4	N/A
é é	Overcurrent protection device:		é –
χŪ	Fitted within the equipment; or	0, 0, 0, 0	N/A
6, 6	Specified in manufacturer's instructions	6, 6, 6, 6,	N/A
9.6.3	Other equipment	yo to to to	<i>i</i> –
	Protection within the equipment		N/A

IEC 61010-1

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Clause	Requirement + Test	Result - Remark	Verdict
4 4	4 4 4 4 4 4 4 4	4. 6. 6. 6.	4 4
10	EQUIPMENT TEMPERATURE LIMITS AND RESISTAN	CE TO HEAT	No Bo
10.1	Surface temperature limits for protection against burns		P
₹ ₹	Easily touched surfaces within the limits in normal and in single fault condition:		<ol> <li>√</li> </ol>
र्श र	– at an specified ambient temperature of 40 °C	8 8 8 8	P
of o	<ul> <li>for equipment rated above 40 °C ambient temperature limits not exceeded raised by the difference to 40 °C</li> </ul>	to to to to	N/A
é é	Heated surfaces necessary for functional reasons exceeding specified values:	, see see see see	۵ 
é <sup>C</sup> é	Are recognizable as such by appearance or function; or	40 40 40 40	Sec.
50 6	- Are marked with symbol 13	yo do do do	N/A
-	Guards are not removable without tool		N/A
10.2	Temperatures of windings	4 4 6 6 6	₹ P
20 /	Limits not exceeded in:	0	<u> </u>
6. 6	normal condition	4. 4. 4. 4.	P
10 0	single fault condition	1 10 10 10 10 10	₽ <sup>C</sup>
10.3	Other temperature measurements	0 20 20 20 20	G P <sub>2</sub> G
6, 6	Following measurements conducted if applicable:	6666	₹ _
é é	a) Value of 60 °C of field-wiring terminal box not exceeded	, 40 40 40 40	N/A
é é	b) Surface of flammable liquids and parts in contact with this liquids	1 40 40 40 40	N/A
6 6	c) Surface of non-metallic enclosures	The sto sto sto	N/A
6° 6	d) Parts made of insulating material supporting parts connected to mains supply	1 10 10 10 10	P P C
20	e) Terminals carrying a current more than 0,5 A	0 20 20 20 0	O PO
10.4	Conduct of temperature tests	6, 6, 6, 6,	P
10.4.1	Tests conducted under reference test conditions and manufacturer's instructions	, 40 40 40 40	& Bro
10.4.2	Temperature measurement of heating equipment	, the the the the	N/A
>C1	Tests conducted in test corner	5 20 20 20 20	N/A
10.4.3	Equipment intended for installation in a cabinet or wall	6, 6, 6, 6,	P
X0 X	Equipment built in as specified in installation instructions	1 %0 %0 %0 %0	O PO
10.5	Resistance to heat	X X X X	Р
10.5.1	Integrity of clearance and creepage distances	1 40 40 40 40	P
10.5.2	Non-metallic enclosures	0 00 00 00	N/A
6, 6	Within 10 min after treatment:	6, 6, 6, 6,	7 _
éro é	Equipment subjected to suitable stresses of 8.2 and 8.3 complying with criteria of 8.1	, 40 40 40 40	N/A
10.5.3	Insulating material	o de de de de	S P

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50 500	IEC 61010-1	Report No., P10230703100	<u> </u>
Clause		Result - Remark	Verdict
50 50	a) Parts supporting parts connected to mains supply	A 50 50 50 50	P P
.0.	b) Terminals carrying a current more than 0,5 A		P
	Examination of material data; or	Insulating material can have adequate resistance to heat	Р
ST ST	in case of doubt:	4 4 4 4	Р
0 X0	Ball pressure test; or	40 A0 A0 A0 A0	O PAO
<	2) Vicat softening test of ISO 306	X X X X X	N/A

6, 6	5, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,	6, 6, 6, 6,	8
11,0	PROTECTION AGAINST HAZARDS FROM FLUIDS	0 00 00 00 0	1
11.1	Protection to operators and surrounding area provided by equipment		2
4 4	All fluids specified by manufacturer considered	4 4 4 4	A
11.2	Cleaning	A Sec Sec Sec Sec	2
11.3	Spillage	0 20 20 20 0	20
11.4	Overflow	6, 6, 6, 6,	8
11.5	Battery electrolyte	o so so so so	5
	Battery electrolyte leakage presents no hazard		
11.6	Specially protected equipment	Indoor use	Q.
11.7	Fluid pressure and leakage	0 40 40 40	
11.7.1	Maximum pressure:	X X X X	~
200	Maximum pressure of any part does not exceed P <sub>rated</sub>	a see see see see	2
11.7.2	Leakage and rupture at high pressure	0 20 20 20 0	
8, 8	Fluid-containing parts subjected to hydraulic test if:	6, 6, 6, 6,	9
000	a) product of pressure and volume > 200 kPal; and	o the the the	5
L.C.	b) pressure > 50 kPa		
	Parts of refrigerating systems meets pressure-related requirements of IEC 60335-24 or IEC 60335-2-89		री
11.7.3	Leakage from low-pressure parts	6, 6, 6, 6,	0
11.7.4	Overpressure safety device	0 30 30 30 30	5
	Does not operate in normal use		
₹° ₹	a) Connected as close as possible to parts intended to be protected		Q.
8	b) Easy access for inspection, maintenance and repair	4 5 5 5	Q)
20	c) Adjustment only with tool	0 00 00 00 0	4
X X	d) No discharge towards person	Y Y Y Y	×
(N)	e) No hazard from deposit of discharged material	I SE SE SE SE	Q
<sub>2</sub> O	f) Adequate discharge capacity	0 20 20 20 0	~
8, 8	No shut-off valve between overpressure safety device and protected parts	4 4 4 4	9

the to the the

to to to

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Clause	Requirement + Test	Result - Remark	Verdict
X X			X X
12	PROTECTION AGAINST RADIATION, INCLUDING LAS AGAINST SONIC AND ULTRASONIC PRESSURE	SER SOURCES, AND	N/A
12.1	Equipment provides protection	So so so so	N/A
12.2	Equipment producing ionizing radiation		N/A
12.2.1	Ionizing radiation	\$ \$ \$ \$ \$ \$	N/A
12.2.1.1	Equipment meets the following requirements:	0 20 00 00	
X X	a) if intended to emit radiation meets requirements of 12.2.1.2; or		N/A
5° 6	tested, classified and marked in accordance to IEC 60405		N/A
50 5	b) if only emits stray radiation meets requirements of 12.2.1.3	, to to to to	N/A
12.2.1.2	Equipment intended to emit radiation		_
Q Q	Effective dose rate of radiation measured:	4 4 4 4	√ −
AG A	If dose rate exceeds 5 μSv/h marked with the following:	0 00 00 00	· <u>/</u> —
4 4	a) symbol 17 (ISO 361)	X X X X	N/A
6 6	b) abbreviations of the radionuclides:	The second	é –
2G 2	c) with maximum dose at 1 m; or:	0 40 40 40 40	
₹0 ×	with dose rate value between 1 μSv/h and 5 μSv/h in m:	0	× _
12.2.1.3	Equipment not intended to emit radiation	4. 6. 6. 6.	٧ _
é é	Limit for unintended stray radiation of 1 µSv/h at any easily reached point kept:	1 40 40 40 40	<i>₹</i> −
12.2.2	Accelerated electrons	The sto sto sto	<i>(</i> € −
2G 2	Compartments opened only by the use of a TOOL	0 20 20 20 20	N/A
12.3	Ultraviolet (UV) radiation	6, 6, 6, 6,	N/A
5° 5	No unintentional HAZARDOUS escape of UV radiation:	Se se se se	· 5 -
	- checked by inspection; and		N/A
Q Q	evaluation of RISK assessment documentation	8 8 8 8 8	N/A
12.4	Microwave radiation	0 00 00 00	N/A
6 . 6	Power density does not exceed 10 W/m²:	4 4 4 4	N/A
12.5	Sonic and ultrasonic pressure	10 40 40 40	N/A
12.5.1	Sound level	0 20 20 20 20	N/A
8, 8	No hazardous sound emission	4, 6, 6, 6,	N/A
	Maximum sound pressure level measured and calculated for maximum sound power level as specified in ISO 3746 or ISO 9614-1		N/A
6, 6	Instruction describes measures for protection	6, 6, 6, 6,	N/A
12.5.2	Ultrasonic pressure	a the the the the	N/A
50 A	Equipment not intended to emit ultrasound does not exceed limit of 110 dB between 20 kHz and 100 kHz	1 40 40 40 KG	N/A

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IEC 61010-1					
Clause	Requirement + Test	Result - Remark	Verdict		
A 6	Equipment intended to emit ultrasound:		N/A		
50 S	Outside useful beam does not exceed limit of 110 dB between 20 kHz and 100 kHz		N/A		
2C1	If inside useful beam above values exceeded:		_		
é é	Marked with Symbol 14 of table 1	5 5 5 5 5 5 5	N/A		
X0 X	and following information in the documentation:	0 00 00 00 00 0	_		
4 4	a) dimensions of useful beam	4 4 4 4 4	N/A		
é é	b) area where ultrasonic pressure exceed 110 dB		N/A		
χ0 ,	c) maximum sound pressure inside beam area	X	N/A		
12.6	Laser sources	4 4 4 4 4 4	N/A		
50 S	Equipment meets requirements of IEC 60825-1		N/A		

13	PROTECTION AGAINST LIBERATED GASES AND SUBSTANCES, EXPLOSION AND IMPLOSION	N/A
13.1	Poisonous and injurious gases and substances	N/A
éro é	No poisonous or injurious gases or substances liberated in normal condition	N/A
50 B	Attached data/test reports demonstrate conformity	N/A
13.2	Explosion and implosion	N/A
13.2.1	Components	N/A
NO A	Components liable to explode:	<u> </u>
ζ ,	Pressure release device provided; or	N/A
₹ <sup>1</sup> ¢	Apparatus incorporates operator protection (see also 7.7)	N/A
6 0	Pressure release device:	<^ −
χ0	Discharge without danger	N/A
4 4	Cannot be obstructed	N/A
13.2.2	Batteries and battery charging	á –
20	If explosion or fire hazard could occur:	_
6, 6	Protection incorporated in the equipment; or	N/A
5° 8	Instructions specify batteries with built-in protection	N/A
	In case of wrong type of battery used:	_
6, 6	No hazard; or	N/A
, O ,	Warning by marking and within instructions	N/A
Α	Equipment with means to charge rechargeable batteries:	_
of o	Warning against the charging of non-rechargeable batteries; and	N/A
de d	Type of rechargeable battery indicated; or	N/A
χO .	Symbol 14 used	N/A
8, 8	Battery compartment design	N/A

Clause	Requirement + Test	Result - Remark	Verdict
XO X	Single component failure	X0 X0 X0 X0	N/A
× ×	Polarity reversal test		N/A
13.2.3	Implosion of cathode ray tubes	the state state state	N/A
χC ,	If maximum face dimensions > 160 mm:	0 10 10 10	_
4. 4	Intrinsically protected and correctly mounted; or	4 4 4 4	N/A
6 6	ENCLOSURE provides protection:		N/A
, O ,	If non-intrinsically protected:	O	_
6, 6	Screen not removable without TOOL	5, 6, 6, 6,	N/A
X0 X	If glass screen, not in contact with surface of tube	to to to to	N/A

14	COMPONENTS AND SUBASSEMBLIES	. 6. 6. 6. 6. 6	Р
14.1	Where safety is involved, components and subassemblies meet relevant requirements	e de de de de d	O P
14.2	Motors	No motor used	N/A
14.2.1	Motor temperatures	r. c. c. c. c.	N/A
₹ <sup>6</sup> ₹	Does not present a hazard when stopped or prevented from starting; or		N/A
8 8	Protected by over-temperature or thermal protection device conform with 14.3		N/A
14.2.2	Series excitation motors	6 6 6 6 6	N/A
élo é	Connected direct to device, if overspeeding causes a hazard	e de de de de d	N/A
14.3	Overtemperature protection devices		N/A
· ·	Devices operating in a Single fault condition		N/A
6/10	a) Reliable function is ensured		N/A
χO	b) Rated to interrupt maximum current and voltage	0 00 00 00 0	N/A
6, 6	c) Does not operate in Normal use	6, 6, 6, 6, 6	N/A
of o	If self-resetting device used to prevent a hazard, protected part requires intervention before restarting		N/A
14.4	Fuse holders	So to the total	- B
χÜ	No access to hazardous live parts	0 0 0 0 0 0	N/A
14.5	Mains voltage selecting devices	No mains voltage selecting devices	N/A
6. 6	Accidental change not possible	6, 6, 6, 6, 6	N/A
14.6	Mains transformers tested outside equipment	(see Form A.39 and A.40)	N/A
14.7	Printed circuit boards	0 20 20 20 20	, P,
4, 4	Data shows conformity with V-1 of IEC 60695-11-10 or better; or	Printed circuit boards are made of material with flammability classification of V-0	P
2/0	Test shows conformity with V-1 of IEC 60695-11-10 or better		N/A

Page 35 of 77 Report No.: PTC23070310003S-IE01 IEC 61010-1 Clause Requirement + Test Result - Remark Verdict Not applicable for printed wiring boards with N/A limited-energy circuits (9.4) Circuits or components used as transient overvoltage 14.8 N/A limiting devices N/A Test conducted between each pair of mains supply terminals No hazard resulting from rupture or overheating of the component:

N/A

N/A

15	PROTECTION BY INTERLOCKS	o to to to to	N/A
15.1	Interlocks are designed to remove a hazard before operator exposed	1 40 40 40 40 1	N/A
15.2	Prevention of reactivation		N/A
15.3	Reliability	6, 6, 6, 6, 6	N/A
20	Single fault unlikely to occur; or	0 10 10 10 10	N/A
_	Cannot cause a hazard	X X X X X	N/A

no bridging of safety relevant insulation

no heat to other parts above the self-ignition points

16	HAZARDS RESULTING FROM APPLICATION	م کے کے کے کے کے	o P <sub>z</sub> o
16.1	Reasonably foreseeable misuse	4, 4, 4, 6, 6	Р
\$ C	No hazards arising from settings not intended and not described in the instructions	No hazards	° ₽
\$10 Q	Other cases of reasonably foreseeable misuse addressed by risk assessment	40 40 40 40 40 40 40 40 40 40 40 40 40 4	P
16.2	Ergonomic aspects		Р
6° 6	Factors giving rise to a hazard the risk assessment is reflecting those aspects:	No hazards	_
χO.	a) limitation of body dimensions	x Ox Ox Ox Ox	N/A
6 6	b) displays and indicators	4 4 4 4 4	Р
10 c	c) accessibility and conventions of controls	in the ten the ten to	P B €
~C1	d) arrangement of TERMINALS		c, P.c.

17	RISK ASSESSMENT		N/A
50	Risk assessment conducted, if hazard might arise and not covered by Clauses 6 to 16	No such hazards	N/A
20	Tolerable risk achieved by iterative documented process covering the following:		_
-0	a) Risk analysis		N/A
8	Identifies hazards and estimates risk	6, 6, 6, 6, 6	N/A
XC.	b) Risk evaluation	0 00 00 00 00	N/A

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N/A

N/A

N/A

Clause	Requirement + Test	Result - Remark	Verdic
	Plan to judge acceptability of resulting risk level based on the estimated severity and likelihood of a risk		N/A
8 8	c) Risk reduction	6 6 6 6	N/A
20 20	Initial risk reduced by counter measures;	, the the the the	N/A
40 K	Repeated risk evaluation without new risks introduced	, 40 40 40 40 40 °	N/A
4° 8'	Risks remaining after risk assessment addressed in instructions to responsible body:	, 40 40 40 40	-
20 20	Information contained how to mitigate these risks	0 20 02 02 0	N/A
8, 8,	Following principles in methods of risk reduction applied by manufacturer in given order:		_
6, 6,	Risks eliminated or reduced as far as possible	6, 6, 6, 6, 4	N/A
de de	Protective measures taken for risks that cannot be eliminated	, 40 40 40 40 40 4	N/A
40 4	User information about residual risk due to any defect of the protective measures	, 40, 40, 40, 40, 40, 40	N/A
Exp St	Indication of particular training is required	1 40 40 40 40 4	N/A
of of	Specification of the need for personal protective equipment	1 10 10 10 10 10	N/A
4° 8'	Conformity checked by evaluation of the risk assessment documentation	, to to to to	N/A
XO X	ر کے کے کے کے کے کے کے ک	0 40 40 40	40 X
ANNEX F	EX F ROUTINE TESTS		N/A
of of	Manufacturer 's declaration		N/A
0 (			Š
ANNEX H	QUALIFICATION OF CONFORMAL COATINGS FOR PROTECTION AGAINST POLLUTION		N/A
H.1	General	8. 8. 8. 8.	N/A
Sic Si	Conformal coatings meet the requirements of Clause H.2 and H.3.	, 40 40 40 40 40	N/A
H.2	Technical properties	So so so so	N/A
80 81	Technical properties of conformal coatings are suitable for the intended application. In particular:		_
20 20	a) Manufacturer indicate that it is a coating for PWBs;	0 0 0 0	N/A
\$ \$\	b) rated operating temperature include the temperature range of the indicated application;	8, 6, 6, 6, 6	N/A
8, 8,	c) CTI, insulation resistance and dielectric strength are suitable for the intended application;	6, 6, 6, 6, 6	N/A

Qualification of coatings

H.3

d) Coating have adequate UV resistance, if it is exposed to sunlight;

Flammability rating of the coating is at least the required flammability rating of the applied PWB.

8 8	Page 37 of 77 IEC 61010-1	Report No.: PTC230703100	03S-IE0 <sup>-</sup>
Clause	Requirement + Test	Result - Remark	Verdict
4º 4º	Coating complies with the conformity requirements.		N/A
ANNEX K	INSULATION REQUIREMENTS NOT COVERED BY CLAUSE 6.7	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Р

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	Fage 30 01 77	Report No.: F10230703	100033-1201
Clause	Requirement + Test	Result - Remark	Verdict

4.4	TABLE: To	esting in SINGLE FAULT CONDITION - Results	6, 6, 6,	Form A.1	Р
Test subclause	Fault No.	Fault description	Td 4.4.3 (NOTE)	How was test terminated Comments	Meets 4.4.4
4.4.2.2	1	Protective impedance	0 NO NO		Р
4.4.2.3	2	Protective conductor	-0 -0 -0		Р
4.4.2.4	3	Equipment or parts for short-term or intermittent operation	% % % &	Continuously operation	N/A
4.4.2.5	4	Motors	40 <u>40</u> 40		Р
4.4.2.6	5	Capacitors	0 0 0 0	No motors capacitors	N/A
4.4.2.7	6	Mains transformers attach drawing of mans Txs showing all protective devices	% % % 6. 4. 6.	No mains transformers	N/A
4.4.2.8	7	Outputs	χο χ <u>ο</u> χο	Output protection	Р
4.4.2.9	8	Equipment for more than one supply	20 20 20	220V	N/A
4.4.2.10	9	Cooling - air holes closed - fans stopped - coolant stopped	\$0 \$0 \$0 \$0 \$1 \$0		Р
4.4.2.11	10	Heating devices - timer overridden - temperature controller overridden - loss of cooling liquid - overfilled or empty or both			Р
4.4.2.12	11	Insulation between circuits and parts	xo <u>xo</u> xo	See appendix table 4.4	Р
4.4.2.13	12	Interlocks	70 70 70 K 4 6 4	No interlocks	N/A
4.4.2.14	13	Voltage selectors	5. 6. 6.	No voltage selectors	N/A

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

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		IEC 61010-1	00 100000-ILO I
Clause	Requirement + Test	Result - Remark	Verdict

4.4	TABLE: Testin	ig in SINGLE FAULT CONDITION - Results	are are are	Form A.1	N/A
Test subclause	Fault No.	Fault description	Td 4.4.3 (NOTE)	How was test terminated Comments	Meets 4.4.4
		40 40 40 40 40 40 40 40 40	50 50 50	to to to to to to to to to	
		40 40 40 4 <u>0</u> 40 40 40 40 40	₹ <sub>0</sub> ₹ <del>0</del> ₹0	40, 40, 40, 40, 40, 40, 40, 40, 40	
		he he he has he he he he	€0 €±0 €0	to to to to to to to to	
		40 40 40 <del>40</del> 40 40 40 40 40	so s <del>o</del> so	40 40 40 40 40 40 <del>40</del> 40	
			%° %° %°	10 10 10 10 10 10 10 10 <del>10</del> 10	
			0x <del>0</del> x 0x	0 0 0 0 0 0 0 0 0 0 0 0	
			x	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	
		6, 6, 6, 6, 6, 6, 6, 6, 6,	5, 6, 6,	5, 6, 6, 6, 6, 6, 6, 6, 6,	
			8 4 <u> 8</u>		

NOTE Td = Test duration in hh:mm:ss

Record dielectric strength test on Form A.18 and temperature tests on Forms A.26A and / or A.26B.

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

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<u> </u>		1 agc +0 01 11	110port 1101 102007001000	JOU-ILU I
6, 6		IEC 61010-1		6,
Clause	Requirement + Test	1 10 10 10 10 10 1	Result - Remark	Verdict

5.1.3c)	TABLE: Mains supply	10 NO	30	30	310	30	Form A.2	O PAC
	Marked rating		220	V			.00	_
री री	Phase:	( ( )	Q.	8	Q.	Q.	\$ \$ \land \	_
X 0 X	Frequency:	0 X	50	Hz	20	XG.	X0 X0	_
4 4	Current:	× ×	1.3	Α	4	Α	X X X	_
1 1	Power:	\$ \$ \langle	S.C.	W	8	8/10	\$ \$ \$ \$	_
χO χ	Power:	20 20	χG	VA	χG	χG	20 20	_

Te	est	Voltage	Frequency	Current	Power		Comments
N	Ο.	[V]	[Hz]	[A]	[W]	[VA]	
4	1	220	50	1.18	\$10- \$10	259.6	Maximum normal load.

NOTE - Measurements are only required for marked ratings. Initial inrush currents are not regarded.

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6, 6,		IEC 61010-1		6,
Clause	Requirement + Test	to the test to the test	Result - Remark	Verdict

5.3 TABLE: Durability of markings	Form A.3
Marking method (see note)	Agent
1) Adhesive label	A Water
2) Ink printed	B Isopropyl alcohol 70%
3) Laser marked	C (specify agent)
4) Film-coated (plastic foil control panel)	D (specify agent)
5) Imprinted on plastic (moulded in)	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)	3)	Q'	Q.	Q.	Q.	8	Q.	6	8	Q.
Mains supply (5.1.3)	N/A	20	×0	XO.	20	X0	XO.	AC.	20	40
Fuses (5.1.4)	5)	Α	4	4	4	4	4	4	~	Α
Terminals and operating devices (5.1.5.2)	N/A	STO.	S. Co	8/10	S. Co	S.	8/10	S.C.	S. Co	Q.
Switches and circuit breakers (5.1.6)	2)	χG	70	χC	χ0	χG	χG	χŪ	χG	χG
Double/reinforced equipment (5.1.7)	N/A	8.	4	8	4.	8	8.	8.	8	8
Field wiring Terminal boxes (5.1.8)	N/A	200	510	210	2/0	20	2/0	210	2/0	200
Warning marking (5.2)	1), 2)	20	20	20	20	20	2G	2G	20	20
Battery charging (13.2.2)	N/A	6,	6,	8,	8,	6,	6,	6,	6,	6,

Method	Test agent	Remains legible	Label loose	Curled edges	Comments
		Verdict	Verdict	Verdict	
1/2/3	A/B	20 PO 20	∠O P₂O ∠C	20 P20 20	Clearly legible
Supplement	ary information	on:	6, 6, 6,	5, 5, 5,	6, 6, 6, 6,

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6, 6,		IEC 61010-1		8
Clause	Requirement + Test	10 10 10 10 10 10 10	Result - Remark	Verdict

6.2	TABLE: List of accessible parts	yo yo yo yo	Form A.4
6.1.2	Exceptions	.0000.	-C1 -C1 -C1 -
6.2	Determination of accessible parts	री री री री री	( ( ( -
Item	Description	Determination method (note 5)	Exception under 6.1.2 (note 4)
5°1 5°	Scale panel	V, R, J	O N/A
2	screen	V, R, J	N/A

- 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:

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	% % % % % % % % % % % lec	61010-1	, 40
Clause	Requirement + Test	Result - Remark	Verdict

6	TABLE: \	Values in N	IORMAL C	ONDITION	1 8 8	8 8	é é	46.4	4 4	6/2	the state of	100	Form A.5	N/A
6.1.2	Exception	ns	4/0 4	in the time of	10 40 4	in the the	é é	11.2 Cleaning and decontamination						_
6.3.1	Values in	NORMAL CO	NDITION (	(see NOTE 1)	to sto st	is sign sign	10 8	11.3 Sp	oillage	6 40	to sto	in sign	éto.	_
6.6.2	Terminals	erminals for external circuit						11.4 O	verflow	(C \$1C \$	10 ×10 ×	10 810	₹°C	_
6.10.3	Plugs and connections						61° 6	( ) ( )	(° 50° 5	(° 5/° 6	Ko Ko	KO KO	*C	_
Item		Voltage Current						Capa	citance	10 s	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.	μС	mJ	V	μС	mJ		
			20 2	0 20 20	20 70 2	0 20 20	25	0 20	0 20 2	0 70	JG <del>Z</del> G	6 ZO	20	
			8, 8	6, 6,	6, 6	6, 6,	6, 6	4 4	6 6	8, 8	5, 5, 6	8	-	
			€ <u></u> €	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10 40 V	4 <u>-</u> 4	€ - €	₹ <u>-</u> ₹	6 4 <u>10</u> 4	\$ \langle \( \langle \)	1 4 C	60 TO	2	
			é é	6 40 40 °	<0 ₹0 ₹	0 4 <u>0</u> 40	€1 <u>0</u> €		( 4 <u>0</u> 4	0 20	0 40	6 Ko	<u>20</u>	
			<del>~</del>	0 40-40	0 <del>7</del> 0 4	ر کر <del>د</del> کرد	X- X	o , <del>c</del>	0 <del>,0</del>	ر جي ه	, o ,	© <del>,</del> 0	Æ	
			20	0 20 20	20 ZO Z	0 20 20	25	.0 .75	0 70 7	0 20	G 70	, G 7, G	- 	
			4, 4	4, 4,	<u> </u>	8 <u>-</u> 8,	8, - 8	<u> </u>	4 4 4	<u> </u>	<u> </u>	8	<u>-</u>	
			₹ <u>~</u> ₹	10 -10 A	10 4 6	41 410	€ - €	4 <u>-</u> 4	10 4 <u>10</u> 4	\$ \$\frac{1}{2}  \$ \left\{ \text{\$ \left\{ \text{\$ \left\{ \text{\$ \left\{ \text{\$ \	( 40° c	6 40	<u>~</u>	

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.

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	√° √° √° √° √° √° √° IEC 61010-1		
Clause	Requirement + Test	Result - Remark	Verdict

6.3.2	TABLE: Values in SI	NGLE FAUL	T CONDITIO	ON								Form A.6	N/A
Item	Subclause Voltage and					nsient NOTE)		Current				Comments	
(see Form A.4)	fault No. (see Form A.1)	V r.m.s.	V peak	V d.c.	V	s	Test circuit A1/A2/A3	mA r.m.s.	mA peak	mA d.c.	μF (see NOTE)		
		×0×0	×0×0	×0×0	×0×0	, <del>0</del>	0 40-40	(C -XC	×0×0	χ <del>0-</del> χ	0 <u>0</u> 0 0		
		× -×	X -X	× <	4 4	4 4	4 4	<u> </u>	× _×	4 <u>-</u>	4 4 4		
		Q _Q	Q _Q	Q _Q	QQ	Q Q	Q _Q (	0	Ý _Ý	6,-6,	6 5 6		
		\$10-\$10	\$10-\$10	\$10 -\$10	\$10-\$10	\$ - \$	6 40 -40 4	Ko Ko	& & C	& - &	of the to		
		30 <u>-3</u> 0	×0×0	x0-x0	×0-×0	8 <del>0</del> 8	0 30-30	KO =KO	30 <u></u> 30	80 <u>-</u> 8	9 %0 <del>%</del> 0 %0		
		20 <del>-</del> 20	20 T 20	x0 <del></del> x0	20 ZC	20 2	0 20-20	40 <del>-</del> 30	20-20	20 Z	0 20 20 20		
		4 -4	6, -6,	√ - √	6 - 6	6, 6	<u> </u>	<u> </u>	6, -6,	4,-4,	4 4 4		
		€ _ €	₹ <u>₹</u>	20 <u>-2</u> 70	8 _ 8 T	€ <u></u> €	\$ \$ \$ \$ \$ \$	<u> </u>	€ _ €	₹° ₹	100 To 100		

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.

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<u>اير لياي (</u>		rage 45 or 11	116port 1101 102307031000	730-ILU I
6, 6,		IEC 61010-1		6,
Clause	Requirement + Test	10 10 10 10 10 10 1	Result - Remark	Verdict

6.5.2.2	0 50	61°C	é/C	TA	BLE:	Cross	-sectio	onal	area of	bondi	ng con	ductors	O P
	·	Conc	ductor	locatio	n.Cr		.0		Cı	ROSS-5	SECTION	AL AREA	Verdict
		Oon	auctor	localio					O.	1000	[mm²]	AL AINEA	Verdict
8 8 F	rotectiv	e bond	ling co	nducto	or	6,	6,	0	6,	4	0.75	4, 4, 4	P
Suppleme	ntary info	ormatio	on:	20	χG	20	20	~	20	20	20	XO XO	0 X
6.5.2.3	TABI	E: Tig	htenir	ng tord	que te	st	Α	X	Υ	Α	Υ _	Form A.8	N/A
		Con	ductor	locatio	n				Siz	e of so	crew	Tightening torque [Nm]	Verdict
				1		-				<u>-</u>	· .	\(\frac{1}{2}\)	~ - `
- (°	4/0	die die	4	Q.	ST.	S.C.	4	Q'	8	4 <u>-</u>	4/10		- SU
-xº xº	0 00	.KO	20	20	20	20	20	4	10		20	, CO , CO ,	O K
<u> </u>	. X	X	Υ	X	Α	Α	Υ	X	X	Α	Y	<u> </u>	
XO X	) XO	YO.	VO.	YO.	YO.	YO.	70	_ <	1 10	YO.	70	KO KO .	( A

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		r ago to of 77	11000111101 102001001000	OO ILOI
6, 6,		IEC 61010-1		4,
Clause	Requirement + Test	20 20 20 20 20 X	Result - Remark	Verdict

6.5.2.4 TABLE: BONDING impeda	nce of plug-c	connected equip	ment Form A.9	O PO
ACCESSIBLE part under test	Test	Voltage attained after 1 min	Calculated resistance (Maximum 0, 1 or 0, 2 Ω)	Verdict
	[A]	[V]	$[\Omega]$ (NOTE 1)	
Earthing to protective bonding conductor terminal	25	1.275	0.051	PASS

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	8	TABL	E: Bo	NDING I	mped	ance d	of PERI	MANENT	LY CON	INECTE	D EQU	IPMENT	Fo	rm A.10	⊘ P <sub>o</sub>	0
	ACCESSIBLE part under test				CL	Γest ırrent [A]		Voltage attained after 1 min (maximum 10 V) [V]					Verdict			
-8/0	8KO	& CO	STO.	810	é	200	200	-610	200	&XO	2/0	2/0	é la	\$ C	<0 <del>-</del> €	P
- <u>,</u> C	<u>ر</u> ن و	₹ <sup>©</sup>	8,0	<u>ر</u> ن و	<u> </u>	₹ <sup>©</sup>	₹C	- <u>, c</u>	₹C	₹ <u>C</u>	& C	20	8,0	₹ <sup>C</sup> <	<u>, , , , , , , , , , , , , , , , , , , </u>	40
-30	30	550	50	Nº O	NO.	30	50	-30	50	350	30	30	5,G	No.	(° -	Ç

Supplementary information:

6.5.2.6	TABLE: Transformer P	ROTECIVE BOI	Form A.11	N/A	
ACCE	SSIBLE part under test	Test current (see NOTE)	Voltage attained after 1 min (maximum 10 V)	Calculated resistance (maximum 0, 1 $\Omega$ )	Verdict
		[A]	[V]	[Ω]	
-5/0 5/0	a to to to to	\$10-\$10 K	40 40 40 40	So to	NO THE
- 20 20	0 20 20 20 20	207 20	20 20T 20 20	, ,G <del>7</del> 0 ,G	20 - 20
8, 8,	6, 6, 6, 6,	6, -6,	5, 4, 74, 4,	6, 6, 6, 6	2

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:

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	√° √° √° √° √° √° √° IEC 61010-1		
Clause	Requirement + Test	Result - Remark	Verdict

5.4	TABLE: PROTECTIV	/E IMPEDANCE								Form <b>A.12</b> N/A
	·			A sin	gle compo	nent				
	Component	Location	Location			Calculated	Rated		Verdict	Comments
			Working voltage [V]	Current [A]	Power dissipation [W]	Working voltage [V]	tage dissipation			
		£ 40 40 40 40	to see se	, 4 <sub>10</sub> -4 <sub>10</sub> 4	6 40 Kg	1 40 -40 4	0 40 40	40 -40 €	0 40	
		40 40 40 40 4	6 40 4c	, 40 <del>-</del> 40 4	\$ \$P\$	1 40 -40 4		€0 <del>-</del> €0 €	0 40	
		#c %c %c %c %	6 % %	%°-%° ;	· ~ ×	10-10 N	o s <del>a</del> so	% <del>-</del> % %	0 S	
				A combina	ation of cor	nponents				
	Componen	t							Comments	
		0 0 0 0 0	0 XC XC	, 40 , 40 ,	0 X0 X	0 20 20 2	0 20 20	70 YO Y	0 70	
		4. 4. 4. 4. 4.	<u></u>	4 4 4 4	0 0 0 0		G - G - G	4. 4. 4	0 20	
		8, 8, 8, 8, 4	- 6, 6,	6, 6, 6	4 4	8 8 8	4, 4,	5, 5, 5	S 8	
		8 8 8 8 8 8	- 40 40	8 8 8	1 S. S.	1 1 1	4 4 4 <u>-</u>	री री री	4	
		40 40 40 40 4	5 46 46	, 400 400 4	Co Sec Sec	1, 10, 10, 1	6 40 46	. The start of	6 %	
		not be a single electronic de	vice that emp	loys electron co	onduction in a	a vacuum, gas o	r semiconduc	tor. V	0 50	
uppleme	entary information:									

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	1 age 40 01 11	Nepolitivo F 10230703	100033-1201
	√ √ √ √ √ √ √ √ √ IEC 61010-1		
Clause	Requirement + Test	Result - Remark	Verdict

6.5.6	TABLE: Current	- or voltage-limiting device	X X X X		X X X	X X X	× .	Form A.13 N/A
	Component	Location	Meas	sured	Ra	ted	Verdict	Comments
			Working voltage [V]	Current [A]	Working voltage [V]	Current [A]		
		40 40 40 40 40 40 40	40 40 40 40 40	\$ \$0 \$0 \$0	€ € €	€ -€ €	0 KG	
		40 40 40 40 40 40 40	\$ 40 40 \$10 \$1	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	√ √ √ √ √ √	€ - € €	0 <u>4</u> 0	
		40 40 40 40 40 40 40	6 40 40 40 40	\$ \$ \$ \$ \$ \$ \$ \$ \$	€0 € <u>0</u> €0	€° €° €	(O 4 <u>4</u> C	
		20 40 40 40 40 40 A	o the the te	0 40 40 40	€	40 -40 4	( ) <del>(</del> ()	
		20 K K K K K K K	e se se se s	0 % <del>%</del> %	60 A 60	50 <del>-</del> 50 3	0 20	
-		-xo xo xo xo xo xo x			40 <del>40</del> 40	×0 -×0 ×	o <del>x</del> o	
-						X0 <sup>™</sup> X0	0 70	
	_	4 4 4 4 4 4 4 4	4. 4. 4. 4.	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Q Q Q	4 4 4	~ <del>-</del>	

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NOTE 3 - OVERVOLTAGE CATEGORIES

or POLLUTION DEGREES which differ

should be shown under "Comments"

		rage to erri	1100011110111102001001000	00
6, 6,		IEC 61010-1		4,
Clause	Requirement + Test	to to to to the	Result - Remark	Verdict

6.7 TABLE: Insulation requirements - Blo							ock diagram of system -						Form A.14			

Pollu	tion degree		(U &		in Si	Ove	rvoltag	e cate	egory	6	o Sto	Sec Sec
Area	Location	Insulation type	WORKING VOLTAGE			CLEARANCE (NOTE 3)	CRE		E DISTAN TE 3)	Test voltage	Comments (NOTE 3)	
		(NOTE 1)	RMS [V]	Peak [V]	Freq. [kHz]	[mm]	PWB [mm]	CTI	Other [mm]	CTI	(NOTE 2) [V]	
Α	- 20 20	ZO	G	G- x	G 20	D 20 20	5 -20	, ,	5 - 20	ار ر	5 70	70 20
В	-6, 6,	Q <u>.</u> Q	8	8	?`	6, 6,	0,	-2	2	2	0,	5, 6,
C	- X0 XC	7 <del>0</del> 7	O ,	0 x	0 <del></del> <u>X</u>	0 <sub>7</sub> 0 X	) <del></del>	) <	D X	) <u>(</u>	) <u> </u>	-XO XO
D	-4. 4	4 - 4	<	<		A A					<u>X</u>	<u> </u>
EC	-80 80	1 1 P	O /	0-3	OX	1 X0 X	) <u>-</u> K		J-50	-8	J. 40	40 X0
F		-			-						<u>-</u>	
5	-80 80	600	V_3	V-6	Y _31	1 5º 5º	-51	-5	-5°	-51	- <del>2</del> 0	- No

NOTE 1 – Type of insulation: BI = BASIC INSULATION

NOTE 2 - Types of voltage

Peak impulse test voltage (pulse)

DI = DOUBLE INSULATION PI = PROTECTIVE IMPEDANCE r.m.s.

RI = Reinforced Insulation

d.c. peak

SI = Supplementary INSULATION see also Form A.15 for further details

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	(C)	
Clause	Requirement + Test	Result - Remark Verdict

6.7	TABLE: Insulation r	equirements	s - CLEAR	ANCES ar	nd CREEPAGE	s						Form A.15	Р
6.2.2	Examination	Sec Sec Se	o Sto St	Sec. Se	Section &	6.5.4	Protective	Protective impedance					_
6.4.2	ENCLOSURES and pro	tective barrie	ers	o sto st	Sec Sec Se	6.5.6	Current-	Current- or voltage-limiting device					_
6.4.4	Impedance	Impedance							tween oppo	site po	larity		_
Area	Location	Insulation type	Wo	WORKING VOLTAGE CLEARANCE CREEPAGE DISTANCE (NOTE 2)		CTI	Verdict Comme		nts				
	(See Form A.14)	(NOTE 1)	RMS [V]	Peak [V]	Frequency [kHz]	Required [mm]	Measured [mm]	Required [mm]	Measured [mm]				
Α	Different polarities of L/N before fuse	BI	250	420	40 40 40	1.5	3.5	3.0	3.5	100	Р	Pollutio n degre Overvol tage ca	
В	Power supply board to metal enclosure	< <sup>©</sup> Bl <sup>©</sup> <	250	420	40 40 4	1.5	5.6	3.0	5.6	100	Р	Pollutio n degre Overvol tage ca	
Note 1	- refer to Form A.14 for type of ins	sulation shown ir	n the insulat	ion diagram		NOTE 2 - to I	e used for defi	nition of requir	red insulation (	see For	m A.14)	J	
Input	supply voltage:	V	0 0 1	łz 🔬 🦽	0 00 00 0	0 00 00	XO XO	(C _ (C _ (C	X0 X0 X	KO KO	)		
Suppl	ementary information:	X0 X0 X				0 40 40		40 40 40		40 A	ó		

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	rage 31 or 77	Nepolt No.: F10230703	100033-1201
	(C)	to to to to to	
Clause	Requirement + Test	Result - Remark	Verdict

6.7	TABLE: Insulation re	quirements	- Clearar	nces and	Creepag	jes	\$ 8	4	Q 0	1 4 4 4 T	8 8 8		Form A.16	N/A
6.4.2	enclosures or protective	e barriers	6 4 4	10 St. St.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	o de de	9.6.1	Overcurrent protection basic insulation between mains parts				n mains parts	_	
8	Mechanical resistance	to shock an	d impact	o sto st	o sto st	10.5.1	Integri	ity of cl	earances a	nd creepage	e distance	s	_	
Area	Location	Insulation type		Mechanical tests (NOTE)					Test at max.		d after test juired)	Verdict	Comme	nts
	(See Form A.14)		Applied Rigidity force (8.2)				Orop 8.3)		RATED mbient	Clearance	Creepage distance			
			N	Static (8.2.1)	Impact (8.2.2)	Normal (8.3.1)	Hand held/ Plug-i	/   `	10.5.1)	mm	mm			
		éc éc é	o <del>√</del> o √	0 4 <u>0</u> 8	0 4 <u>0</u> 4	S & &	\$ \$ \( \sigma^{-} \)	, ço	₹0 €	Ko Ko	40 -40 4	٥ <u></u>		

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

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		1 agc 32 01 11	1(cport 1(0) 1 0200700100	OOO-ILO I
6, 6,		IEC 61010-1		
Clause	Requirement + Test	10 10 10 10 10 1	Result - Remark	Verdict

6.7.2.2.2	TABLE: Reliabili	ty of	potted componen	ts	Form	A.17 (o <sub>l</sub>	otional)	N/A
14.1 b)	Components and	d sub	passemblies	.00				N/A
Temperature C	ycling Test							
Manufacturer	<u> </u>	<u> </u>	the the the	Silver Silver	20 St	1 2/0	50 5	6 840
Туре	5	ж	-20 20 26	2G 2G	20 20	20	2G 2	0 ,0
Construction	8, 8, 6		6, 6, 6,	6, 6,	6, 6,	8,	6, 6,	, 6,
Potting compou	ind	- الكير	-xc xc xc	50 50	10 NO	NO.	50 5	0 50
CREEPAGE DIST	ANCES measured		-0.0	.6 .6				.00.
CLEARANCES me	easured		5 5 5 5 5 T	of of	8 8	8	2 Q	6/10
Thickness throu	ıgh insulation	- سې	-xo xo xo	%° %°	X0 X0	, KG	X° X	0 ,<0
Adhesive test P	ass/Fail		XXX	X X	X X	Α	× ×	
Test temperatur	re T °C	<u></u> -	200 200 200	STO STO	410 VI	, 410	20 2	60
Cycles at U= A	C 500 V			L	eakage curre	ent (at A mA	C 500 V)	
Number of cycles		Dat	е	68 h /	1 h /	2 h /	1 h	ı /
				125 °C	25 °C	0 °C	25 °	°C
1. Cycle from	× × ×	to	4 4 4	ζ ζ	4- 4	-2	4 4	
2. Cycle from	6-20 No 8	to	to to to	50-51C	1 8 0 VC	-510	40 E	0 810
3. Cycle from	0 20 20	to	<del>7</del> 0 20 20	2G 2G	20 20	-20	2G 7	0 20
4. Cycle from	-6, 6, 4	to	67 6, 6,	8, -8,	67 6,	2	6, 5	, 6,
5. Cycle from	0-30 SO	to	on on op	30-3C	1 P 30	-50	50 5	0 50
6. Cycle from		to		\ <u>-</u>	100			
7. Cycle from	40 40 4	to	( ) ( ) ( )	€~~~	4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 -	2	€ €	C STO
8. Cycle from	0- 00 00	to	0 X 0 X	70-70		-20	X0 X	0 20
9. Cycle from	× × · ·	to	- × ×				X X	- X
10. Cycle from	400 400 4	to	(A) (A) (A)	€ - € C	\$ 100 S	-510	€ 60 E	No Sto
After Cycling Te	est: 👝 🐰	χO	20 20 20	20 ZC	, 20 , XC	1 20	χG χ	0 70
Humidity condit	ioning			2	18 h			
Requirements f diagram)	or dielectric streng	th (s.	insulation	Test volt	age V r.m.s.		Verdict	
Basic insulation	V KIN KIN V	/ r.m.:	s. of of	\$ \$ \$ \$ \$	60 60	8/10	€ - €	10 St
Supplementary	insulation	V	r.m.s.	20 ZO	- 20 XC	J KO	χO- χ	0 0
Reinforced insu	lationV	/ r.m.:	S.	4. 4.	6. 6.	8	6 6	. 6.
NOTE - to be used thermal cycling test	for evaluation of compo . Ref Clause 14.1 and	onents Figure	containing insulation thr 15, option b)	ough solid ins	sulation, when t	he compo	nent standar	d require
Supplementary	information:							

10 10 10

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7		1 490 00 01 11	1100011110111102001001000	OC ILC I
6, 6		IEC 61010-1		6,
Clause	Requirement + Test	do do do do de	Result - Remark	Verdict

6.8	TABL	.E: Dielectric	strength tes	sts O XO	X0 X0 X	Form A.18	O PO		
4.4.4.1 b)	Confo	rmity after app	lication of si	ngle fault cor	nditions¹		P		
6.4	Prima	ry means of pr	otection <sup>2</sup>	é é	2 2 2	री री री री	Р		
6.6	Conn	ections to exte	rnal circuits	NO NO	X0 X0 X9	0 00 00	O P.O		
6.7.	Insula	ition requireme	ents² (see An	nex K)	X X X	X X X X	Р		
6.10.2	Fitting	g of non-detach	able MAINS	supply cords <sup>1</sup>	10 10 10	10 40 40 4	Р		
9.2 a) 2)	Eliminating or reducing the sources of ignition within the equipment								
9.4 c)	Limite	Limited-energy circuit							
9.6.1	Overd	current protection	on basic ins	ulation betwe	en MAINS - parts	to the the	P		
20 20	Test	site altitude	.,		Under 2000m	0 = 0			
8, 8,	Test v	oltage correcti	on factor (se	ee table 10)	9. 9. 9.	8 81 8 8	_		
Location references	from	Clause or	Humidity	Working voltage	Test voltage	Comments (NOTE)	Verdict		
Forms A.1 A.14		sub-clause	Yes/No	V	r.m.s./peak/ d.c.				
L/N to enclosure /  L/N to output / terminal		1	Yes	240	4200 Vdc	1 min	Р		
		1	Yes	Yes 240 4200 Vdc 1 min					

<sup>&</sup>lt;sup>1</sup> Record the fault, test or treatment applied before the dielectric strength test. <sup>2</sup> Humidity preconditioning required.

NOTE: Test duration may be recorded.

6.8	TABL	E: Dielectric	strength tes	ts	5 5 5	Form A.18	Р			
4.4.4.1 b)	Confo	rmity after app	lication of si	ngle fault con	ditions¹	10 10 10 1	O P			
6.4	Primar	y means of pr	otection <sup>2</sup>	4 4	4 4 4	X X X X	Р			
6.6	Conne	ections to exte	rnal circuits	\$10 \$10 A	STO STO STO	100 100 100 100 100 100 100 100 100 100	Р			
6.7.	Insulat	sulation requirements² (see Annex K)								
6.10.2	Fitting	Fitting of non-detachable MAINS supply cords <sup>1</sup>								
9.2 a) 2)	Elimin	Eliminating or reducing the sources of ignition within the equipment								
9.4 c)	Limited	d-energy circu	it <sub>o ko</sub>	2G 2G	20 20 20	20 20 20 2	G P <sub>zG</sub>			
9.6.1	Overci	urrent protection	on basic insu	ulation betwee	en MAINS - parts	6, 6, 6, 6	Р			
to to	Test site altitude									
Location references Forms A. A.14	s from or voltage voltage (NOTE)									

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		1 490 0 1 01 7 7	Hoport Ho 1 102001001000	OO ILOI
6, 6,		IEC 61010-1		6,
Clause	Requirement + Test	to the the the	Result - Remark	Verdict

L	ocation		Mass [kg]	Pull [N]	Verdict	Torque [Nm]			ent			
- CO - A	0 20	-0	, o -, o	5 2G	20 T20	,o -,	o 70	- - - - -	ZG.	.0	-,0	50
6, 6,	8,	8	6, 6,	۶` <u></u> ۱	5, -6,	4) <u>-4</u>	0	57	6,	6,	4	6,
5° 5	0 30	20	30 -X	× 4	30 <del></del> 30	×0 -×	0 40	30	20	XC.	30	8
	c. c.		· -	·	C C.		c.		· ·	· .	· ·	
2 V	8	8	€ - €	Q (	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	€ -€	<u> </u>	67	0	8	Q.	Q.
- xº x	0 0	20	X0 <del>-</del> X0	×0-	χο <del></del> χο	χ6 <del>-</del> -χ	0 -0	<del>7</del> 0	XC.	20	×0	~
<u> </u>		Α	<u> </u>			× -×	<u> </u>	<u></u>	Α	Α	4	Α.
200 E	0 K	Silv.	€	\$ \( \frac{1}{2} \)	₹ <del>-</del> ₹	€ -€	- <del>(1</del> 0	670	8/10	Silver Silver	4/0	Q.
- <sub>Z</sub> O Z	0 70	χO	χQ <del>-</del> χQ	) <sub>Z</sub> G-	χο <del></del> χο	χ0 <del></del> χ	0 <del>3</del> 0	χQ	χÖ	χO	χO	~(
8, 8,	8.	8.	6. 8.	8.	ζ. <u>-</u> ζ.	8. 8	8.	8	8.	8.	8.	8.
40 S	0 %	810	40 A	, <u>%</u> (	40 -40	40 -4	· 40	&O	10	810	200	6
-,6 -	0 70	20	2G -2G	0	JO JO	2G = 2	0 70	70	20	20	2G	(
8, 8,	8,	8	S, S,	Q (	?` <u>-</u> ?`	6, 6	0	5	8,	8,	8,	6,
Dielectric :	strength	test for	1 min. (6.8	.3.1)	40 KO	X0 X	V r.m	ı.s.	AG.	20	40	X

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	rage 33 01 11	Report No., PTG23070	100033-1201
	√ √ √ √ √ √ √ √ √ IEC 61010-1		
Clause	Requirement + Test	Result - Remark	Verdict

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

Part / Location	Clause	7.3.4			(	Clause	7.3.5.	1			Clause 7.3.5.2		Verdict	Comments	
	Continuous	Temporary			Min	imum	gaps [	mm]			Maximum gaps [mm]				
	Contact pressure max. 50 N /cm² @ max. 150 N	max. 250 N / 3 cm² @ max. 0, 75 s	Torso 500	Head 300	Leg 180	Foot 120	Toes 50	Arm 120	Hand 100	Finger 25	Head 120	Foot 35	Finger 4		
	💉	of the first	0 40	10 - 10	\$ C	₹0 <del></del> \$0	- <del>- (</del> 0	√°	0 0	%° - %°	40-40	\$ C	€°		
	10	50 5 <del>0</del> 50 5	0 50	<u> </u>	<i>₹</i>	KOK	- <del>5</del> 0	5°- 5	0 70	×0×0	5G-5G	, <del>5</del> 0	<u> х</u> о		
	30		0 70	√0 <del>-</del> √0	Ä,	KOK	<del>-</del> <del>-</del> <del>-</del> -	\ <del>-</del> \	0 70	χο <del>-</del> χο	XO- X	- <del>T</del> O	<u> </u>		
	20	x x x x	0 70	, x , G = , G	χ <u>.</u> Τ	χο <del></del> χο	<u> 7</u> 0	χ <u>σ</u> χ	0 70	χ0 - χ0	x0 x	× 70	χ <sub>0</sub>		
	%	<u> </u>	0 70	/	S	70 <u> </u>	<u> </u>	V V	0 70	70 - 70 - 70	20 70	<u> </u>			

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<u> </u>		1 agc 50 01 77	1(cport 140 1 102007 c	000000-IL01
6, 6		IEC 61010-1		6, 6,
Clause	Requirement + Test	to to to to	Result - Remark	Verdict

7.4	TABLE	Stability	50 5	6 40	A .	KO 2	30	20	50	Form	A.20A	O BY
0 0	Equipm	ent height /	mass			:	480	) r	nm	35.62	kg	_
( ( )	Equipme	ent (Contai	ners) load	ded	<u> </u>	5	[yes	s <del>/ no</del> ]	Q.	8	6	_
X6 X	Castors	at unfavou	urable position					s / no]	ΛG	XC.	X0 X	_
× ×	Doors, d	drawers and	d movable	e arms clo	osed	:	[ <del>ye</del>	s / no]	Υ	×	Z Z	_
4 6	Doors a	nd drawers	s at unfavourable position:					s / no]	S.	\$ TO	Ó Ó	_
Loca	ation	Tilt angle		Appli	ed force		•		Co	mments		Verdict
		10°	250 N	20% [N]	800 N	4 tim						
Front side	- Y Y	yes	yes		× - ×		,	<u> </u>	Υ	Α	× ×	Р
Left side	400	yes	yes	6 410	\$ C			40	S.C.	810	\$ C	C Rice
Rear side	0 20 0	yes	yes	0 - 0	χΘ.		,	-20	20	χO	χΟ .	O P
Right side	6. 6	yes	yes	8,	Q <		,	3	8.	8,	8, 8	Р
Top side	1 NO 8	yes	yes	6 %	₹ <u>0</u> <		,	20	50	S.C.	000	C BC
Working surface yes			yes	6 -6	25			-50	Jo	20	J.C.	, P, c
Ledge	edge			0	6, - <		•	0	0	8,	6, 6	N/A
Castor / su	pport foot					KO -	30	30	5°	30	50 a	N/A
Castor / su removed	ipport foot							<u>_</u>	, , , ,	30	X0 /	N/A
Suppleme	ntary inform	ation:	5° 5	0 0	×0 /	, C	50	×0	XG.	350	× 6	6 %
7.6	TABLE	Wall mou	nting	C. C.		· ·		· .		Form	A.20B	N/A
6, 6,	Equipme	ent weight.		- Q	ζ <sup>N</sup> (			Q.	kg	8/10	₹ ¢	_
X0 X	Equipme	ent mounte	d as spec	cified by n	nanufactu	ırer:	[yes	s / no]	20	20	χ <sup>0</sup> ,	_
× ×	Equipme	ent mounte	d at plast	erboard (	drywall)	:	[yes	s / no]	Α	Α		_
10 1	More that	an one fast	ener used	b		z	[yes	s / no]	\$1°	Silv.	\$ C	_
20 Z	Test ma	intained (at	fter 5 s to	10 s to fu	ıll load)		1 m	nin	20	χO	χG .	_
Loca	ation		Appli	ed weigh	t			(	Comr	nents		Verdict
		4 tin weigh			2 times eight [kg]							
Mounting b	orackets	( 50 m	50 5	(P 5/0	50	KO 2	30	50	50	30	5 °	10 st

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		1 age of oil i	11Cport 1401 102007001000	JOO-ILU I
6, 6,		IEC 61010-1		, 4,
Clause	Requirement + Test	NO NO NO NO NO	Result - Remark	Verdict

8.2	TABLE: ENCLOSURE rigidity test	Form A.2	1A P
8.2.1	Static test		N/A
8 8	Material of enclosure	Metal <del>/ non-metallic</del>	< −
No No	Preparation for the test:	C NO NO NO NO	_
× ×	Operated at ambient temperature	°C h	_
	Location	Comments	Verdict
1) Top	02 02 02 02 02 02 0	No hazard, no damaged	O P
2) Side left	t / right	No hazard, no damaged	Р
0) D 11	0 40 40 40 40 40 40	No hazard, no damaged	P.C
3) Bottom		ino nazaru, no damaged	- Y - 'Y
	ntary information:	No hazard, no damaged	10 K
Supplemer	ntary information:  TABLE: Impact test	No hazard, no damaged	P
Supplemer		Metal / non-metallic	NO NO
Supplemer	TABLE: Impact test		NO NO
Supplemer	TABLE: Impact test  Material of enclosure		NO NO
Supplemer	TABLE: Impact test  Material of enclosure		NO NO
Supplemer	TABLE: Impact test  Material of enclosure	Metal / non-metallic	NO NO
Supplemer	TABLE: Impact test  Material of enclosure:  Corresponding IK-code:  Preparation for the test:  Cooled to (temperature)	Metal / non-metallic °C	P — — — — — —
	TABLE: Impact test  Material of enclosure	Metal / non-metallic °C Comments	P — — — — Verdict

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6, 6		IEC 61010-1		6,
Clause	Requirement + Test	10 10 10 10 10 11	Result - Remark	Verdict

8.3	TABLE: Drop test				Form A.21B	N/A
8.3.1	Other equipment	.0 .0 .0		.000		0 .0
	Location	Raise	ed up to	Comi	ments	_
		[mm]	30 °			
1)	, 5, 5, 5, 5	6, 6,	8, 6,	4. 4, 4,	6, 6, 6	8,
2)	6 30 30 30 3	C XP XC	20 -X0	A NO NO	10 50 S	O -50
3)		.c <del>c</del> c		<u>-</u>		c, <del>-</del> .c
4)	1 8 8 8 8 8	6 T 6	Q -Q	4- 8 8	6 6 6	-2

Supplementary information:

8.3.2	8.3.2 HAND-HELD EQUIPMENT and DIRECT PLUG-IN EQUIPMENT				
810 810	Material of enclosure				
2G 2C	Preparation for the test:	_			
8, 8,	Cooled to (temperature) °C				
	Location Comments	Verdict			
1) Side		0-0			
2) Edge		2			
3) Corner		0 0			

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·-	Y Y Y Y	Page 59 01 77	Report No.: P1C230703100035-1E01
		IEC 61010-1	to to to to to
Clause	Requirement + Test	to	Result - Remark Verdict

9	TABLE: Protection against the spread of fire			Form A.22	Р
Item	Source of HAZARD or area of the equipment considered (circuit, component, liquid etc.)	Protection Method (9.1 a, b or c)	Protection details		Verdict
1	Measuring circuit	9c	Insulated wire of VW-1, PCB of V-0		Р
3	Other circuit on PCB	20 29c 20 2	PCB of V-0, enclosure of V-0		Р

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		1 age 00 01 11	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	JO-ILU I
6, 6,		IEC 61010-1		
Clause	Requirement + Test	30 30 30 50 50	Result - Remark	Verdict

9.3.2	TABLE: Constructional req	uirements	3 40	20	KO KO	For	m A.23	N/A
14.7	Printed wiring boards	.000	3 0		.00			N/A
Q Q	8 8 8 8 8	6, 6,	Q.	8 6	S. S.	8	Q Q	6
Material tes	sted	Ç2Ç; <u>z</u>	100	X0 /	0 XC	XC.	X0 /	_
Generic na	me			7	C C		7.	_
Material ma	anufacturer		8	QU C		Q.	Q Q	_
XO XC	0 0 0 0 0 0 0	0 20 2	0 20	40	40 KC	XC.	χ0 <sub>-</sub> χ	0 20
• •			Υ	4 4		V.	4 4	_
Colour		<u> </u>		STO S		& KO	<b>₹</b> 10 ⟨	_
Conditionin	g details	j	20				20	_
6, 6,	6, 6, 6, 6, 6	6, 6,	8,	6, 6	5, 5,	8,	6, 6	6,
					San	nple		
			1	2	3	4	5	6
Thickness	of specimen	mm	Q	⟨	0	6,	₹`₹`	<u> </u>
Duration of	flaming after first Application	s of	) <u>, (</u> 0	×0-	(O = (O	×°	50-5	0 ,0
	flaming plus glowing ad application	s	, <u>%</u>	, C	10 30	No.	, - ·	0 <u>%</u> 0
Specimen h	ourns to holding clamp	Yes/No		`.c <del>.</del>	0 -0	- 5		
Opecimen i			3 26 5					o - To
Cotton ignit		Yes/No	Q	Ø Ø	( )	Q1-	₹`` <b>-</b> -₹`	<u> </u>

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	Page 01 0177	Report No.: F10230703	100033-1201
	IEC 61010-1		
Clause	Requirement + Test	Result - Remark	Verdict

.4 TA	ABLE: Lim	ited-energy circuit	. 5, 5, 5, 5, 5	, 6, 6, 6, 6, 6	5 8 8, 1	8, 8, 8,	Form A.24	N/A
Item		9.4 a)	9.4 b) Current I	imitation (NOTE)	9.4 c)	Decision	Comments	
or Locatio (see Form		Maximum potential in circuit voltage r.m.s./d.c. [V]	Maximum available current	Overload protection after 120 s [A]	Circuit separation	Yes/No		
		40 40 -40 A	0 60 60 60-60	0 10 10 10-10	6 26- 20	<0 <del>√0</del> √0	10 10	
,		X0 X0 -X0 X	o ko ko ko <u></u> ko k	0 00 00 00 00	6 X <del>0</del> X0	KO <u>K</u> O KO		
		χο χο <sup></sup> χο χ	0 20 20 20 0	0 40 40 40 40	0 20 0	40 <u>40</u> 40	T_0 _0	
•		8, 8, 8, 8	0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 . 6, 6, 4	0 0 0 0 6 8 8 8	- 20 20	
		8 8 <u>8</u> 8	4 4 4 4 4	\$ \$ \$ \$ <u>\$</u>	1 4 - 4 · ·	6, 5 <u>,</u> 5,		
•		40 40 40 4	2 42 42 42 42 4	~ 40 40 40 -40 4	C 40 40	the state state	<u>-4</u>	
		40 40 -40 4	5 40 40 40 <del>1</del> 0 4	2 40 40 40 -40 4	6 40 40 V	10 40 V	-10 10	
•		% %	0 %0 %0 %0 <u>-</u> %0 %	0 %0 %0 %0 %0 %	6 40 40 V	SO SO SO	-4° 4°	

TRF No. IEC61010\_1P

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in the second se	r age oz or rr	Report No.: 1 10230703	7100030-IE0 I
	√ √ √ √ √ √ √ IEC 61010-1		
Clause	Requirement + Test	Result - Remark	Verdict

9.5	TABLE: Requirements for equipment containing or using flammable liquids Form A.25				
	Type of liquid		9.5 Flammable liquids	Verdict	
		b) Quantity	c) Containment		
	1° 1° 1° 1° 1° 1° 1°	£, 4, 4, 4, 4, 4, 4, 4, 4	-4° 4° 4° 4° 4° 4°		
		40 Kg 40 Kg 40 Kg Kg Kg	-10 to to to to to		
	to to to to to	20 40 40 40 40 40 40 A	-6 6 6 6 6 6		
		20 K0 K0 K0 K0 K0 K0 K0 K0	-40 40 40 40 40 40 40		
		70 00 00 00 00 00 00			
	0 0 0 0 0 0 0 0	$\frac{1}{2}$ 0 $\times$			
	4, 4, 4, 4, 4, 4, 4,		3, 8, 8, 8, 8, 8, 8,		
	4, 4, 4, 4, 4, 4, 4,				
		50 40 40 40 40 40 40 40 40	-2° 6° 6° 6° 6° 6° 6°		

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<u>اير لايل ل</u>		1 age 05 01 11	116port 110 1 102307031000	JOO-ILU I
6, 6,		IEC 61010-1		6,
Clause	Requirement + Test	ko ko ko ko ko ki	Result - Remark	Verdict

10.	TABLE:	Temperature I	Measureme	ents			Form A.26A	O PAC
10.1	Surface	temperature lim	its - NORM	AL CONDITION	and / d	or SINGLE FA	AULT CONDITION	Р
10.2	Tempera	ture of winding	s – NORMAL	CONDITION 8	and / or	SINGLE FAU	LT CONDITION	N/A
10.3	Other ter	mperature meas	surements	KO KO	χ0	KO KO	20 20 20 SX	O PXC
Operatin	g conditions:	Load: t the mu According to t					s every each 15minute er.	es O AC
Frequen	cy:	50 Hz	Test room	n ambient tei	mperati	ure (ta):	24.2 °C	0 ,0
Voltage	9	198/242 <sub>V</sub>	Test dura	tion	2 h 10 min	6,		
	Part / Loca		198V50Hz [°C]	242V50Hz [°C]	t <sub>max</sub> [°C]	Verdict	Comments	
1.Power	cord	50 50 51	34.3	34.8	70	O PO	No No No N	0 50
2.Input w	/ire	C. C. (	35.2	35.7	80	Р		c. c
3.Switch	shell	10 4/0 4/	32.1	32.6	95	Р	\$ \$ \$ \$ \$	4
4.PCB	KO KO	40 40 K	48.7	48.9	130	O P.O	40 40 <del>4</del> 0 4	0 70
5. Motor	4 4	4 4	59.5	61.3	100	Р	4 4 4 4 4	4
6.Interna	l wiring	10 20 St	51.3	51.8	80	Р	50 50 50 50 50	0 00
7. Comp	ressor	20 20 20	62.3	63.5	100	0 P20	2G 2G <del>2</del> G 2	6 20
8. Powe	r switch	5, 6, 6,	33.8	34.2	70	Р	6, 6, 5, 6	6,
9.Screen	KO KO	50 50 5°	33.4	34.1	80	P	NO NO NO N	0 50
10.Ambie	ent		30.0	30.0		Р		- 3

NOTE 1 -tm = measured temperature

tc = tm corrected (tm-ta+ 30°C or max. rated

ambient)

tmax = maximum permitted temperature

NOTE 2 - see also 14.1 with reference to component operating conditions
NOTE 3 - Record values for normal condition and / or single fault condition in this Form use additional form if

NOTE 4 -see Form A.26B for details of winding temperature measurements

10.2	TABLE: To Resistance				asureme	ents			Form A.26B	N/A
4.4.2.7	MAINS tran	sformers	2G 2	0 20	χG.	,G ,G	20	χG ,	O 20	G 2G
14.2.1	Motor temp	peratures	5, 6,	8,	6, 6	8,	8,	6, 6	, 6, 6	6,
\$ \$	conditions:	Hz	Test ro	om ambie	ent tempe	erature (ta	1/ta2) :	6 6 8 18	°C (initia	al / final)
	0	V	Test duration					XO X	0 0	
Part / De	esignation	Rcold $[\Omega]$	Rwarm $[\Omega]$	Current [A]	<i>t<sub>r</sub></i> [K]	t <sub>c</sub> [°C]	t <sub>max</sub> [°C]	Verdict	Comme	ents
								, ,		
	0 0 1	Cı -	C) -	5 20	-C1 -	JO TO	.51	2 C1	ō	0 0

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		1 ago 00 01 11	11000111101 102001001000	OO ILOI
6, 6		IEC 61010-1		6,
Clause	Requirement + Test	1 40 40 40 40 K	Result - Remark	Verdict

10.2	TABLE: Temperature of windings Resistance method Temperature Measurements Form A.26B									N/A	
4.4.2.7	Mains tran	sformers	50 51	0 %0	50 S	6 40	30	is i	6 36	KO KO	
14.2.1	Motor temp	peratures	VC1 3	51 261	>C1	0 0	-0	C	.C1	-C1 C1	
Operating	conditions:	8) S		0 <sup>3</sup> /0 6,	₹` ₹	6 %0	8	€, €	60 %c 3	40 40 5, 8,	
Frequency	·:	Hz	Test ro	om ambie	nt tempe	rature (ta	1/ta2).:	1	°C (init	ial / final)	
Voltage		V	Test du	Test duration:					h min	4	
Part / De	Part / Designation		Rwarm $[\Omega]$	Current [A]	<i>t<sub>r</sub></i> [K]	t <sub>c</sub> [°C]	t <sub>max</sub> [°C]	Verdict	Comm	ents	
-xº x	0 60 6	×0-	(O = K	2 60	X0	6 40	×0-	KG- 8	9 60 /	KO KO	
			· ·			C			- \	C. C.	
-2 0	410 4	4 - C	6 P	₹ <u>-</u>	⟨°⟨	6 VI	é	ć~-	- 4/0 ¢	The state	

NOTE 1-  $R_{cold}$  = initial resistance

 $t_r$  = temperature rise

R<sub>warm</sub> = final resistance

 $t_c = t_r \text{ corrected } (t_c = t_r + [40 \text{ °C or max RATED ambient]})$ 

t<sub>max</sub> = maximum permitted temperature

NOTE 2 - Indicate insulation class (IEC 60085) under comments (optional)

NOTE 3 - Record values for NORMAL CONDITION and / or SINGLE FAULT CONDITION in this Form use additional form if necessary

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<u>, , , , , , , , , , , , , , , , , , , </u>		rage oo oi 11	Report No., F 102307031000	JJJ-ILU I
6, 6,		IEC 61010-1		6,
Clause	Requirement + Test	10 10 10 10 10 1	Result - Remark	Verdict

10.5.2	TABLE: Res	istance to heat of non-metallic ENCLO	SURES	Form A.27	N/A
.0.	Test method	used:	.00.	.0 .0 .0	_
8 8	Non-operativ	e treatment:	110	8 8 8	N/A
X6 X	Empty ENCLO	SURE:	(Q) (O)	N/A	
× ×	Operative tre	atment:	[ ]	NA	
á á	Temperature	during tests:	70 °C	40 40 40 A	_
Des	scription	Material		Comments	Verdict
4 4	_	4 4 4 7 4 4 4	Α Α	A A A	<u> </u>
50 S	0 00 0	TO TO TO TO TO	XO XO	10 10 10	20 X
Dielectric	strength test (6.	8)::		V [r.m.s./peak/d.c.]	
	Vithin 10 minute criteria of 8.1.	s of the end of treatment suitable tests i	n acc. to 8.2	2 and 8.3 must be con	ducted

10.5.3	TABLE: Ins	ulating material	Form A.28	SO PSO
10.5.3 1)	Ball-pressure	e test	20 20 20 20 20	-C1 -C1
6, 6,	Max. allowed	d impression diameter	2 mm	_
F	Part	Test temperature [°C]	Impression diameter [mm]	Verdict
PCB	5 X0 X0		1.10	A PAC

	Part		Vi	cat sof	tening t [°C]		rature		Thickne	ess of s [mm]	sample	Ver	dict
-20 20	XO XO	XO X	0 0	40	χG	χO	χO	X	1 40	χO	S	χ0.	- 20
4. 6.	6. 6.	6. 6.	9.	8.	Q	8.	8	8	8	6.	8.	ζ.	4
Supplementa	ry informatio	n:<	350	20	20	20	20	1	10	20	20	30	1

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	i age or or i	Nepolitio 1 10230103	100030-IE01
	√° √° √° √° √° √° IEC 61010-1		
Clause	Requirement + Test	Result - Remark	Verdict

8	TABLE: Mechanical resistance to shock and impact	Form A.30	Р
11	Protection against HAZARDS from fluids and solid foreign objects		

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	e 8 tests			Clause	11 tests					
Location (see Form A.14)	Static (8.2.1) 30 N	Impact (8.2.2)	Normal (8.3.1)	Handheld Plug-in (8.3.2)	Cleaning (11.2)	Spillage (11.3)	Overflow (11.4)	IEC 60529 (11.6)	Working voltage [r.m.s./d.c.]	Test voltage [r.m.s./peak/d.c.]	Verdict	Comments
Enclosure	30N Ф12mm	<		1m		\$ \$ \$ \$ \$	20 20 20	\$ <u>\$</u> \$	1000Vac	5312V r.m.s	Р	Handheld equipment
Probe assembly	20N Ф12mm		<0	1m,		40-40	6 4 <del>6</del> 46	€ 50 €	1000Vac	5312V r.m.s	Р	Tested according to EN61010-031cl, 8.1, 8.2 and 8.3

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

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1 1 1 1 1				
6, 6,		IEC 61010-1		4, 4,
Clause	Requirement + Test	1 20 20 20 20 20 2	Result - Remark	Verdict

	TABLE: I	eakage and	rupture at	t high press	ure 🔗 🔗	Form A.31	N/A
Part		Maximum permissible working pressure [MPa]	Test pressure [MPa]	Leakage Yes / No	Deformation  Yes / No	Burst Yes / No	Comments
-x0 x0 x0	20 20	XG- XG	X0X	0 20 2	0 20 20	X9 X	)X 0 X ±
NOTE - see also Annex	G with requir	ements for USA	and Canada.	4. 4	4. 4.	6. 6.	6. 6.
Supplementary info	rmation:	No No	é é	0 80 8	c sic sic	of of	o de de
11.7.3	TABLE: I	_eakage fron	n low-pres	sure parts	0 20 20	Form A.32	N/A
11.7.3							
Pa	art	•	essure	Leakage Yes / No	C	comments	<u> </u>
20 20 20	art XO XO	•	essure		O 20 20	comments	
XU XU XU	art X	•	essure	Yes / No	C	comments	

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		1 age 00 0111	Troport Trop 1 To 2 do 1 do 1 do 1	000 .
6, 6,		IEC 61010-1		6,
Clause	Requirement + Test	to to to to the	Result - Remark	Verdict

12.2.1	TABLE: Ionizing	radiation	P KO	Form A.33 N/A
12.2.1.2	Equipment intende	ed to emit radiation	G - oG	6 6 6 6 6 6
Loca	ations tested	Measured values [µSv/h]	Verdict	Comments
6, 6,	6, 6, 6,	6, 6, - 6, 6,	<u> </u>	5 6, 6, 6, 6, 6, 6
50 SC	o do do do	1 10 10 10 10 10 10 10 10 10 10 10 10 10	0 <u>4</u> 0	40 X0 X0 X0 X0 X0
		C 5 C	<u>-</u> -	
2 0 0 C	1 1 1	1 1-1 1	<u> </u>	
25 OX	0 0 0 0	10 10 10 10 11	<del>ی</del> و	£ 10 10 10 10 10
X X	X X X	X X X X	<u></u>	- X X X X X
Sie Sie	1 40 40 40	40 40 40 4	· 40 .	20 40 40 40 40 40 40 1
χG χC	0 20 20 20	20 2 <del>0</del> 20 2	0 <del>,</del> 0	O <sub>X</sub> O <sub>X</sub> O <sub>X</sub> O <sub>X</sub> O <sub>X</sub>
Q. Q.	4. 4. 4.	4. 4. 4. 4.	<u> </u>	- 6. 6. 6. 6. 6. 6.
30 3C		10 10 10 V	<u> </u>	
supplemen	tary information:			
20 X	2 40 40 40	tended to emit radiatio	o Ko	Form A.34 N//
20 X	Equipment not in	tended to emit radiation	$\cup$ $$	Form A.34 N/. 1 μSv/h —
2.2.1.3	Equipment not in	<del></del>	$\cup$ $$	20 20 20 20 10 10 10 10 10 10 10 10 10 10 10 10 10
2.2.1.3	Equipment not in	ctive dose rate at 100 mr	n:	1 μSv/h —
2.2.1.3	Equipment not in	ctive dose rate at 100 mr	n:	1 μSv/h — Comments
2.2.1.3	Equipment not in	ctive dose rate at 100 mr	Verdict	1 μSv/h — Comments
2.2.1.3	Equipment not in	ctive dose rate at 100 mr	verdict	1 μSv/h — Comments
2.2.1.3	Equipment not in	ctive dose rate at 100 mr	Verdict	1 μSv/h — Comments
2.2.1.3	Equipment not in	ctive dose rate at 100 mr	Verdict	1 μSv/h — Comments —
2.2.1.3	Equipment not in	ctive dose rate at 100 mr	Verdict	1 μSv/h — Comments —
2.2.1.3	Equipment not in	Measured values [μSv/h]	verdict	1 μSv/h — Comments
2.2.1.3 Loca	Equipment not in	Measured values [µSv/h]	verdict	1 μSv/h — Comments

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		1 age 10 of 11	116port 110 1 102307031000	JO-ILU I
6, 6,		IEC 61010-1		6,
Clause	Requirement + Test	20 20 20 20 X	Result - Remark	Verdict

12.5.1	TABLE: Sound level	SO.	10 NO	X0 2	30	20	30	Fo	rm A.3	35	N/A	
Locations tested		maxi	leasured mum sound ssure level dB(A)		Calculated maximum sound power level							
	tor's normal position ystanders' positions	y	~O ~O	X 3	, Či	Y ZO	٧ 	VO.	.G	-2G	- ZG	
a)	4, 4, 4, 4,		?` ?`	4								
b)	20 20 20 X	3 50	No No	X0 -	30	20	20	XC.	20	20	10	
c)	C C C		<u>-</u>		· ·	· A.		· ·	· .			
d)	\$ \$ \$ \$ \$	Q .	₹ <del>-</del> ₹	6/		Ó.	8	8	8	8	6	
e)	X 0X 0X 0X	0 10	XG- XO	XO	ζŪ	20	XQ.	χG	70	20	70	
f)	4 4 4 4	×	< <u>-</u> <	8. 7		4	4	8	Α,	4	8	

Supplementary information:

12.5.2 TABLE: Ultrasonic p	ressure	6, 6,	Form A.36 N/A
Locations tested	Meas	ured values	Comments
	[dB]	[kHz]	
At operator's normal position	67 6	6-6-60	
At 1 m from the ENCLOSURE	χO χO .	O	XO XO XO XO XO XO

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

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		1 agc / 1 of / /	1(cport 140) 102007 C	O TOOOOO ILOT
6, 6		IEC 61010-1		4, 4,
Clause	Requirement + Test	30 50 50 50	Result - Remark	Verdict

	13.2.2	6	TABL							6	6	0	6	го	rm A.3	6	N/
)			Batter	y load	and ch	narging	circui	t diagra	am:								
)																	
)																	
)																	
j																	
)																	
2																	
2																	
)	20	20	20	20	<u> </u>	20	20	20	20	20	20	20	χO	40	χC	20	
	Υ.	X	Batter	y type.		<u>.</u>		·····		:		×	×	×	×		_
2	S.C.	& CO	Batter	y manı	ufactur	er/mod	del/cata	alogue	No		450	\$ TO	STO.	Section 1	STO.	<	_
j	20	χ0	Batter	y rating	gs					<u>.</u>	χO	20	χO	χO	χG		_
	8.	8	Rever	se pola	arity in	stalme	nt test	8.	8	Α.		8	8.	8	8.	4	
1			Single	compo	nent fa	ailures			Verdict								
)				Compo	onent					Oper	n circui	t		S	hort cir	cuit	
ļ	_2 ? `	8,	8.	8.	8.	8,	8.	8,	8,	8.	2	8.	8	8,	₹	8,	
2	-6KO	é/O	é.C	é C	20	é/G	é.C	QXO	20	20	-XC	é C	0	é.C.	ézo.	ox C	
3		_,0	_0	_,0	χ0.	~0	_,0	_ζΟ	_,0	_,0		_,0	.0	_,0	<u>,</u> 5	_,0	
ļ	?`	8,	8,	8,	8,	8,	8,	9	8,	8,	-Q`	8,	8	8,	8,	6,	- 1
١	<del></del> 40	£10	€K0	61°	410	φ <sub>C</sub>	é(C	£10	\$1º	40	-610	61°	60	61°C	₹ <u></u>	£10	_

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<u> </u>		1 agc 12 of 11	1(cport 1(0) 1 020070010	0000-IL01
6, 6		IEC 61010-1		6, 6,
Clause	Requirement + Test	20 20 20 20	Result - Remark	Verdict

Reliab	ility test											
	Component	Type (NOTE)	Verdict	Comments								
<u>-</u> ¢`	6, 6, 6, 6,	4, -4,	4, -4,	4	8,	4	4	6	6,	4	6,	
-20	10 10 10 10	10-X0	50-50	-50	30	20	30	30	30	50	50	
			- C C			`.c.	· .c.		`.c.			
-2		₹ <del>-</del> ₹	€ €	-2	8	Q.	Q.	Q.	8	2	Q.	
-20	20 00 00 00	X0 X0	X0 X0	-40	20	20	20	20	20	20	×C	
<u> </u>	X X X X	_ × _ ×	× ×		×.	×.	× _	×	×	×	×	
S. C.		1 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	200 200	-2	Silv.	Q'IV	8/10	Q.	S. C.	S. C.	Ser.	
- 40	20 20 20 20	XO- XO	∠C ∠C	-,0	20	χ0	χG	20	20	20	χς.	
	X X X X	× _ ×	× _ ×		×	X	Υ	4	X	8	×	
- NO	to to to the	1 20- 200	\$10- \$10	-2/0	S.C.	S.C.	S.C.	S.C.	STO.	of Co	6	
-20	20 20 20 20	, o- , o	χO <sup></sup> χO	- 20	ζ0	20	رن	ر0	ین	20		
8.	6, 6, 6, 6,	8° 8°	8, -8,	_2	8.	8.	8.	8.	8,	8.	8.	
-XO	20 20 20 X	1 20- 20	40-4C	-50	2/0	20	20	20	20	20	55	
	0.0.0.0			- 0				.0		.0		
<u> </u>	6, 6, 6, 6,	4 -4		-2	6	4	6	6	6	6	4	
-10	20 20 20 20	X0-X0	50-5C	-50	20	á <sup>©</sup>	S(C)	SC	50	50	5	
	_6_6_6_6						<u> </u>			<u> </u>		
-Ó	and the ten	4 4 T	€ €	-2/1	8	Q.	Q.	S. C.	Q.	Q'	Q.	
- ,0		20 <del></del> 20	zO zO	20								

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

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		rage 13 01 11	Report No., F 162307031000	J33-ILU I
6, 6,		IEC 61010-1		
Clause	Requirement + Test	, the to the to	Result - Remark	Verdict

4.4.2.7	TABLE: MAI	NS transformer			Form A.39	N/A
4.4.2.7.2	Short circuit	C. C. C.		C	N/A	
14.6	MAINS transf	ormers tested outside	100 SC S	2 4 4 4 4	N/A	
Туре	ىكىسىدىسىدى	20 20 20	X0 X0 X0	, XO XO	KG KG KG	_
Manufactur	er:	X X X	4 4 4	4 4 4	( V V V	_
Test in equ	ipment	10 10 10	₹° ₹° ₹°	, <u>40, 40, 4</u>	10 10 10 10 1	~ \( \lambda \)
Test on bei	nch o o	25 Dx Dx	20 20 20	20 20	20 20 20	0 ,0
Test repeat	ted inside equip	oment (see 14.6)	6, 6, 6,	4, 4,	( 4 4)	8
Optional –	Insulation class	s (IEC 60085) of the	lowest rated wind	ling:	to to to	_
Winding ide	entification	20 20 20	0 000	- CT - CO	Ja -Ja Ja	
Type of Pro	tector for wind	ing (NOTE 1)	4 5 6 6	₹ <u>-</u> ₹		_ <
Elapsed tin	ne 🚫	10 10 10	10 10 10	X0- X0	40 <del>4</del> 0 40 4	(P) (S)
Current, A	primary	× × × ×		- X - X - X		- X
s	econdary		4 4 4 4 A	₹°- ₹°	2 0 0	7
Winding te	mperature, °C	primary	KO 40 KO	XG- XO	0 <u>-</u> 0	(a) X
(see NOTE 2	2) secondary		<u>-</u>	- Q		- 4
Tissue pap (Pass / Fail	er / cheeseclot	h OK ?		₹° ₹°		
Voltage tes	ts (see NOTE 3	10 0 0	\$ \$1 \$1	Ø Ø	2 4 6 6	- 60
Primary to	secondary	-x0 x0 -x0	0 x0 x0	0 00	20 20 20 A	
Primary to	core	X 4 - X	<u> </u>	4 4	( Y Y Y	
Secondary	to secondary	₹0 ₹0 <u>-</u> ₹0	4 4 4 K			6 54
Secondary	to core	-20 20 -20	25 Ox Ox	0 20 0	20 20 20 .	0, 0
Verdict	6, 6,	6, 6, 6,	4 6 6	- Q	<u> </u>	- 6
NOTE 2:	Record the voltage	ion	- R = resista nce in cold and warm	condition in Form A. beak) and for	26B.	

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		1 age 14 of 11	116port 1401 102307031000	JU-ILU I
6, 6,		IEC 61010-1		
Clause	Requirement + Test	No No No No No	Result - Remark	Verdict

4.4.2.7	TABLE: MA	INS transformer	Form A.40	N/A		
4.4.2.7.3	Overload te	sts (for MAINS transfor	. c. c.	0 0 0	N/A	
14.6	Mains trans	formers tested outside	2 4 4	N/A		
Туре		KO KO KO Z	6 20 XC	XO XO	40 40 40 A	_
Manufactur	er	4 4 4 4	- 4 - 4 -	4 4 4	(	_
Test in equ	ipment	10 10 10 1	40 440 Ac	10 80 C		~ \langle
Test on ber	nch o o	ر کے کہ کے	ی کړ ک	20 20	20 20 20 Z	0 2
Test repeat	ed inside equip	oment (see 14.6)	6, 6,	4, 4,	(, 6, 6, 6	4
Optional –	Insulation class	s (IEC 60085) of the lo	west rated win	ding:	No No No	_
Winding ide	entification		0 0 0	\ <del>0</del> \0	0 -0 0	τ,
Type of Pro	tector for wind	ing (NOTE 1)	6 6 6 C	Q	<u> </u>	_ (
Elapsed tim	ie XO XO	40 40 KO X	0 x0 x0	X0_ X0	30 30 30 3	9 3
Current, A	primary	Y X X X	C. C. C	C C.	X	
S	econdary		<u> </u>	Q - Q	8 <u>1</u> 6 6	7 6
Winding ter	nperature, °C	primary	0 20 20	XC- XO	, o <sub>k</sub> o <sub>k</sub> o <sub>k</sub>	e ,
(see NOTE 2	2) secondary		- <del>-</del> ×	·	<u> </u>	= <
Tissue pape (Pass / Fail	er / cheeseclot	h OK ?	0 0 0	₹° ₹°		Z &
Voltage tes	ts (see NOTE 3)	\$ \$ \$ \$ \$	67 6V	€ - € C	2 4 6 6	- Q
Primary to s	secondary	<del>-</del> 0 <u>70-</u>	0 00 00	XO XO	0 0 0 0	
Primary to	core		× - ×	× × ×		_ <
Secondary	to secondary	£ 40 - 40 4	0 5 <u>10</u> 50	100 pm		( )
Secondary	to core	<del>70</del> 70- 70 /	0, 0, 0	20 ZO	0 0 0 0	0 4
Verdict	6, 6,	4 4 4 4	6. 6.	4 <u>-</u> 4	<u> </u>	_
NOTE 1: NOTE 2: NOTE 3:	Record the voltag	ction	R = resistar ice in cold and warr	n condition in Form peak) and for	A.26B.	

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		raye 13 01 11	1\epoit No F 1\c2307\c31\c00\c3c	)-ILU I
		IEC 61010-1		
Clause	Requirement + Test	Re	esult - Remark Ve	erdict

14.8	TABLE: Cir	cuits used to	limit TRANSIENT	OVERVOLTAG	ES O							Form A.41	N/A
Circuit	/ Designation	Overvoltage Category	MAINS voltage [V r.m.s.]	Test voltage [V]	t <sub>m</sub> [°C]	t <sub>c</sub> [°C]	t <sub>max</sub> [°C]	Ignited Yes / No	Safely suppressed Yes / No	Properly functional Yes / No	Verdict	Commo	ents
		- XC	χο <del>,</del> το χο	0 V <u>0</u> V0	χο <del>-</del> χο	XO -XO	XO_XO	χο <del>,</del>	0	XO <u>X</u> O			
		- 80	40 40 40	70 7 <u>0</u> 70	20 ZG	70 - 70	70 70	40 40 40	X	20 ZO			
		- 8	8, 8, 8,	5, 6, 0	3, 3,	5, 6,	6, 6,	4, 4, 4,	5, 6, 6,	6, 6,			
		💎	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		4	5 - 5/L	8 - 8 C	\$ \$\frac{1}{2} \$\frac{1}{2}\$	5 5 5	₹ <u>₹</u>			
-		💎	40 4 <u>70</u> 40	€ 4 <u>°</u> € 6	No No	10 -2/C	10-10	40 40 40	10 4 10 40	10 To			
		¢ <sup>1</sup>	\$ \$\frac{1}{2} \$\frac{1}{2}\$	10 1 10 10 10 10 10 10 10 10 10 10 10 10	10 40	200 -200	\$10-\$10	40 4 <u>70</u> 40	50 50 50	\$10 PC			
-		& <sup>C</sup>	40 4 <u>0</u> 40	₹° ₹ <u>°</u> ₹° ,	Ko Ko	5 <sup>10</sup> −5 <sup>10</sup>	& C-& C	40 4 <u>0</u> 40	Sec Sec Sec	<sup>₹</sup> C <del>€</del> C			
		<	X0 X0 X0	χο <u>χο</u> χο	KO -KO	√0 <u>-</u> √0	X0_X0	20 20 XC	0 10 KG	KO <u>4</u> 0			

NOTE -  $t_m$  = measured temperature

 $t_c = t_m$  corrected ( $t_m - t_a + 40$  °C or max. RATED ambient)

 $t_{\text{max}}$  = maximum permitted temperature

Conformity is checked by applying 5 positive and 5 negative impulses with the applicable impulse withstand voltage, spaced up to 1 min apart, from a hybrid impulse generator (see IEC 61180-1).

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			1 agc 10 01 11	report No i	102001001000	
20	XO XO XO XO	3 40	IEC 61010-1	0 0 0	40 40 X	0 0
Clause	Requirement + Test	X	4 4 4	Result - Remark	4 4 4	Verdict

Anne		ABLE: Qualif or protection				al coa	ating				Fo	rm A.4	2 N	I/A
Techr	nical properti	es												
Manu	facturer		.á	\$100	Q.	STO.	Silver Silver	4	\display \( \frac{1}{2} \)	100	\$1°		_	
Туре				.Cı	C1	-C1	-61			Cı	,C1		_	
Meet	requirement	s of ANSI / UL	(P)	[yes / ı	no]	Q.	Q'	4	4	8	Q .	Q1	N/A	Ó
Manu	facturer decl	aration of coa	ting	[yes / ı	no]	-6	20	2Ö		5 20	20	20	N/A	
Opera	ating tempera	ature of coatin	ıg	[ ] °C	8,	6,	6,	6,	6,	6,	8,	6,	N/A	0
Comp	arative track	ing index (CT	T)	[][	20	20	χO	χ0	1	و کر ت	χG	χG	N/A	
Insula	ition resistan	ice	9	[ ] MΩ	2	8	8.	8.	₹.	6.	8.	83	N/A	8
Dielec	ctric strength		(0)	[ ]V	20	70	40	40		0 00	20	20	N/A	3
		equired)	950		no]	Υ _	X	×	- X	× .	Υ	X	N/A	X
7/	V	g	70	010	20	550	510	-510	1	J 20	20	200	N/A	6
Prepa		test specime		[yes / ı	no]								N/A	
Item	Test conditioni ng	Parameter	Td			Sam	ples			Verdict		Comm	nents	
			h	1	2	3	4	5	6					
1.	Cold	\$10 \$10	24	8×2	₹ <u>~</u>	€ <u>~</u>	450	4	40	4	4			
2.0	Dry heat	2G 2G	48	20	70	20	70	70		3 70	70	20	20	- 6
3.	Rapid temp. change	40 40	\$10	8.T	₹ <u>`</u>	₹ <sub>0</sub>	\$ C	\$ C	8	\$ 100 \$ 100	S S	40	\$ C	0 0
4.	Damp heat	of of	24	₹-	Q <sup>C</sup>	₹ <sup>7</sup> 0	₹\C	8 C	61	810	₹C	810	é Co	Ó
5.0	Adhesion of coating	5 N	\$ CO	é.€	Q <sup>C</sup>	er Co	₹ <sup>©</sup>	\$ C	-K	**C	-XC	& C	& CO	Ó
6.	Visual inspection	Sic Sic	& CO	é.	é.	₹ <sup>0</sup>	8 <sup>7</sup> 0	\$\langle	Q.(	\$ <u>7</u> 0	₹C	& C	810	ó
7.0	Humidity	XO XO	48	20	20	40	<del>4</del> 0	<del>_</del> <0	<	0 <u>+</u> 0	×CO	XO.	XC.	2
8.	Insulation resistance	≥ 100 MΩ	X0	4 <u>0</u>	YO.	70	70	X0	<u>-                                    </u>	3 40	X0	20	40	7
9.	Visual inspection	20 X0	NO.	50	× 0	× 0	XO	X-	<u>-</u>	× × ×	× 0	370	30	7
	S	3 3		-										
10.	(m)													

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1			1 agc 11 o	117 Report No., 1 1020	07 00 100000-1E0 1
, O ,	0 00 00	KO KO K	IEC 61010	0-1 0 0 0 0 0	0 X 0 X
Clause	e Requirement	+ Test	4 4 4	Result - Remark	Verdict

	TABLE: A	dditional or special tests conduc	ted	Form A.43	N/A
Clause and na	me of test	Test type and condition	Observed	results	
	4			7 7	-

TABLE 1.	A: List of compone	ents and circuits	relied on for sa	fety		Р	
Unique component reference or location	Application/function	Application/function Manufacturer / trademark (NOTE 1)		Technical data (NOTE 2)	Standard	Mark(s) of conformity evidence of acceptance (NOTE 3 and 4)	
o 1.	Input wire	Hunan Valin Cable Co., Ltd.	GR-B8	- 0 0 0	- XC	UL	
2.	Power supply cord	Ching Cheng Wire Material Co., Ltd.	WW05VAS-F	3 x1.0 mm²	6 %C	VDE	
3.	PCB	Dongguan Formosto Electronics Co., Ltd.	OF-2			ULC &C	
4.	Power switch	Omron Automation (China) Co., Ltd.	JA-9	Single pole, 10E3, Rated AC250V, 16A, Rated AC125V, 16A		VDE	
5.	Motor	Kunming Yunnei Power Co., Ltd.	GI-12	-	4G 4G	VDE	
6.	Compressor	Jinan Compressor Factory Co., Ltd.	MFA-1P	- 40 KO	30 30 S =	TUV	
7.	electrical control system	Shandong Aipu Electric Equipment Co., Ltd.	MT-150	40 40 40 40 4		VDE	

NOTE → 1 List all different manufacturers of the → 4 asterisk indicates mark assuring agreed level above components of surveillance

values

<sup>ightarrow</sup> 2 May include electrical, mechanical

 $<sup>\</sup>rightarrow$  3 List licence no or method of acceptance

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Refrigerator Product:

Type Designation: See test report for details



Fig. 1

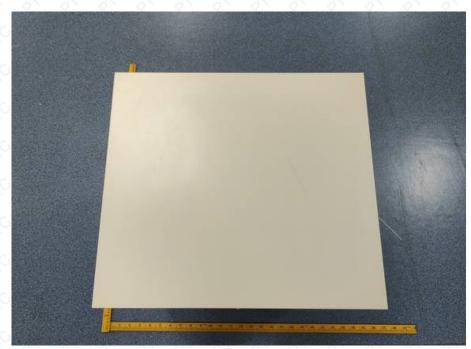


Fig. 2

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Refrigerator Product:

<u>Type Designation:</u> See test report for details



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Fig. 4

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Refrigerator Product:

Type Designation: See test report for details



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Fig. 5



Fig. 6

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Refrigerator Product:

<u>Type Designation:</u> See test report for details



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Fig. 7

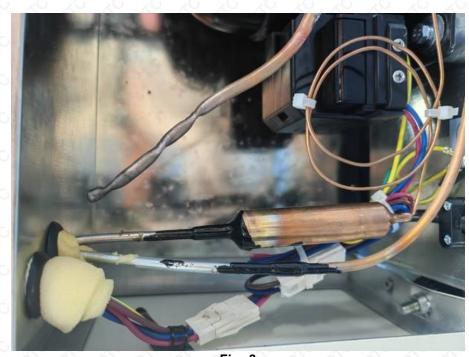


Fig. 8

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Refrigerator Product:

<u>Type Designation:</u> See test report for details



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Fig. 9



Fig. 10

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Refrigerator Product:

<u>Type Designation:</u> See test report for details



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Fig. 11