

#### APPLICATION FOR LOW VOLTAGE DIRECTIVE On Behalf of

Shenzhen New Huayi Instrument Co., Ltd

DIGITAL MULTIMETER

Model no.: M300

Prepared for : Address: Shenzhen New Huayi Instrument Co., Ltd F3, Block 2, Instrument World Industrial Park, Guiyue Road, Longhua New District, Shenzhen City

Prepared By : Address: Shenzhen Certification Technology Service Co., Ltd. 2F, Building B, East Area of Nanchang Second Industrial Zone, Gushu 2<sup>nd</sup> Road, Bao'an District, Shenzhen 518126, P.R. China

Date of Test: Date of Report: Report Number: Version number: March 01-03, 2014 March 03-04, 2014 CSTS140227045 REV0

## TEST REPORT

#### IEC 61010-1 / EN 61010-1

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

Report Reference No	CSTS140227045
Tested by (name + signature):	Jonson Cai Jonson Cai
Approved by (name + signature):	Kaiden Guo
Date of issue	March 04, 2014
Testing Laboratory	Shenzhen Certification Technology Service Co., Ltd.
Address	2F, Building B, East Area of Nanchang Second Industrial Zone, Gushu 2 <sup>nd</sup> Road, Bao'an District, Shenzhen 518126, P.R. China
Testing location/procedure	TL[√] CBTL[] SMT[] TMP[]
Address	Same as above
Applicant's name	Shenzhen New Huayi Instrument Co., Ltd
Address	F3, Block 2, Instrument World Industrial Park, Guiyue Road, Longhua New District, Shenzhen City
Test specification:	and Shines Shines
Standard	EN 61010-1: 2010
	EN 61010-2-031:2002 + A1:2008
Test procedure	LVD Approval
Non-standard test method	N.A.
Test Report Form No	IEC/EN 61010_1F
TRF Originator	VDE Testing and Certification Institute
Master TRF	2011-03
Copyright © 2011 Worldwide System Equipment and Components (IECEE	n for Conformity Testing and Certification of Electrotechnical ), Geneva, Switzerland. All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the IECEE is acknowledged as copyright owner and source of the material. IECEE takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

Test item description	DIGITAL MULTIMETER
Model/Type reference	M300
Manufacturer	Shenzhen New Huayi Instrument Co., Ltd
Address	F3, Block 2, Instrument World Industrial Park, Guiyue Road, Longhua New District, Shenzhen City
Trademark	HYELEC
Rating(s)	1×12Vdc L1028 battery; 600V CATII; Class II

#### Page 2 of 92

#### Report No. CSTS140227045

Test item particulars	
Type of item tested	Measuring equipment
Description of equipment function	Measure for voltage, current, resistance, diode.
Installation/overvoltage category	600V CATII
Pollution degree	Pollution degree 2
Environmental rating	Temperature: 0 ~ +40°C
Equipment mobility	Portable equipment
Connection to mains supply	None
Operating conditions	Continuous
Marked degree of protection to IEC 60529	IP20
Accessories and detachable parts included in the evaluation	N/A
Options	N/A
Test case verdicts:	
Test case does not apply to the test object	N(/A)
Test object does meet the requirement	P(Pass)
Test object does not meet the requirement :	F(Fail)
Testing	
Date of receipt of test item	March 01, 2014
Date (s) of performance of tests	March 01-03, 2014
General remarks:	Entrance NULL

#### MI

This report shall not be reproduced, except in full, without the written approval of the issuing testing laboratory.

The test results presented in this report relate only to the item(s) tested. "(see remark #)" refers to a remark appended to the report. "(see Annex #)" refers to an annex appended to the report.

"(see Form A.#)" refers to a table appended to the report.

Throughout this report a comma (point) is used as the decimal separator.

TRF No. IEC61010\_1F



TRF No. IEC61010\_1F

Page 4 of 92

Report No. CSTS140227045

5	IEC/EN 6101	0-1	
Clause	Requirement + Test	Result - Remark	Verdict
			NILLA
	TABLE, 4 Decuments attached to this	on ort	D

TABLE	: 1 - Documents attached to this report	P
Document No.	Document description	Page Numbers
Appendix 2	Photo documentation	91-92
Concess.		1

		Tech	11/1		Continue	
A Lon Le Manuel	TABLE: 2 - Test equipmen	t list	Treamanau 11	11/1	~	Р
Item	Manufacturer	Equipment	Calibrati	on date	Com	ments
-	-	Model No.	Last <sup>1</sup>	Due		
*Note: Ap	pendix 1 (Page 89-90)	1		Core and the second sec	eur.	E.
1) or interva	I between calibrations.	Zustante	200	-		Cantino

C.	TABLE: 3 – List of compo	onents and circui	its relied on for safety	Р
Unique component reference or location (including drawing reference if required)	Manufacturer (NOTE 1)	Part number	RATING (NOTE 2)	Evidence of acceptance (NOTE 3)
Enclosure	(Various)	(Various)	Min thickness 1.5 mm, V-0, 85℃	UL
PCB	(Various)	(Various)	V-0, 130°C	UL
Fuse	(Various)	(Various)	100mA, 250V	VDE
Internal wire	(Various)	(Various)	80°C, 300V, VW-1, 30AWG or better	UL
Hand-held probe	Shenzhen New Huayi Instrument Co., Ltd	(Various)	600V CATII/MAX 2A	Test with appliance
- plastic enclosure	(Various)	(Various)	V-0, 85°C	UL
- lead wire	(Various)	(Various)	24 AWG or better, 80 ℃, 4000V, PVC insulation	UL
Battery	25	L1028	DC 12V	And the second

NOTE 1 - List all manufacturers concerned. NOTE 2 - Electrical, mechanical, flammability, etc. NOTE 3 - Licence number, file number or other documentary evidence of acceptance

TRF No. IEC61010\_1F

- Concertain 1	IEC/EN 61010-1		
Clause	Requirement + Test	Result - Remark	Verdict
4.4	Testing in SINGLE FAULT CONDITIONS	Centil	P
4.4.1	Fault tests	(see Form A.1 and A.2)	Р
4.4.2	Application of SINGLE FAULT CONDITIONS	an the second se	Р
4.4.2.1	FAULT CONDITIONS SHALL INCLUDE THOSE SPECIFIED IN 4.4.2.2 TO 4.4.2.14	(see Form A.1 and A.2)	and -
4.4.2.2	PROTECTIVE IMPEDANCE	and ALL	N
4.4.2.3	PROTECTIVE CONDUCTOR		N
4.4.2.4	Equipment or parts for short-term or intermittent operation		N
4.4.2.5	Motors	NH/100	N
4.4.2.6	Capacitors	No such capacitor	N
4.4.2.7	MAINS transformers	Contraction	NIN
4.4.2.7.2	Short circuit	Contraction	N
4.4.2.7.3	Overload		N
4.4.2.8	Outputs	Store and	Р
4.4.2.9	Equipment for more than one supply	Zanaran Still	N
4.4.2.10	Cooling	11	N
4.4.2.11	Heating devices	Summer SULLA	N
4.4.2.12	Insulation between circuits and parts	E Standard MUI	Р
4.4.2.13	Interlocks		N 11
4.4.2.14	Voltage selectors	En Contration	N
4.4.3	Duration of tests	(see Form A.1 and A.2)	Permin
4.4.4 🧹	Conformity after application of fault conditions	(see Form A.1; A.2; A.8, A.14)	Р

5	MARKING AND DOCUMENTATION	Alle	P
5.1.1	General	E Standard MULLA	Р
Certin	Required equipment markings are:	Frank El Statement	
	visible:	Contract	P
500	From the exterior; or		P
Contraction !!	After removing a cover; or	the state of the s	N
	Opening a door	Zana St	N
1111/1	After removal from a rack or panel	11.	N
	Not put on parts which can be removed by an operator		P 🧧
	Letter symbols (IEC 60027) used	The sol	P
11/10	Graphic symbols (IEC 61010-1: Table 1) used	Refer to rating label	P
5.1.2	Identification		
	Equipment is identified by:	E Sharman Shuller	Р

TRF No. IEC61010\_1F

			C <sup>2</sup>
Clause	Requirement + Test	Result - Remark	Verdic
	a) Manufacturer's or supplier's name or trademark	See page 1	Р
SILLIS	b) Model number, name or other means	See page 1	P
E Contraction	Manufacturing location identified	Only one factory	N
5.1.3	Mains supply	Powered by battery only	Ν
	Equipment is marked as follows:		N
	a) Nature of supply:	En en en	N
e les tes	1) a.c. RATED MAINS frequency or range of frequencies		N
	2) d.c. with symbol 1	Contraction	N
Innelson	b) RATED supply voltage(s) or range	Contraction	N
1	c) Max. RATED power (W or VA) or input current :	JIN COM	N
France	The marked value not less than 90 % of the maximum value		N
AND A	If more than one voltage range:	Contract	N
E S	Separate values marked; or		N
Contraction	Values differ by less than 20 %	(see Form A.3)	N
	d) OPERATOR-set for different RATED supply voltages:		N
2 Johnson	Indicates the equipment set voltage	Contraction Contraction	N
Certification	Portable equipment indication is visible from the exterior		N
11/1/2	Changing the setting changes the indication	Contraction Technology	N
and the second	e) Accessory MAINS socket-outlets accepting standard MAINS plugs are marked:		N
C.	With the voltage if it is different from the MAINS supply voltage		N
Traines All	For use only with specific equipment	Contineau	N
11 miles	If not marked for specific equipment it is marked with:		N
64	The maximum rated current or power; or	Contraction of the second s	NIN.
NI//.	Symbol 14 with full details in the documentation		N
5.1.4	Fuses		Р
Contineation	Operator replaceable fuse marking (see also 5.4.5):		N
5.1.5	TERMINALS, connections and operating devices	Come	P
5.1.5.1	General		Р
II.	Where necessary for safety, indication of purpose of TERMINALS, connectors, controls and indicators marked		P
and a gut	If insufficient space, symbol 14 used	Contraction	P
NTL N	Push-buttons and actuators of emergency stop		N

TRF No. IEC61010\_1F

- El	IEC/EN 81010-1		Certi
Clause	Requirement + Test	Result - Remark	Verdi
	used only to indicate a warning of danger or	State All	N
NII/1/10	the need for urgent action	200	N
E Cartemana	coloured red	Ser Starten Starten Starten	Ν
Cerunca	coded as specified in IEC 60073		N
	Supplementary means of coding provided, if meaning of colour relates (see IEC 60073):		N
The Instant	to safety of persons; or	and Alle	N
	safety of the environment	E Stranger MULL	N
5.1.5.2	TERMINALS	Entrantin Electron and	Р
Prest	MAINS SUPPLY TERMINAL IDENTIFIED	Contraction	N
N. N.	Other TERMINAL marking:	JNIII III	P
- Conce	a) FUNCTIONAL EARTH TERMINALS (symbol 5 used)	The state	N
	b) PROTECTIVE CONDUCTOR TERMINALS:	Carolina -	N
	Symbol 6 is placed close to or on the TERMINAL; or		N
Contraction	Part of appliance inlet	mann team	Ν
	c) TERMINALS of control circuits (symbol 7 used)	Zuene st	Ň
	d) HAZARDOUS LIVE TERMINALS supplied from the interior	11	Р
Contineation	Standard MAINS socket outlet; or		N
	RATINGS marked; or	Zana SQ	P
	Symbol 14 used	E Contraction	Р
5.1.6	Switches and circuit breakers	1000 NII//	P
7	If disconnecting device, off position clearly marked		Р
6	If push-button used as power supply switch:	Contract Englished	N
mology	Symbol 9 and 15 used for on-position	Contraction	N
E a	Symbol 10 and 16 used for off-position		N
Contineation	Pair of symbols 9, 15 and 10, 16 close together	Zamer Stallan	N
5.1.7	Equipment protected by DOUBLE INSULATION OR REINFORCED INSULATION		Р
E C	Protected throughout (symbol 11 used)		Р
Canuncanan	Only partially protected (symbol 11 not used)	The sum of the second	N
5.1.8	Field-wiring TERMINAL boxes	Element St	N
S C C	If TERMINAL OF ENCLOSURE exceeds 60 °C:	110 Guina	N
- Contraction	Cable temperature RATING marked	ALL AND A	N
11.	Marking visible before and during connection or beside TERMINAL		N
5.2	Warning markings	5. Contraction	Р
on the bar	Visible when ready for NORMAL USE	11111	P
2	Are near or on applicable parts		Р

TRF No. IEC61010\_1F

0	Denvis of Text		Manda
Clause	Requirement + Test	Result - Remark	Verdic
	Symbols and text correct dimensions and colour:	The second state	
3	a) symbols min 2,75 mm and text 1,5 mm high and contrasting in colour with background		P
Enterna	b) symbols and text moulded, stamped or engraved in material min. 2,0 mm high and		Р
	0.5 mm depth or raised if not contrasting in colour		P
cation feedbar	If necessary marked with symbol 14	and MIII	P
C.	Statement to isolate or disconnect if access by using a tool to HAZARDOUS LIVE parts is permitted		P
5.3	Durability of markings	Contraction	P
	The required markings remain clear and legible in NORMAL USE	(see Form A.4)	P
5.4	Documentation	Entrantin	11P/
5.4.1	General	Contraction	Р
	Equipment is accompanied by documentation for safety purposes for OPERATOR or RESPONSIBLE BODY	Provided in user's manual.	Р
Cer	Safety documentation for service personnel authorized by the manufacturer	2 Still	IV.P
	Documentation necessary for safe operation is provided in printed media or		Р
Contract	in electronic media if available at any time		N
	Documentation includes:		01094
and and a set	a) intended use	E. Entreto	P
atton fee	b) technical specification	JUNI /	P
Z	c) name and address of manufacturer or supplier	Element Stilling	Р
110	d) Information specified in 5.4.2 to 5.4.6	En and a start of the start of	P
	e) information to mitigate residual RISK (see also subclause 17)	Shill and the second se	P
Certificati	<ul> <li>f) accessories for safe operation of the equipment specified</li> </ul>		P
	<ul> <li>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</li> </ul>		Р
	h) instructions for lifting and carrying	Zammen St	N
	Warning statements and a clear explanation of warning symbols:	1/2	
Certification	Provided in the documentation; or	and a stand	Р
	Information is marked on the equipment	Zame SCH	🍃 P
5.4.2	Equipment ratings	E Constantin	P
ion technol	Documentation includes:	111/12	Р
	a) Supply voltage or voltage range:	Powered by battery	Р
			-

- State	IEC/EN 81010-1		Certin
Clause	Requirement + Test	Result - Remark	Verdi
	Frequency or frequency range:	and the state of t	N
NIIII	Power or current rating:	11	N
Come of the owner	b) Description of all input and output connections in accordance to 6.6.1 a)		P
	c) RATING of insulation of external circuits in accordance to 6.6.1 b)		N
a lon recommend	d) Statement of the range of environmental conditions (see 1.4)	Environmental indicated	Р
	e) Degree of protection (IEC 60529)	IP20	N
110	f) if impact rating less than 5 J:	Contraction of Contraction	N
company al	IK code in accordance to IEC 62262 marked or	Comments of the second s	N
E.	symbol 14 of table 1 marked, with		N
Centifica	RATED energy level and test method stated	Zanana Salan	N
5.4.3	Equipment installation	Portable device, not need installation	N
E	Documentation includes instructions for:		N
Certific	a) assembly, location and mounting requirements	Interior E Common	N
	b) protective earthing	Contraction 2	N
S Color	c) connections to supply	11 Comme	N
-uncauon fect	d) permanently connected equipment:	Transmission Milling	N
	<ol> <li>Supply wiring requirements</li> </ol>	Elen Milli	N
	2) If external switch or circuit-breaker, requirements and location recommendation		N
ation	e) ventilation requirements	A Company	N
Ċ	f) special services (e. g. air, cooling liquid)	Zana Shill	N
10	g) Instructions relating to sound level	2 Section 199	N
	aa) for permanently connected measuring circuit TERMINALS RATED for MEASUREMENT CATEGORIES II, III or IV		ĪN
SUIL.	bb) for permanently connected measuring circuit TERMINALS that are not RATED for MEASUREMENT CATEGORIES II, III or IV		NU N
5.4.4	Equipment operation	See below.	Р
Century	Instructions for use include:		1, P
	a) identification and description of operating controls		P
and the second	b) positioning for disconnection	Common NII//	Ν
ar -	c) instructions for interconnection	E Milling	N
1/2	d) specification of intermittent operation limits		N
Lon Technology	e) explanation of symbols used	Symbols have explanation in user manual.	P
2	f) replacement of consumable materials	Battery	Р

TRF No. IEC61010\_1F

Clause	Boguiromont + Toot	Booult Bomork	Vordia
Jause	Requirement + rest	Result - Remark	verdic
MU	g) cleaning and decontamination	Use soft dry cloth without any solvents or water.	P
	h) Listing of any poisonous or injurious gases and quantities		N
	i) RISK reduction procedures relating to flammable liquids (see 9.5)		N
	j) RISK reduction procedures relating burn from surfaces permitted to exceed limits of 10.1		N
	Additional precautions for IEC 60950 conforming equipment in regard to moistures and liquids		N
- Andrew	A statement about protection impairment if used in a manner not specified by the manufacturer		P
5.4.5 💦	Equipment maintenance		Р
Certific	Instructions for RESPONSIBLE BODY include:	Zana Salan	111
SUL.	Instructions sufficient in detail permitting safe maintenance and inspection and continued safety:	- The second sec	Р
Z	Instruction against the use of detachable MAINS supply cord with inadequate rating		N
	Specific battery type of user replaceable batteries	Element NI	P
111/10	Any manufacturer specified parts	11	N
- Contraction of the	Rating and characteristics of fuses	Contraction AVI/	N
	Instructions include following subjects permitting safe servicing and continued safety:	Service by qualified person of manufacturer only. The information is not provided in user instruction	N
ion fee	a) product specific RISKS may affect service personnel		N
6	b) protective measures for these RISKS		NI
nologu Al	c) verification of the safe state after repair	Contraction	N
5.4.6	Integration into systems or effects resulting from special conditions		N
Cort	Aspects described in documentation		N.N.

6	PROTECTION AGAINST ELECTRIC SHOCK		Р
6.1	General	(see Form A.5)	Р
6.1.1	Requirements	Sterner St.	Contraction of the second
	Protection against electric shock maintained in NORMAL CONDITION and SINGLE FAULT CONDITION		Р
Contract	ACCESSIBLE parts not HAZARDOUS LIVE	All accessible parts are not hazards live	Р
11/1	Voltage, current, charge or energy below the limits in NORMAL CONDITION and in SINGLE FAULT CONDITION between:		
le.	ACCESSIBLE parts and earth	E Share Aller	Р

TRF No. IEC61010\_1F

Page 11 of 92

#### Report No. CSTS140227045

	MULTING Contraction		
Clause	Requirement + Test	Result - Remark	Verdio
	two ACCESSIBLE parts on same piece of the equipment within a distance of 1,8 m		N
	Conformity is checked by the determination of 6.2 and 6.3 followed by the tests of 6.4 to 6.11		Р
6.1.2	Exceptions	E areanona	N
	Following HAZARDOUS LIVE parts may be accessible to an OPERATOR:		N
and technic	a) parts of lamps and lamp sockets after lamp removal		NĘ
110	b) parts to be replaced by operator only by the use of tool and warning marking		N
all	Those parts not HAZARDOUS LIVE 10 s after interruption of supply	(see Forms A.6 )	N
Contract	Capacitance test if charge is received from internal capacitor	(see Forms A.6 and A.7)	N
6.2	Determination of accessible parts	(see Form A.6)	Р
6.2.1	General		Р
Continee	Unless obviously determination of accessible parts as specified in 6.2.2 to 6.2.4		P
6.2.2	Examination		P
E Recondicasi	- with jointed test finger (as specified B.2)	Contraction State	Р
Contract	- with rigid test finger (as specified B.1) and a force of 10 N		P
6.2.3	Openings above parts that are HAZARDOUS LIVE	Concerne the	N
allon Technology	- test pin with length of 100 mm and 4 mm in diameter applied		N
6.2.4 🧹	Openings for pre-set controls	Zanan SC Par	Ν
moural NU	- test pin with length of 100 mm and 4 mm in up diameter applied	Contraction of the second	N
6.3	Limit values for ACCESSIBLE parts	Solom All	P
6.3.1 🧹	Levels in NORMAL CONDITION	(see Form A.7)	Р
NIII	a) Voltage limits less than 33 V r.m.s. and 46,7 V peak or 70 V d.c.		P
1 de la compañía de	for wet locations voltage limits less than 16 V r.m.s. and 22,6 V peak or 35 V d.c.		N
	Voltages are not HAZARDOUS LIVE the levels of:	Zanana Sta	- Contraction
	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		Ρ
L.	for wet locations measuring circuit A.4 used	Contraction and Contraction	¯ Ν
and and a second second	or	au Contraction	Ν
ion ter	c) Levels of capacitive charge or energy less		N

E			Certi
Clause	Requirement + Test	Result - Remark	Verdic
ALL.	1) 45 $\mu$ C for voltages up to 15 kV peak or d.c. or line A of Figure 3		N
	2) 350 mJ stored energy for voltages above 15 kV peak or d.c.		N
6.3.2	Levels in SINGLE FAULT CONDITION	(see Form A.7)	Р
	a) Voltage limits less than 33 V r.m.s. and 46,7 V peak or 70 V d.c.		P
allow to the	for wet locations voltage limits less than 16 V r.m.s. and 22,6 V peak or 35 V d.c.		NÇ
	Voltages are not HAZARDOUS LIVE the levels of:	Carlos and Statement	
	<ul> <li>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</li> </ul>		P
	for wet locations measuring circuit A.4 used	Contra Co	Ń
NIII	or	1111	N
Elester	c) Levels of capacitive charge or energy less:		N
Contrica	1) 45 $\mu C$ for voltages up to 15 kV peak or d.c. or line A of Figure 3		N
	2) 350 mJ stored energy for voltages above 15 kV peak or d.c.	1	N
6.4	Primary means of protection	a read	Р
6.4.1	ACCESSIBLE parts prevented from being HAZARDOUS LIVE by one or more of following means:		P
Technology	a) ENCLOSURES OF PROTECTIVE BARRIERS (see 6.4.2)	and a life	Р
100	b) BASIC INSULATION (see 6.4.3)		P
G	c) Impedance (see 6.4.4)	Zana Salan	N
6.4.2	ENCLOSURES OF PROTECTIVE BARRIERS	(see Form A.13)	P
Mar Sti	- meet rigidity requirements of 8.1	NULL.	Р
The second	- meet requirements for BASIC INSULATION, if protection is provided by insulation		P
	- meet requirements of 6.7 for CREEPAGE and CLEARANCES between ACCESSIBLE parts and HAZARDOUS live parts, if protection is provided by limited access		P
6.4.3	BASIC INSULATION	(see Form A.13)	U,P
	- meet CLEARANCE, CREEPAGE DISTANCE and solid insulation requirements of 6.7		Р
6.4.4	Impedance	(see Form A.12)	N
112	Impedance used as primary means of protection meets all of following requirements:		en -
- Andrew	a) limits current or voltage to level of 6.3.2	(see Form A.7)	N
an te	b) RATED for maximum WORKING VOLTAGE and the amount of power it will dissipate		N

TRF No. IEC61010\_1F

Page 13 of 92

# Report No. CSTS140227045

S GA	IEC/EN 61010-1		Certific
Clause	Requirement + Test	Result - Remark	Verdic
SUII/2	c) CLEARANCE, CREEPAGE DISTANCE between terminations of the impedance meet requirements of BASIC INSULATION of 6.7	(see Form A.13)	N
6.5	Additional means of protection in case of SINGLE FAULT		Р
6.5.1	Accessible parts are prevented from becoming hazardous live by the primary means of protection and supplemented by one of:		P
an technology	a) PROTECTIVE BONDING (see 6.5.2)	anan MIL	N
	b) SUPPLEMENTARY INSULATION (see 6.5.3)		Р
	c) automatic disconnection of the supply (see 6.5.5)	Contraction 2 Contraction	Ν
Pres .	d) current- or voltage-limiting device (see 6.5.6)	Contraction	P
	Alternatively one of the single means of protection is used:		P
Certifi	e) REINFORCED INSULATION (see 6.5.3)	Contraction	NIP,
MD	f) PROTECTIVE IMPEDANCE (see 6.5.4)	Contraction	N
6.5.2	Protective bonding	NULL C	N
6.5. <mark>2.1</mark>	Accessible conductive parts, may become harzardous live in single fault condition:		N
MIL.	Bonded to the protective conductor terminal; or	Entre Ele	N
A start to be a start	Separated by conductive screen or barrier bonded to protective conductor terminal		N
17.	CONFORMITY IS CHECKED AS SPECIFIED IN 6.5.2.2 TO 6.5.2.6 AND 6.5.2.101.		N
6.5.2.2	Integrity of protective bonding	5. Ermann	N
A A A A A A A A A A A A A A A A A A A	a) PROTECTIVE BONDING consists of directly connected structural parts or discrete conductors or both; and withstands thermal and dynamic stresses		
111	b) Soldered connections:	1111	= N
E	Independently secured against loosening		N
Certifica	Not used for other purposes	Enterna	N
	c) Screw connections are secured	Contraction	N
1	d) PROTECTIVE BONDING not interrupted; or	NIII C	N
Company of the	exempted as removable part carries MAINS SUPPLY INPUT connection		N
	e) Any moveable PROTECTIVE BONDING connection specifically designed, and meets 6.5.2.4		N
	<ul> <li>f) No external metal braid of cables used (not regarded as PROTECTIVE BONDING)</li> </ul>		Ν
	g) IF MAINS SUPPLY PASSES THROUGH:	The sol	N
10	Means provided for passing protective conductor;	5 Container	N
on rechmo.	Impedance meets 6.5.2.4		N

TRF No. IEC61010\_1F

Clause	Dequirement   Test	Deput Demert	Vard
Clause	Requirement + Test	Result - Remark	Verdi
MD	<ul> <li>h) Protective conductors bare or insulated, if insulated, green/yellow</li> </ul>		N
E Comment	Exceptions:	11 Contraction of Contraction	N
Contration	1) earthing braids;	and the second second	N
	2) internal protective conductors etc.;	The second share	N
11/1/10	Green/yellow not used for other purposes		N
Contraction of the second	TERMINAL suitable for connection of a PROTECTIVE CONDUCTOR, and meets 6.5.2.3		N
6.5.2.3	PROTECTIVE CONDUCTOR TERMINAL	Zaman Stallan	N
10	a) Contact surfaces are metal	Zucan	N
echnon 11	b) Appliance inlet used	NIIIII	N
The second se	c) For rewirable cords and PERMANENTLY CONNECTED EQUIPMENT, PROTECTIVE CONDUCTOR TERMINAL is close to MAINS supply TERMINALS		N
	d) If no mains supply is required, any PROTECTIVE CONDUCTOR TERMINAL:		N
Contraction	Is near terminals of circuit for which protective earthing is necessary		N
MU.	External if other terminals external	Contract 2	N
A standard	e) Equivalent current-carrying capacity to MAINS supply TERMINALS	(see Form A.9)	N
Ce.	f) If plug-in, makes first and breaks last	Electron Will	N
	g) If also used for other bonding purposes, protective conductor:		N
ation fee	Applied first;	Shill and a shift of the shift	N
2	Secured independently;	Element Stilling	N
110	Unlikely to be removed by servicing	Contraction of the second	N
inneres 11	h) PROTECTIVE CONDUCTOR of measuring circuit:	ALL COM	<b>N</b>
A Land	<ol> <li>Current RATING equivalent to measuring circuit TERMINAL;</li> </ol>		N
	2) PROTECTIVE BONDING:	Con Constant and	N
5111	Not interrupted; or		N
A started and	i) FUNCTIONAL EARTH TERMINALS allow independent connection		N
MILLE	j) If a binding screw used for PROTECTIVE CONDUCTOR TERMINAL:		N
E Constant	Suitable size for bond wire	Color	Ν
Continear	Not smaller than M 4 (No. 6)		N
	At least 3 turns of screw engaged		N
- And	Passes tightening torque test	(see Form A.9)	N
ton recht	k) Contact pressure not capable being reduced by deformation of materials	State and	N

	IEC/EN 61010-1		Certific
Clause	Requirement + Test	Result - Remark	Verdi
6.5.2.4	Impedance of PROTECTIVE BONDING of plug- connected equipment	(see Form A.10)	N
2 Anna	Impedance between PROTECTIVE CONDUCTOR TERMINAL and each ACCESSIBLE part where PROTECTIVE BONDING is specified, is:		
	less than 0,1 Ohm; or	Enterna Sta	N v
	less than 0,2 Ohm if equipment is provided with non detachable cord		N
6.5.2.5	Bonding impedance of PERMANENTLY CONNECTED EQUIPMENT	(see Form A.10)	N
6.5.2.6	Transformer PROTECTIVE BONDING screen	(see Form A.11)	N
Company St	Transformer provided with screen for protective bonding:	SUU	N
	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
Contraction for	screen bonding with soldered connection (see 6.5.2.2 b ) is:	Shill Shill	N
	- Independently secured against loosening	Zanana SV	N
1111/10	- Not used for other purposes	1110 21	N
6.5.3	SUPPLEMENTARY and REINFORCED INSULATION	Transman NII//	Р
Ca.	- meet CLEARANCE, CREEPAGE DISTANCE and solid insulation requirements of 6.7		P
6.5.4		(see Form A.12)	Ν
allow for	Limits current or voltage to level of 6.3.1 in NORMAL and to level of 6.3.2 in SINGLE FAULT CONDITION		N
and the second	CLEARANCE, CREEPAGE DISTANCE between terminations of the impedance meet requirements of DOUBLE OF REINFORCED INSULATION of 6.7	(see Form A.13)	N
No.	The protective impedance consists of one or more of the following:	(see Table 3 and Form A.12)	Centin
	a) appropriate single component suitable for safety and reliability for protection, it is:		N
1	1) RATED twice the maximum WORKING VOLTAGE		N
Francis	2) resistor RATED for twice the power dissipation for maximum WORKING VOLTAGE		N
MIL.	b) combination of components	Contract	N
	Single electronic device not used as PROTECTIVE	Shilling of the second se	Ν
6.5.5	Automatic disconnection of the supply	E Shill	N
	a) RATED to disconnect the load within time specified in Figure 2		N
los tres	b) RATED for the maximum load conditions of the equipment		N

2 G	IEC/EN 61010-1	N. Contraction	Certifica
Clause	Requirement + Test	Result - Remark	Verdict
6.5.6	Current- or voltage limiting devices	En state st	Р
NIII	Device complies with all of:	U. T	Р
Zeren	a) RATED to limit the current or voltage to the level of 6.3.2		Р
	b) RATED for the maximum working voltage; and	Zana Maria	P
	RATED for the maximum operational current if applicable		P
	C) CLEARANCE, CREEPAGE DISTANCE between terminations of the impedance meet requirements of SUPPLEMENTARY INSULATION of 6.7		P
6.6	Connections to external circuits	All les	P
6.6.1 🔰	Connections do not cause ACCESSIBLE parts of the following to become HAZARDOUS LIVE in NORMAL CONDITION or SINGLE FAULT CONDITION:		P
× NH/	- the external circuits	Contract	Р
E	- the equipment		Р
Continearan	Protection achieved by separation of circuits; or	Solar Solar	N
	short circuit of separation does not cause a HAZARD	Zana St	Р
1000	Instructions or markings for each terminal include:	1110	Р
- Contraction	a) RATED conditions for TERMINAL	Transant NII//	Р
Cat	b) Required RATING of external circuit INSULATION	Electronic MU	Р
6.6.2	TERMINALS for external circuits	Eastern Eller	Р
alon technology	TERMINALS which receive a charge from an internal capacitor are not HAZARDOUS LIVE after 10 s of interrupting supply connection	(see Form A.7)	P
6.6.3	Circuits with terminals which are HAZARDOUS LIVE	Connest E Connest	PI
and and a state	These circuits are:	Controlling	P
Ň	Not connected to ACCESSIBLE conductive parts; or	11111	Р
Contract	Connected to ACCESSIBLE conductive parts, but are not MAINS circuits and have one TERMINAL contact at earth potential		N
200	No ACCESSIBLE conductive parts are HAZARDOUS LIVE	NU110	P
6.6.4	ACCESSIBLE terminals for stranded conductors	JULIA	N
C.	No RISK of accidental contact because:	III III	/ N
NIII	Located or shielded		N
	Self-evident or marked whether or not connected to ACCESSIBLE conductive parts		Ν
	ACCESSIBLE TERMINALS will not work loose	Zerran Mill	N
6.7	Insulation requirements	(see Form A.5)	P
6.7.1	The nature of insulation	an Cart	P

TRF No. IEC61010\_1F

Page 17 of 92

#### Report No. CSTS140227045

- El			Certi
Clause	Requirement + Test	Result - Remark	Verdie
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		Р
6.7.1.2	CLEARANCES		Р
	Required CLEARANCES reflecting factors of 6.7.1.1	(see Form A.5)	P AND
	Equipment rated for operating altitude greater than 2000 m correction factor of Table 3 of 61010-1 applied	SHULL REPORT	N
6.7.1.3	CREEPAGE DISTANCES	Zamer Stollar	Р
10	Required CLEARANCES reflecting factors of 6.7.1.1	(see Form A.5)	P
company 11	CTI material group reflected by requirements		Р
E	CTI test performed	E Common AUL	N
6.7.1.4	Solid insulation	Contract Contraction	NIP/
•	Required CLEARANCES reflecting factors of 6.7.1.1	(see Form A.5)	Р
6.7.1.5	Requirements for insulation according to type of circuit	Refer to annex K of EN 61010-1	Р
Car	a) 6.7.2 MAINS circuits of OVERVOLTAGE CATEGORY II up to nominal supply voltage of 300 V		// N
	b) 6.7.3 Secondary circuits separated from circuits defined in a) by transformer		N
Contract	c) K.1 MAINS circuits of OVERVOLTAGE CATEGORY III and IV or OVERVOLTAGE CATEGORY II over 300 V		P
Comments	d) K.2 Secondary circuits separated from circuits defined in a) by transformer		N
-	e) K.3 Circuits having one or more of:	2 Colorest	N
¢.	1) maximum TRANSIENT OVERVOLTAGE is limited to known level below the level of MAINS CIRCUIT		N
manage Still	2) maximum TRANSIENT OVERVOLTAGE above the level of MAINS CIRCUIT	SUU	<b>N</b>
Entres .	3) WORKING VOLTAGE is the sum of more than one circuit or a mixed voltage		N
	4) WORKING VOLTAGE includes recurring peak voltage, may include non-sinusoidal or non- periodic waveform		N
Contract	5) WORKING VOLTAGE with a frequency above 30 kHz		N
6.7.2	Insulation for MAINS CIRCUITS of OVERVOLTAGE CATEGORY II with a nominal supply voltage up to 300 V	Shine and a state	Ρ
6.7.2.1	CLEARANCES and CREEPAGE DISTANCES	(see Form A.13)	Р
11/10	Values for MAINS CIRCUITS of table 4 are met		Р
an recommon	Coatings to achieve reduction to POLLUTION DEGREE I comply with requirements of Annex H	ANNUL STREET	N
6722 2	Solid insulation	=	Р

TRF No. IEC61010\_1F

E	IEC/EN 81010-1		Certin
Clause	Requirement + Test	Result - Remark	Verdi
6.7.2.2.1	Withstands electrical and mechanical stresses in normal use and all RATED environmental conditions of 1.4		В
	Equipment passed voltage tests of 6.8.3 with values of Table 5	(see Form A.14)	Р
	Complies as applicable:	Friday Star	P
	a) ENCLOSURE OF PROTECTIVE BARRIER Clause 8	The Contraction of the Contracti	Р
carbon feedball	b) moulded and potted parts requirements of 6.7.2.2.2		N
10	c) inner layers of printed wiring boards requirements of 6.7.2.2.3		N
iteres 11	d) thin-film insulation requirements of 6.7.2.2.4	NH/ICC	N
6.7.2.2.2	Moulded and potted parts	E Transant ANUL	N
Certin	Conductors between same two layers are separated by at least 0,4 mm after moulding is completed		NIN,
6.7.2.2.3	Inner insulation layers of printed wiring boards	NULLA K	N
Contra los	Separated by at least 0,4 mm between same two layers		N
	REINFORCED INSULATION have adequate electric strength; one of following methods used:		N
E Constant	a) thickness at least 0,4 mm	Commonw All	N
	<ul> <li>b) insulation is assembled of minimum two separate layers, each RATED for test voltage of Table 5 for BASIC INSULATION</li> </ul>		N
ALL AND A	c) insulation is assembled of minimum two separate layers, where the combination is rated for test voltage of Table 5 for REINFORCED INSULATION		N
6.7.2.2.4	Thin-film insulation		N
	Conductors between same two layers are separated by applicable CLEARANCES and CREEPAGE DISTANCES	Shill and a	N
Contract	REINFORCED INSULATION have adequate electric strength; one of following methods used:		N
NII/2	a) thickness at least 0,4 mm		N
2 Contraction	<ul> <li>b) insulation is assembled of min two separate layers, each RATED for test voltage of Table 5 for BASIC INSULATION</li> </ul>		N
	c) insulation is assembled of min three separate layers, where the combination of two layers passed voltage tests of 6.8.3 with values of Table 5 for REINFORCED INSULATION	(see Form A.14)	N
6.7.3	Insulation for secondary circuits derived from MAINS of OVERVOLTAGE CATEGORY II up to 300 V		N
6.7.3.1	Secondary circuits where separation from MAINS CIRCUITS is achieved by a transformer providing:	SILLIA COM	
2	- REINFORCED INSULATION	E	Ν

TRF No. IEC61010\_1F

			Cert
Clause	Requirement + Test	Result - Remark	Verdie
	- DOUBLE INSULATION	The second state	N
3	- screen connected to the PROTECTIVE CONDUCTOR TERMINAL		on teen N
6.7.3.2	CLEARANCES	and the state of t	N
Mlter	a) meet the values of Table 6 for BASIC INSULATION and SUPPLEMENTARY INSULATION; or		N
callon feetine ogs	twice the values of Table 6 for REINFORCED	NILLIA COMPANY	N
	or	E martenada MIII	_
- Contract	b) pass the voltage tests of 6.8 with values of Table 6; with following adjustments:	(see Form A.14)	N
	1) values for REINFORCED INSULATION are 1,6 times the values for BASIC INSULATION		Ń
	2) if operating altitude is greater than 2000 m values of CLEARANCES multiplied with factor of Table 3		NUN.
2	3) minimum CLEARANCE is 0,2 mm for POLLUTION DEGREE 2 and 0,8 mm for POLLUTION DEGREE 3		N
6.7.3.3	CREEPAGE DISTANCES	The state	N
	Based on WORKING VOLTAGE meets the values of Table 7 for BASIC and SUPPLEMENTARY INSULATION		N
Connection	Values for REINFORCED INSULATION are twice the values of BASIC INSULATION		N
	Coatings to achieve reduction to POLLUTION DEGREE I comply with requirements of Annex H		N
6.7.3.4	Solid insulation	NIII//	N
6.7.3.4.1	Withstands electrical and mechanical stresses in normal use and all RATED environmental conditions of 1.4		N
1X/I	a) Equipment passed voltage test of 6.8.3.1 for 5 s with VALUES of Table 6 for BASIC and SUPPLEMENTARY INSULATION	(see Form A.14)	N
ALL.	values for REINFORCED INSULATION are 1,6 times the values of BASIC INSULATION		N
	b) if WORKING VOLTAGE exceeds 300 V, equipment passed voltage test of 6.8.3.1 for 1 min with a test voltage of 1,5 times working voltage for BASIC or SUPPLEMENTARY INSULATION	(see Form A.14)	N
	value for REINFORCED INSULATION are twice the WORKING VOLTAGE		N
Contraction .	Complies as applicable:	Teaching and the second s	N
	1) ENCLOSURE or protective barrier Clause 8	Element Milling	N 🕺
	2) moulded and potted parts requirements of 6.7.3.4.2		N
	3) inner layers of printed wiring boards requirements of 6.7.3.4.3		N

TRF No. IEC61010\_1F

	IEC/EN 61010-1		Certific
Clause	Requirement + Test	Result - Remark	Verd
	4) thin-film insulation requirements of 6.7.3.4.4	En statement 11	N
6.7.3.4.2	Moulded and potted parts	The second se	N
June of the owner	Conductors between same two layers are separated by applicable distances of Table 8		N
6.7.3.4.3	Inner insulation layers of printed wiring boards	Element III	N
	Separated by at least by applicable distances of Table 8 between same two layers		N
allerter	REINFORCED INSULATION have adequate electric strength; one of following methods used:		N
1	a) thickness at least applicable distance of Table 8	Comment of the Comment	Ν
	<ul> <li>b) insulation is assembled of minimum two separate layers, each RATED for test voltage of Table 6 for BASIC INSULATION</li> </ul>		N
NULL.	<ul> <li>c) insulation is assembled of min two separate layers, where the combination is rated for 1,6 times the test voltage of Table 6</li> </ul>		NIN.
6.7.3.4.4	Thin-film insulation		N
Contineat	Conductors between same two layers are separated by applicable CLEARANCES and CREEPAGE DISTANCES		N
	REINFORCED INSULATION have adequate electric strength; one of following methods used:		N
Conditionation	a) thickness at least applicable distance of Table 8	a team	N
	<ul> <li>b) insulation is assembled of min two separate layers, each RATED for test voltage of Table 6 for BASIC INSULATION</li> </ul>		N
The second second	<ul> <li>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:</li> </ul>	(see Form A.14)	N
moresu 11	a.c. test of 6.8.3.1; or	Contract	N
Z	d.c. test of 6.8.3.2 for circuits stressed only by d.c. voltages		N
6.8	Procedure for dielectric strength tests	(see Form A.5 and A.14)	P
6.9	Constructional requirements for protection against electric shock		P
6.9.1	If a failure could cause a HAZARD:	A STATE STATE	Р
	a) Security of wiring connections	Zameran JI	P
111/1/10	b) Screws securing removable covers	In The The	N
Contraction of the second	c) Accidental loosening	Same Allina	Р
e alla	d) CREEPAGE and CLEARANCES not reduced below the values of basic insulation by loosening		P
6.9.2	Material not to be used for safety relevant insulation:		P
on recommendation	Easily damaged materials not used		Р
	Non-impregnated hydroscopic materials not used		P

TRF No. IEC61010\_1F

Clause	Requirement + Test	Result - Remark	Verdie
6.9.3	Colour coding		N
3	Green-and-yellow insulation shall not be used except:		N
Conneation	a) protective earth conductors;	and the second sec	N
	b) protective bonding conductors;	Zanatan M	N
11/1/10	c) potential equilization conductors;		N
Constant of the second	d) functional earth conductors	alogal Alle	N
6.10	Connection to MAINS supply source and connections between parts of equipment	Powered by battery only	N
6.10.1	MAINS supply cords	Zhanna	Ň
ectinon 11	RATED for maximum equipment current (see 5.1.3c)	NHI11	N
E.	Cable complies with IEC 60227 or IEC 60245	- Aller	N
Central	Heat-resistant if likely to contact hot parts	Entre Contraction	NIN/
	Temperature RATING (cord and inlet)	Contraction	N
	Green/yellow used only for connection to PROTECTIVE CONDUCTOR TERMINALS		N
C	Detachable cords with IEC 60320 MAINS connectors:	The second second	11/10
MIL.	Conform to IEC 60799; or	Contract	N
E Contract	Have the current RATING of the MAINS connector	Contraction Contraction	N
6.10.2	Fitting of non-detachable MAINS supply cords		N
6.10.2.1	Cord entry		🦾 N
	Inlet or bushing smoothly rounded; or	- Zee	N
stion feething	Insulated cord guard protruding >5D		N
6.10.2.2	Cord anchorage	E Comment William	N
- Cont	Protective earth conductor is the last to take the strain		N
	a) Cord is not clamped by direct pressure from a screw		N
Certin	b) Knots are not used	Constant E Constant	NIN.
NII/	c) Cannot push the cord into the equipment to cause a HAZARD		N
- Commenter of	d) No failure of cord insulation in anchorage with metal parts		N
	e) Not to be loosened without a tool	Hanna St.	N
	f) Cord replacement does not cause a HAZARD and method of strain relief is clear		N
Centifics	Push-pull and or torque test	(see Form A.15)	N
6.10.3	Plugs and connectors		🇟 N
and the second second	MAINS supply plugs, connectors etc., conform with relevant specifications		N
	If equipment supplied at voltages below 6.3.2.a) or from a sole source:	Shine and	_

TRF No. IEC61010\_1F

E			<u>Ce</u>
Clause	Requirement + Test	Result - Remark	Verdie
SML.	Plugs of supply cords do not fit MAINS sockets above rated SUPPLY voltage		N
	MAINS type plugs used only for connection to MAINS supply		N
Eer	Plug pins which receive a charge from an internal capacitor	(see Form A.7)	N
	Accessory MAINS socket outlets:	Contraction of	_
Calum Technology	a) Marking if accepts a standard MAINS plug (see 5.1.3e)		N
1/10	b) Input has a protective earth conductor if outlet has EARTH TERMINAL CONTACT		N
6.11	Disconnection from supply source	AND A	N
6.11.1 灵	Disconnects all current carrying conductors	E Harmonth ANULA	N
6.11.2	Exceptions	Contraction	NIN
6.11.3	Requirements according to type of equipment	Connertin	N
6.11.3.1	PERMANENTLY CONNECTED EQUIPMENT and multi- phase equipment:		N
Cer	Employs switch or circuit-breaker		17, N
1111/10	If switch or circuit-breaker is not part of the equipment, documentation requires:	1/10 2	in recordence
Contraction of Contraction	a) Switch or circuit-breaker to be included in building installation		N
	b) Suitable location easily reached	Enterna 2	N
and a set	c) Marking as disconnecting for the equipment	E. Entran	N
6.11.3.2	Single-phase cord-connected equipment	11111	N
Z	Equipment is provided with one of the following:	Zerren JIIIII	N
14	a) Switch or circuit-breaker	Contraction of the second seco	N
melosy 111	b) Appliance coupler (disconnectable without tool)	Com.	N
Ele	c) Separable plug (without locking device)		N
6.11.4	Disconnecting devices	Formation 2 Second	N
	Electrically close to the SUPPLY	Contraction 2	N
6.11.4.1	Switches and circuit-breakers		N
Concerton Sec	When used as disconnection device:	Summer Still	
	Meets IEC 60947-1 and IEC 60947-3	Element 11	<u>// N</u>
111/1/10	Marked to indicate function	ter	N
- Contraction	Not incorporated in MAINS cord		N
and the second	Does not interrupt PROTECTIVE EARTH CONDUCTOR		Ν
6.11.4.2	Appliance couplers and plugs	Contraction -	N N
on technology	Where an appliance coupler or separable plug is used as the disconnecting device (see 6.11.3.2):		N
	Readily identifiable and easily reached by the operator		N

TRF No. IEC61010\_1F

Page 23 of 92

#### Report No. CSTS140227045

	IEC/EN 61010-1		
Clause	Requirement + Test	Result - Remark	Verdict
ALL.	Single-phase portable equipment cord length not more than 3 m		N
	PROTECTIVE EARTH CONDUCTOR connected first and disconnected last		N

711	PROTECTION AGAINST MECHANICAL HAZARDS		P
7.1	Equipment does not cause a mechanical HAZARD in NORMAL nor in SINGLE FAULT CONDITION		P
	Conformity is checked by 7.2 to 7.7	Contraction - Contraction	P
7.2	Sharp edges	Contraction	P
11 miles	Easily touched parts are smooth and rounded	NIII III	P
2	Do not cause injury during NORMAL USE and	Elen Milling	Р
	Do not cause injury during SINGLE FAULT CONDITION	Cert.	N P
7.3	Moving parts	No moving part	N
7.3.1	HAZARDS from moving parts limited to a tolerable level with the conditions specified in 7.3.2 and 7.3.5		Ν
MUL	RISK assessment in accordance with 7.3.3 carried out		N
7.3.2	Exceptions	Contract Contract	Ν
Contineation	Access to HAZARDOUS moving parts permitted under following circumstances:		N
	a) obviously intended to operate on parts or materials outside of the equipment		N
ation for	inadvertent touching of moving parts minimized by equipment design (e .g. guards or handles)		N
	b) If operator access is unavoidable outside normal use following precautions have been taken:		N
STIL STIL	1) Access requires TOOL	NULL.	N
Z	2) Statement about training in the instructions	E Standard NULL	Ν
6	3 ) Warning markings on covers prohibiting access by untrained operators		NI N
1	or symbol 14 with full details in documentation		Street N
7.3.3	RISK assessment for mechanical HAZARDS to body parts		N
NIII/2	RISK is reduced to a tolerable level by protective measures as specified in Table 12		N
and technol	Minimum protective measures:	Common NU/	Ν
	A. Low level measures	E reason NULL	N
10	B. Moderate measures		N,
and	C. Stringent measures	au Contraction	N
7.3.4	Limitation of force and pressure	(see Form A.16)	N

TRF No. IEC61010\_1F

- E			Certi
Clause	Requirement + Test	Result - Remark	Verd
SMU.	Following levels are met in normal and single fault condition:		N
	Continuous contact pressure below 50 N / cm <sup>2</sup> with force below 150 N		N
Çe.	Temporary force below 250 N for an area at least of 3 cm <sup>2</sup> for a maximum duration of 0,75 s		N
7.3.5	Gap limitations between moving parts	(see Form A.16)	N
7.3.5.1	Access normally allowed	1111/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1	N
!/a	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
7.3.5.2	Access normally prevented	SWILL.	EN
A	Maximum gap as specified in Table 14 assured in NORMAL and in SINGLE FAULT CONDITION	E SUC	N
7.4	Stability	Zarano teo	Р
	Equipment not secured to building structure is physical stable		P
Contines	Stability maintained after opening of drawers etc. by automatic means, or		N
NIII111	warning marking requires the application of means	11	N
E Connegation	Compliance checked by following tests as applicable:	Contraction and Contraction	
Certifica	a) 10° tilt test for other than handheld equipment	E Stranger AUL	Р
	b) multi-directional force test for equipment exceeds height of 1 m and mass of 25 kg		N
silon Technology	c) downward force test for floor-standing equipment	and ALLING	N
	<ul> <li>d) overload test with 4 times maximum load for castor or support that supports greatest load</li> </ul>		N
A NU	e) castor or support that supports greatest load removed from equipment		N
7.5 💦	Provisions for lifting and carrying		N
7.5.1 🧹	Equipment more than 18 kg :	Entern Schutz	
	Has means for lifting or carrying; or	Contrainer 2	N
1	Directions in documentation		N
7.5.2	Handles or grips	NIII/1	N
	Handles or grips withstand four times weight		// N
7.5.3	Lifting devices and supporting parts		N
E Reamand	Rated for maximum load; or	Contraction of the Contraction o	N
Condition .	tested with four times maximum static load		N
7.6	Wall mounting	Contraction	溙 N
- Contraction	Mounting brackets withstand four times weight	S. Commenter	N
7.7	Expelled parts	NIII//	N
7	Equipment contains or limits the energy	E Manager MU	N

TRF No. IEC61010\_1F

Page 25 of 92

Report No. CSTS140227045

- Eld			Cerri
Clause	Requirement + Test	Result - Remark	Verdic
	Protection not removable without the aid of a tool	ar All	N
8	RESISTANCE TO MECHANICAL STRESSES	A AND	Р
8.1	Equipment does not cause a HAZARD when subjected to mechanical stresses in NORMAL USE		P
11/1/10	Normal protection level is 5 J		P
a teo le chestes	Levels below 5 J but not less than 1 J are acceptable if all of following criteria are met:		N
116	a) lower level justified by RISK assessment of manufacturer		N
and and	b) equipment installed in its intended application is not easily touched	SIN COMPANY	N
	c) only occasional access during NORMAL USE	The second stilling	Ν
	<ul> <li>d) IK code in accordance to IEC 62262 marked or symbol 14 used with full information in the documentation</li> </ul>		N
Contraction of	For non-metallic ENCLOSURES rated below 2 °C ambient temperature value chosen for minimum rated temperature		N
	Impact energies between IK values, the IK code marked for nearest lower value	1	N
Contraction	Conformity is checked by performing following tests:		
	1) static test of 8.2.1	Zameran Store	P
All I	2) impact test of 8.2.2 with 5 J except for HAND- HELD EQUIPMENT	E	P
	if impact energy not selected to 5 J alternate method of IEC 62262 used	NILLAN NILLAN	N
	3) drop test of 8.3.1 or 8.3.2 except for FIXED and EQUIPMENT with mass over 100 kg		P
IN IN	Equipment rated with an impact rating of IK 08 that obviously meets the criteria		N
	After the tests inspection with following results:	Enterna Electron	NIH.
5111/	- HAZARDOUS LIVE parts above the limits of 6.3.2 not ACCESSIBLE		P
- The second	- insulation pass the voltage tests of 6.8	(see Form A.24)	Р
Ce.	i) no leaks of corrosive and harmful substances	E States MI	11, P
	ii) ENCLOSURE shows no cracks resulting in a HAZARD	140 20	Р
and a sea too	iii) CLEARANCES not less than their permitted values	ANNING ANNING	Р
	iv) insulation of internal wiring remains undamaged	Element Still	P
11/10	v) PROTECTIVE BARRIERS not damaged or loosened	Contraction Contraction	N
an trainenau	vi) No moving parts exposed, except permitted by 7.3	ANNU STREET	N
2	vii) no damage which could cause spread of fire		Р

TRF No. IEC61010\_1F

Page 26 of 92

Report No. CSTS140227045

Clause	Poquirement + Test	Booult Bomork	Vordio
		Result - Remark	veruic
0.2	ENCLOSURE Inglidity lest	- Commission - Co	
8.2.1	Static test	11 J	P P
Commenter Technik	- in case of doubt test conducted at maximum RATED	40°C	P P
	ambient temperature		2.
8.2.2	Impact test	The second	P
and to make	Impact applied to any part of ENCLOSURE causing a HAZARD if damaged	State of the second	P
ç	Impact energy level and corresponding IK code :	The second share	Р
	Non-metallic ENCLOSURES cooled to minimum RATED ambient temperature if below 2 °C		P
8.3	Drop test		Р
8.3.1 🧹	Other than HAND-HELD and DIRECT-PLUG-IN EQUIPMENT	English Scheme	P.
÷	Tests conducted with a drop height or angle of:	100 mm	Р
8.3.2	HAND-HELD and DIRECT-PLUG-IN EQUIPMENT	NIIIII E	N
Contraction feet	Non-metallic ENCLOSURES cooled to minimum RATED ambient temperature if below 2 °C		N
	Drop test conducted with an height of 1 m	Command E	N
S COM			Ion
9	PROTECTION AGAINST THE SPREAD OF FIRE	Stilling Stilling	Р
9.1	No spread of fire in NORMAL and SINGLE FAULT CONDITION		P
and the mentioned	MAINS supplied equipment meets requirements of 9.6 additionally	S. NUM	N
	Conformity is checked by minimum one or a combination of the following (see Figure 11):	(see Form A.17)	Р
10	a) Fault test of 4.4; or	(see Form A.1 and Form A.2)	P
	<ul> <li>b) Application of 9.2 (eliminating or reducing the sources of ignition); or</li> </ul>	Shire and	N
Continuent	c) Application of 9.3 (containment of fire within the equipment)		P
9.2	Eliminating or reducing the sources of ignition within the equipment		N
Contrication	a) 1) Limited-energy circuit (see 9.4); or	The second second	N
MILL	2) BASIC INSULATION provided for parts of different potential; or	Entern St	N
Contraction of the second	Bridging the insulation does not cause ignition	Enter Alle	N
a filled and	b) Surface temperature of liquids and parts (see 9.5)		N
11/16	c) No ignition in circuits designed to produce heat	E E	N
9.3	Containment of the fire within the equipment, should it occur	SHULL	P
9.3.1	General	Elen Stilling	Р

TRF No. IEC61010\_1F

			Cer
Clause	Requirement + Test	Result - Remark	Verdi
	a) Energizing of the equipment is controlled by an operator held switch		P
	b) ENCLOSURE is conform with constructional requirements of 9.3.2 and requirements of 9.5 are met		Р
9.3.2	Constructional requirements		P voins
	a) Connectors and insulating material have flammability classification V-2 or better	(see Table: 3 or Form A.18)	Р
	b) Insulated wires and cables are flame retardant (VW-1 or equivalent)	(see Table: 3 or Form A.18)	Р
110	c) ENCLOSURE meets following requirements:	(see Form A.17)	P
in the second	1) Bottom and sides in arc of 5 ° (see Figure 13) to non-limited circuits (9.4) meets:	SWU	Р
Contines	i) no openings; or	Zuranna SChan	Р
9	ii) perforated as specified in Table 16; or		N
S	iii) metal screen with a mesh; or	NIIII E	N
- Incalion tec	iv) baffles as specified in Figure 12	Multing Multing	N
.Co.,	2) Material of ENCLOSURE and any baffle or flame barrier is made of:		11, P
S	Metal (except magnesium); or	11/10	N
Contraction Technic	Non-metallic materials have flammability classification V-1 or better	(see Table: 3 or Form A.18)	Р
	3) ENCLOSURE and any baffle or flame barrier have adequate rigidity		P
9.4	Limited-energy circuit	(see Form A.19)	Р
	a) Potential not more than 30 r.m.s. and 42.4 V peak, or 60 V dc		Р
10.	b) Current limited by one of following means:	- Contraction of the Contraction	P
The second se	<ol> <li>Inherently or by impedance (see Table 17); or</li> </ol>	the output of battery is considered inherently limited- energy circuit	P
	<ol> <li>Over current protective device (see Table 18); or</li> </ol>		N
2 Ale	3) A regulating network limits also in SINGLE FAULT CONDITION (see Table 17)	Shirt Shirts	N
Co.	c) Is separated by at least BASIC INSULATION		//_N
	Fuse or a nonadjustable electromechanical device is used		N
9.5	Requirements for equipment containing or using flammable liquids		N
11/10	Flammable liquids contained in or specified for use with equipment do not cause spread of fire	(see Form A.20)	N
on Technolo	RISK is reduced to a tolerable level :		N

TRF No. IEC61010\_1F

Page 28 of 92

# Report No. CSTS140227045

	IEC/EN 61010-1		
Clause	Requirement + Test	Result - Remark	Verdict
ALL.	a) The temperature of surface or parts in contact with flammable liquids is 25 °C below fire point		N
2 Contract	b) The quantity of liquid is limited		N
Contraction	c) Flames are contained within the equipment	on feeding	N
	Detailed instructions for RISK-reduction provided	Zame M	N
9.6	Overcurrent protection	Appliance not energized by mains.	N
9.6.1	MAINS supplied equipment protected	Sold and	N
110	BASIC INSULATION between MAINS parts of opposite polarity provided	(see Form A.14)	N NII/
inneres 11	Devices not in the protective conductor	Comm.	N
N	Fuses or single-pole circuit-breakers not fitted in neutral (multi-phase)	1111/1 A	N
9.6.2	PERMANENTLY CONNECTED EQUIPMENT	Cart Summer Street	N
NIII	Overcurrent device:	ALL COM	N
Elerer	Fitted within the equipment; or		N
Contineed	Specified in manufacturer's instructions	The start of the s	N
9.6.3	Other equipment	Contration 2	N
S SOL	Protection within the equipment	11/10	N

10	EQUIPMENT TEMPERATURE LIMITS AND RESISTANCE TO HEAT		P
10.1	Surface temperature limits for protection against burns		P
	Easily touched surfaces within the limits in NORMAL and in SINGLE FAULT CONDITION:	(see Form A.21A)	P
10	- at an specified ambient temperature of 40 °C	Contraction in	P
- TANG	- for equipment rated above 40 °C ambient temperature limits not exceeded raised by the difference to 40 °C		N
	Heated surfaces necessary for functional reasons exceeding specified values:		N
2 and	Are recognizable as such by appearance or function; or		N
6	Are marked with symbol 13	Electron ull	//_N
NIII.	Guards are not removable without tool		N
10.2	Temperatures of windings	San Alle	N
Certificat	Limits not exceeded in:		N
	NORMAL CONDITION	Zana SQ	δ Ν
		E Contraction	N
10.3	Other temperature measurements	NIIII	Р
	Following measurements conducted if applicable:	(see Form A.21A)	Р
			1

TRF No. IEC61010\_1F

	IEC/EN 01010-1		Certi
Clause	Requirement + Test	Result - Remark	Verd
ALL.	a) Value of 60 °C of field-wiring terminal box not exceeded		N
	b) Surface of flammable liquids and parts in contact with this liquids		N
Cer	c) Surface of non-metallic ENCLOSURES		P
	d) Parts made of insulating material supporting parts connected to MAINS supply		N
aller feeling	e) Terminals carrying a current more than 0,5 A	and NIIII	N
10.4	Conduct of temperature test	Electronic MULL	Р
10.4.1	Tests conducted under reference test conditions and manufacturer's instructions	(see Form A.21A)	P
10.4.2 🔊	Temperature measurement of heating equipment	SUIL/	N
Z	Tests conducted in test corner	(see Form A.21A)	N
10.4.3	Equipment intended for installation in a cabinet or wall	Contraction Contraction	N
1 Alexandre	Equipment built in as specified in installation instructions	(see Form A.21A)	N
10.5	Resistance to heat	The second still	11,P
10.5.1	Integrity of CLEARANCE and CREEPAGE DISTANCES	(see Form A.13)	Р
10.5.2	Non-metallic ENCLOSURES	(see Form A.22)	Р
Contineation	Within 10 min after treatment:	Star Start All	_
	Equipment subjected to suitable stresses of 8.2 and 8.3 complying with criteria of 8.1		P
10.5.3	Insulating material	Plastic for enclosure	Р
	a) Parts supporting parts connected to MAINS supply	Battery operated, not connect to the mains	N
110	b) TERMINALS carrying a current more than 0.5 A	Carl	N
Innerosu 111	Examination of material data; or	AND	N
E	in case of doubt:		Ň
Continue	1) Ball pressure test; or	Comment - Comment	NIN.
	2) Vicat softening test of ISO 306	Entre 1	N
500			riffication
11	PROTECTION AGAINST HAZARDS FROM		1110
11.1	Protection to OPERATORS and surrounding area provided by EQUIPMENT		N
and the second	All fluids specified by manufacturer considered	Termony NII//	N
11.2	Cleaning	(see Form A.24)	N
11.3	Spillage	(see Form A.24)	N
11.4	Overflow	(see Form A.24)	Ν
11.5	Battery electrolyte		N
Ç	Battery electrolyte leakage presents no HAZARD	Zer Stole	Ν

TRF No. IEC61010\_1F

Page 30 of 92

# Report No. CSTS140227045

2 Co	IEC/EN 61010-1		Certificat
Clause	Requirement + Test	Result - Remark	Verdict
11.6	Specially protected equipment	(see Form A.24)	N
11.7	Fluid pressure and leakage	11.	N
11.7.1	Maximum pressure:	(see Form A.25)	Ν
Certifica	Maximum pressure of any part does not exceed	A A A A A A A A A A A A A A A A A A A	N
11.7.2	Leakage and rupture at high pressure	2	N _
Lon Technology	Fluid containing parts subjected to hydraulic test if:	(see Form A.25)	NZ
	<ul> <li>a) product of pressure and volume &gt; 200 kPal; and</li> </ul>	100 A	N
10	b) pressure > 50 kPa		N
ideal and a state	Parts of refrigerating systems meets pressure-related requirements of IEC 60335-24 or IEC 60335-24		Ň
11.7.3 🧺	Leakage from low-pressure parts	(see Form A.25)	N
11.7.4	Overpressure safety device	Contraction in	N
3	Does not operate in NORMAL USE	NIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	N
- Company	a) Connected as close as possible to parts intended to be protected		N
NIIII	b) Easy access for inspection, maintenance and repair		N
E Contraction	c) Adjustment only with TOOL	SALLAR SALLAR	Ν
Carultu	d) No discharge towards person		Ν
	e) No HAZARD from deposit of discharged material		N
and to SU	f) Adequate discharge capacity	En Contract	N
ation .	No shut-off valve between overpressure safety device and protected parts		N
		Counter E Countration	NII/
12	PROTECTION AGAINST RADIATION, INCLUDING LASER SOURCES, AND AGAINST SONIC AND ULTRASONIC PRESSURE		N

12	LASER SOURCES, AND AGAINST SONIC AND ULTRASONIC PRESSURE		N
12.1 🧹	Equipment provides protection	Comments - Comments	N
12.2	Equipment producing ionizing radiation	Command 2	N
12.2.1	Ionizing radiation	(see Form A.26)	N
12.2.1.1	Equipment meets the following requirements:	the state stilling	N
	a) if intended to emit radiation meets requirements of 12.2.1.2; or		N
	tested, classified and marked in accordance to IEC 60405	A NUMBER	N
64°	b) if only emits stray radiation meets requirements of 12.2.1.3		N
12.2.1.2	Equipment intended to emit radiation	5. Countration is	N
te non technic	Effective dose rate of radiation measured	NIIIII	N

TRF No. IEC61010\_1F

1 S	IEC/EN 61010-1	N. Contraction of the second s	Certificati
Clause	Requirement + Test	Result - Remark	Verdie
	If dose rate exceeds 5 $\mu$ Sv/h marked with the following:		N
19	a) Symbol 17 (ISO 361)		N
Certification	b) Abbreviations of the radionuclides	on feedball	N
	c) With maximum dose at 1 m; or:	Zana Maria	N
	with dose rate value between 1 $\mu$ Sv/h and 5 $\mu$ Sv/h in m		N
12.2.1.3	Equipment not intended to emit radiation		N
110	Limit for unintended stray radiation of 1 µSv/h at any easily reached point kept:		N
12.2.2	Accelerated electrons	ALL C	N
No.	Compartments opened only by the use of a TOOL		N
12.3 🧹	Ultraviolet (UV) radiation	Cartana Salara	N
4	No unintentional HAZARDOUS escape of UV radiation:	Concerne of	
300	- checked by inspection; and		N
Zerre	- evaluation of RISK assessment documentation	San Transien MILLING	N
12.4	Micro-wave radiation		11, N
NIII.	Power density does not exceed 10 W/m <sup>2</sup> :		N
12.5	Sonic and ultrasonic pressure	Contract Contract	Ν
12.5.1	Sound level	(see Form A.27)	Ν
	No HAZARDOUS sound emission	Contraction 20	N
and technology	Maximum sound pressure level measured and calculated for maximum sound power level as specified in ISO 3746 or ISO 9614-1		N
Č	Instruction describes measures for protection	Z. Store	N
12.5.2	Ultrasonic pressure	(see Form A.27)	N
	Equipment not intended to emit ultrasound does not exceed limit of 110 dB between 20 kHz and 100 kHz		N
Continea	Equipment intended to emit ultrasound:	Zana Salar	N
NIII/	Outside useful beam does not exceed limit of 110 dB between 20 kHz and 100 kHz		N
E C	If inside useful beam above values exceeded:	Same NIL	N
Contineat	Marked with Symbol 14 of Table 1		N
	and following information in the documentation:	Entern St	N
S Class	a) dimensions of useful beam	110 Contraction	N
- Contraction of the second se	b) area where ultrasonic pressure exceed 110 dB	Comments ALLING	N
	c) maximum sound pressure inside beam area	Elementer MU	N
12.6	Laser sources	Cart Land Techn	N
a canadant	Equipment meets requirements of IEC 60825-1	and a literature	N

TRF No. IEC61010\_1F

Clause	Requirement + Test	Result - Remark	Verdi
13	PROTECTION AGAINST LIBERATED GASES, EXPLOSION AND IMPLOSION		N
13.1	Poisonous and injurious gases		N
Conneation	No poisonous or injurious gases or substances liberated in NORMAL CONDITION		N
	Attached data/test reports demonstrate conformity	e El	N
13.2	Explosion and implosion	and Continue	N
13.2.1	Components		N
<	Components liable to explode:	Electron School	_
10	Pressure release device provided; or	Contraction from	N
	Apparatus incorporates operator protection (see also 7.7)	State and	N
Control	Pressure release device:	Zalana Salana	MD
9	Discharge without danger	- Contraction of the	N
S	Cannot be obstructed	NIIII E	N
13.2.2	Batteries and battery charging	(see Form A.28)	N
Contraction	If explosion or fire HAZARD could occur:		1110
MU.	Protection incorporated in the equipment; or	Contract E	N
	Instructions specify batteries with built-in protection	Contra Contra	N
Confication	In case of wrong type of battery used:		
	No HAZARD; or	Zanana 20	N N
	Warning by marking and within instructions	E English	N
tion feeting	Equipment with means to charge rechargeable batteries:		C.
14	Warning against the charging of non-rechargeable batteries; and		N
nneloge 111	Type of rechargeable battery indicated; or		N
E.e	Symbol 14 used	E Stand Milling	N
Certin	Battery compartment design	Sector State	N
	Single component failure	Connection	N
200	Polarity reversal test		N
13.2.3	Implosion of cathode ray tubes	All Income	N
	If maximum face dimensions > 160 mm:	2 Summer Star	100
11/1/10	Intrinsically protected and correctly mounted; or	1	N
- Contraction	ENCLOSURE provides protection:	Sales Aller	N
entitie	If non-intrinsically protected:		_
D.,	Screen not removable without TOOL		N
1/10	If class screen, not in contact with surface of tube	E Circulation	N

COMPONENTS AND SUBASSEMBLIES

TRF originator: VDE

Ρ

TRF No. IEC61010\_1F

14

S	IEC/EN 61010-1		Certifics
Clause	Requirement + Test	Result - Remark	Verd
14.1	Where safety is involved, components and subassemblies meet relevant requirements	(see Table 3)	Р
14.2	Motors		N
14.2.1	Motor temperatures	on recommendation and the second	N
Maria	Does not present a HAZARD when stopped or prevented form starting; or	(see Form A.21)	N
aller Technology	Protected by over-temperature or thermal protection device conform with 14.3	SNULL E	N
14.2.2	Series excitation motors	El martines 11111	N
- Contract	Connected direct to device, if over-speeding causes a HAZARD		N
14.3 义	Overtemperature protection devices	Still 1	ŚN
Z	Devices operating in a SINGLE FAULT CONDITION	(see Form A.29)	N
	a) Reliable function is ensured	Corte	N
1	b) RATED to interrupt maximum current and voltage		N
Contraction	c) Does not operate in NORMAL USE	The second states and	N
ALL.	If self-resetting device used to prevent a HAZARD, protected part requires intervention before restarting		N
14.4	Fuse holders	Contract Contract	N
Contineation	No access to HAZARDOUS LIVE parts		N
14.5	MAINS voltage selecting devices	Zame SQ	N
	Accidental change not possible	a Contraction	Ν
14.6	MAINS transformers tested outside equipment	(see Forms A.30 and A.31)	N
14.7 🗦	Printed circuit boards	Element NUL	Р
	Data shows conformity with V-1 of IEC 60695-11-10 or better; or	V-0	P
11	Test shows conformity with V-1 of IEC 60695-11-10 or better	(see Form A.18)	N
Certin	Not applicable for printed wiring boards with limited- energy circuits (9.4)		NNN
14.8	Circuits or components used as transient overvoltage limiting devices		N
Contractor	Test conducted between each pair of MAINS SUPPLY TERMINALS	(see Form A.32)	N
	No HAZARD resulting from rupture or overheating of the component:		N
sum allos	- no bridging of safety relevant insulation	Technology States	N
	- no heat to other parts above the self-ignition points		N

15

PROTECTION BY INTERLOCKS

TRF No. IEC61010\_1F

TRF originator: VDE

111

Ν

Page 34 of 92

#### Report No. CSTS140227045

Ρ

Ρ

S.	IEC/EN 61010-1	SMILL	Certification
Clause	Requirement + Test	Result - Remark	Verdict
15.1	Interlocks are designed to remove a HAZARD before OPERATOR exposed		N
15.2	Prevention of reactivation	9 P	N
15.3	Reliability	an weather and the second	N
	Single fault unlikely to occur; or	Elene M	/ N
11/1/10	Cannot cause a HAZARD		N 🔊
Ton technologia		and a state of the	Z
16	HAZARDS RESULTING FROM APPLICATION	E Sulling	Р
16.1	REASONABLY FORESEEABLE MISUSE	Conner El Conner	P.II
economical V	No HAZARDS arising from settings not intended and not described in the instructions	NULL C	P
T Van	Other cases of REASONABLY FORESEEABLE MISUSE addressed by RISK assessment	E SUU	P
16.2	Ergonomic aspects	England	Р
	Factors giving rise to a HAZARD the RISK assessment is reflecting those aspects:		Р

limitation of body dimensions

displays and indicators

a)

b)

	c) accessibility and conventions of controls	11/13 Contract	Р
The sum feel	d) arrangement of TERMINALS	The state of the s	P <
		Element NI	10.
17	RISK assessment		N
tion technology	RISK assessment conducted, if HAZARD might arise and not covered by Clauses 6 to 16		N
Ų	TOLERABLE RISK achieved by iterative documented process covering the following:		N
and all	a) Risk analysis	Contract	N
- North	Identifies HAZARDS and estimates RISK		∽N
Contractor	b) Risk evaluation	Zamer School	N
	Plan to judge acceptability of resulting RISK level based on the estimated severity and likelihood of a RISK		N
Zamalan Ia	c) RISK reduction		N
	Initial RISK reduced by counter measures;	The second Still	N
	Repeated RISK evaluation without new RISKS introduced		N
eruneauna.	RISKS remaining after RISK assessment addressed in instructions to RESPONSIBLE BODY:		N S
1/2	Information contained how to mitigate these RISKS	Contraction of the second	N N
on technology	Following principles in methods of RISK reduction applied by manufacturer in given order:		N
5	1) RISKS eliminated or reduced as far as possible	Sharen Shilling	N
105			I

TRF No. IEC61010\_1F

Page 35 of 92

# Report No. CSTS140227045

3	IEC/EN 61010-1		
Clause	Requirement + Test	Result - Remark	Verdict
ML	2) Protective measures taken for RISKS that cannot be eliminated		N
2 Contraction	3) User information about residual RISK due to any defect of the protective measures		N
Cer	Indication of particular training is required	· Electronical NU	N
	Specification of the need for personal protective equipment		N
Caller Collins	Conformity checked by evaluation of the RISK assessment documentation		N

ANNEX F	ROUTINE TESTS	11111	Carried out by manufactu	rer.
ation	Manufacturer 's declaration	- Contraction		Ν

TRF No. IEC61010\_1F
Page 36 of 92

#### Report No. CSTS140227045

	IEC/EN	61010-1	N	an 1	Car	lin.
Clause	Requirement — Test		Result — I	Remark		Verdic
			Cert	- Constant	2111	11/2
4.4.2	TABLE: Summary of SINGLE FAULT COND	ITIONS		Form	1 A.1	Р
Cubalayaa	Title	Decenat	Carried	Comm	onto	
Subclause	litie	apply	out	Comm	ents	
4.4.2.1	SINGLE FAULT CONDITIONS not covered by 4.4.2.2 to 4.4.2.14	NU/	X	see Form A.2	sum techno	054
4.4.2.2	PROTECTIVE IMPEDANCE	x	chronist	IIII		
4.4.2.3	PROTECTIVE CONDUCTOR	X		Technology	110	
4.4.2.4	Equipment or parts for short-term or intermittent operation	X	Control	1	chnology	3111
4.4.2.5 🔊	Motors	X	NII/	1/0		Termeatre
Z	- stopped while fully energized	X	E	1111/16		
C.	- prevented from starting	х	Certificat	- Contraction	1	11/1/
» MII	– one phase interrupted (multi-phase)	X		Continued	T	- Contraction
4.4.2.6	Capacitors	Х	500	1010	Certi	
4.4.2.7	MAINS transformers Attach drawing of MAINS transformers showing all protective devices (see Forms A.30 and A.31)	X		2 Contraction		1 - Commons
4.4.2.8	Outputs	E	X	NUIII	<u>e</u> .	
4.4.2.9	Equipment for more than one supply	х ∽		The manual A	11/1	
4.4.2.10	Cooling – air holes closed – fans stopped – coolant stopped – loss of cooling liquid	X X X X X X				11 SALLA
4.4.2.11	Heating devices – timer overridden	x x				Contraction
Con	- temperature controller overridden	Х	Certificat	E	1	1111
4.4.2.12	Insulation between circuits and parts	X		Contract	E	Technoli and
4.4.2.13	Interlocks	X	SC/		Certifi	
4.4.2.14	Voltage selectors	x	and a second second			
List below a	all SINGLE FAULT CONDITIONS not covered by	4.4.2.2 to	4.4.2.14:	Connearen		chinallogu
- Contraction	semi-conductor components short- circuited.		x	SWIII C	souncan	

Supplementary information: (see Form A.2 for details of tests)

TRF No. IEC61010\_1F

## IEC/EN 61010-1 Clause Requirement — Test Result — Remark Verdict

Report No. CSTS140227045

Page 37 of 92

4.4	TABLE:	Testing in SINGLE FAULT CONDITION - Results	N11/1/25	Form A.2	Р
Fa	ault No.	Fault description	Td 4.4.3 (NOTE)	How was test terminated Comments	Meets 4.4.4
1	12.	Short D1	00:10:00	Unit shutdown immediately, no hazard.	Yes
2	- AND AND	Short C7	00:10:00	Similar normal operation, no hazard.	Yes
3	an te	Short R9	00:10:00	Similar normal operation, no hazard.	Yes
4		Short D2	00:30:00	Unit shutdown immediately, no hazard.	Yes
5	6	Battery reverse	00:30:00	Not operate, no hazard.	Yes
	1000				
			E C		
NOTE Td Record di	= Test duration	in hh:mm:ss test on Form A 14 and temperature tests on Form A 21	Cartinearion	E States Aller	

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

Supplementary information:



Page 38 of 92

#### Report No. CSTS140227045

5.1.3c)       TABLE: Mains supply       Form A.3       N         Marked rating        V          Phase        V          Phase        V          Frequency        Hz          Current        N          Power        W          Power        W          Power        W          Power        VA          Power        VA          Test       Voltage       Frequency       Current       Power in       Power in       Comments         No.       V       Hz       A       W       VA           1                 3	Clause	Req	uirement — Tes	t	Certific	Res	sult — Remark	11/10	Verdic
Marked rating	5.1.3c)		BLE: MAINS SUP	ply	SULL	Cert	- Contraction	Form A.3	N
Phase            Frequency        Hz          Current        A          Power        W          Power        VA          Test       Voltage       Frequency       Current       Power in       Power in         No.       V       Hz       A       W       VA         1             3             Note – Measurements are only required for marked ratings.            Supplementary information:	2	Mar	ked rating		- Sugar Le Same	V	6	Connea	
Frequency        Hz          Current        A          Power        W          Power        VA          Test       Voltage       Frequency       Current       Power in       Comments         No.       V       Hz       A       W       VA          1               3          VA           Voltage       Frequency       Current       Power in       Comments           No.       V       Hz       A       W       VA            2                 Note       Measurements are only required for marked ratings.               Supplementary information:	Cardineatio	Pha	se		Canada	- Sum redu	5	6	
Current          A            Power          W            Power          VA            Test         Voltage         Frequency         Current         Power in         Power in         Comments           No.         V         Hz         A         W         VA            2                 3            VA		Free	quency	· ·	MD	Hz		5	_
Power          W            Power          VA            Test         Voltage         Frequency         Current         Power in         Power in         Comments           No.         V         Hz         A         W         VA            1                 2                 3                 Note - Measurements are only required for marked ratings.               Supplementary information:	11/1	Cur	rent	re#1000	and an and a second	A	6	- Contraction	
Power      VA       Test     Voltage     Frequency     Current     Power in     Power in     Comments       No.     V     Hz     A     W     VA     VA       1     Image:	and techno	Pow	ver		entitication	W	MILL	Ce.	_
Test       Voltage       Frequency       Current       Power in       Power in       Comments         No.       V       Hz       A       W       VA       VA <td< td=""><td></td><td>Pow</td><td>ver</td><td></td><td></td><td> VA</td><td>- Company</td><td>NIII</td><td></td></td<>		Pow	ver			VA	- Company	NIII	
Test     Voltage     Frequency     Current     Power in     Power in     Comments       No.     V     Hz     A     W     VA       1     Image: Comments and the second se		Centre	E.C.				General		
No.     V     Hz     A     W     VA       1     Image: A image:	lest	Voltage	Frequency	Current	Power in	Power in		Comments	
1     1     1     1       2     1     1     1       3     1     1     1   Note - Measurements are only required for marked ratings. Supplementary information:	No.	V	Hz	A	W	VA			
2	1	Confication		ANI/	Certi	170	and then recommend		
3 Note - Measurements are only required for marked ratings. Supplementary information:	2		Contration	-		C.	13	and the second	
Note – Measurements are only required for marked ratings. Supplementary information:	3	NIII110		Conneation	No.	and out		1	stion feels
		ALL CALL							and and a second second

TRF No. IEC61010\_1F

Page 39 of 92

#### Report No. CSTS140227045

			IEC/EN 61010-1			
Clause	Requirement	t — Test	Certain	Result — Rema	irk	Verdict
5 3		ability of marking	s Miles		Form A 4	P
5.5 ALL	Markin		S TE)			Technol
1) Adhesiy	e lahel		· C )	A Water	Agent	
2) Ink print		S	68	B Isopropyl alco	abol 70%	10
3) Lasor m	arked	- Andrew	SULL.		ot)	1054
1) Eilmcoat	ted (plastic foil	control nanel)		D (specify agen	nt)	1
	d on plastic (m			E (specify agen	() ()	9
					it)	
NOTE - Whe	re applicable inclu	de print method label m	naterial ink or paint type	Cart	- Contraction	2
ixing method	, adhesive and sur	face to which marking is	s fixed.	NULL.		Zucanon
	Marking loc	ation	N	larking method (se	e above)	
dentificatio	on (5.1.2) 🗾	States NIII	3	Contraint	E Stranger	11/1
Mains supp	oly (5.1.3)					
-uses (5.1	.4)	144	3	SC	111.	attack .
erminals a	and operating o	devices (5.1.5.2)		Zanan IV	- and	<u>.</u>
Switches a	nd circuit breal	kers (5.1.6)		Z	aton a	- ALANN
Double/reir	nforced equipm	nent (5.1.7)	5	NIIIII	20	n Ter
-ield wiring	g Terminal box	es (5.1.8)	Continent	NIII/	140	
Warning m	arking (5.2)	S	5		among 111/1/	5
Battery cha	arging (13.2.2)	Zincaling Technic	- Contraction	Centines	- Contraction	1000
Technology	111/10	i i i i i i i i i i i i i i i i i i i	The start Start	and the second second	Continue	The second se
Method	Test agent	Remains legible	Label loose	Curled edges	Commer	nts
		Verdict	Verdict	Verdict		
3	<del>A /</del> B	Yes <del>/ No</del>	Yes / No	<del>Yes /</del> No	P/F/N	IA 🔗
3 义	A/B	Yes <del>/ No</del>	<del>Yes /</del> No	<del>Yes /</del> No	P <del>/F/N</del>	IA
5	A / B	Yes <del>/ No</del>	<del>Yes /</del> No	<del>Yes /</del> No	V P/F/N	IA
5	A / B	Yes <del>/ No</del>	📄 <del>Yes /</del> No	<del>Yes /</del> No	P/F/N	HA U

TRF No. IEC61010\_1F

Page 40 of 92

10									
Clause	Requiremen	t — Test	1110	Ce		Re	sult — Remai	rk	Ver
6	TABLE: Pro	otection aga	inst elec	ctric sh	ock - Blo	ock dia	gram of syste	emForm A.5	
Pollution deg	gree: 2	Certai		-Je	Overvolta	age cate	egory	: 600V C	CATII
Location or	Insulation type	Maximum working	С	REEPAG (NO	∈ Distano TE 3)	ce	CLEARANCE (NOTE 3)	Test voltage	Comm
description	(NOTE 1)	voltage (NOTE 2)	PWB mm	СТІ	Other mm	CTI	mm	(NOTE 2) V	
Two terminals of fuse	BI	600V	>6.0		All's	front fe and and	>3.0	2210 V rms	
Live parts to enclosure	RI	600V			>12.0	- 10	>6.0	3510V rms	111
	on Technology		Contra		- And	non	Contraction of the second	MIII	Carter
Cert	3	allow feedball		204		C.	Conce	Contraction of the second	S111/
	ary Informatio	on:							
Supplement	ary Information	on:	ALL CALL		ALL COLOR				
Supplement	ary Information	on:							
Supplement	ary Information	on:							
Supplementa	ary Information	on:							
	ary Information								
Supplementa	ary Information								
	ary Information								
Supplementa	ary Information								
Supplementa	ary Information								

## Page 41 of 92

Z Start	IE	EC/EN 61010-1		NIII.	
Clause	Requirement — Test	4	Result — Rer	nark	Ver
0.0\\//		SCH AND	C		Innotos
0.2	IABLE: LIST OF ACCESSIBLE parts	States States	111 Anno 1	Form A.6	Р
6.1.2	Exceptions	Car June	in technic All		
6.2	Determination of ACCESSIBLE parts			In team IIII	_
Item	Description	Determinat (NO	ion method ΓΕ 5)	Exception under (NOTE 4)	6.1.
1	Enclosure	Visual, tes rigid tes	t finger and st finger		
NOTE 1 - Te NOTE 2 - S NOTE 3 - P NOTE 3 - C NOTE 4 - C NOTE 5 - T	est fingers and pins are to be applied without to becial consideration should be given to inaded arts are considered to be ACCESSIBLE if they of provide suitable insulation (see 6.4). apacitor test may be required (see Form A.7). he determination methods are:	force unless a force is s quate insulation and hig ould be touched in the	specified (see 6.2 h voltage parts (s absence of any cc	2) ee 6.2) vering which is not consi	idere
V Supplement	= visual; R = rigid test finger; J = jointed test f ary information:	finger; P3 = pin 3 mm d	iameter; P4 = pin	4 mm diameter.	- Han I
10	and a state of the	Zanata	NIII/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1	- Contraction -	ICatt
TRF No. IE	C61010_1F			TRF origina	tor: Y



# IEC/EN 61010-1 Clause Requirement — Test Result — Remark Verdict

Report No. CSTS140227045

Page 43 of 92

6.3.2	TABLE: Values in si	NGLE FAUL		ION 🗦								Form A.8 P
Item	Subclause and		Voltage		Trar (see l	nsient NOTE)		Cur	rent		Capacitance	
(see Form A.6)	fault No. (see Form A.2)	V r.m.s.	V peak	V d.c.	V	s	Test circuit A1/A2/A3	mA r.m.s.	mA peak	mA d.c.	μF (see NOTE)	Comments
Enclosure to reference earth	Short C7	65.8	93.1		-		A1	0.010	0.047		- 20	TAT
Enclosure to reference earth	Short R9	69.1	97.7		AUX :	an Anna	A1//	0.011	0.048			
	NH/III		The	on Tech	1	- Andrew	1111	Certific		- Contraction	S111/10	
	E Tremmer	11/10			- Conceller I	1				ertitie	E Contraction	SUIL
Supplement		10.	- Contraction	and the second				Z		and the second second		
TRF No. IEC	61010_1F											TRF originator: VDE

Page 44 of 92

#### Report No. CSTS140227045

	Comment II	EC/EN 61010-1		
Clause	Requirement — Test	Result — Remark	11/10	Verdict
			Technon 11	11/16
6.5.2.2	TABLE: Cross-sectional area of	f bonding conductors	Form A.9	N
Co	DNDUCTOR LOCATION	CROSS-SECTIONAL AREA mm <sup>2</sup>		VERDICT
Cer	Zenne stille		N111/	Pass
	Zamer Al		E	11
6.5.2.3	TABLE: Tighting torque test		Contification	N
	Conductor location	Size of screw	Tighting torque Nm	Verdict
- notest	and a second sec	NIII III	Concato	E C
1				Certification
Suppleme	ntary information:			

6.5.2.4	TABLE: Bonding impedar	nce of plug o	connected equipr	ment Form A.10 🧹	N
ACCES	SSIBLE part under test	Test current A	Voltage attained after 1 min V (NOTE 2)	Calculated resistance (Maximum 0,1 or 0,2 $\Omega$ ) $\Omega$ (NOTE 1)	Verdict
NIIII	Contain a		and and a state		Technon
Electron	NIIII	Contraction .		our Contra	17
NOTE 1 – For	none-detachable power cord the imp xceed 0.2 Ohm.	bedance betwee	en protective conductor	plug pin of MAINS cord and each A	CCESSIBLE

Supplementary information:

6.5.2.5	TABLE: Bonding impedance	e of permanently	connected equipment	N
Α	ACCESSIBLE part under test	Test current A	Voltage attained after 1 min (maximum 10 V) V	Verdict
Como o Su			Summer SULLA	Zanation tee
Suppleme	entary information:	Contra a contra		0.4

6.5.2.6	TABLE: Transformer P	PROTECIVE BOI	NDING screen	Form A.11	N
ACCES	SIBLE part under test	Test current (see NOTE) A	Voltage attained after 1 min (maximum 10 V) V	Calculated resistance (maximum 0,1 $\Omega$ )	Verdict
Alle	i -	the state	100		echnology
NOTE - Test of	current must be twice the value of	of the overcurrent pro	ptection means of the windir	ng. Test is specified in 6.5.2.6	a) or b). 🛛 🛁
Supplement	tary information:				

TRF No. IEC61010\_1F

	SIL	Contraction in		NIII,	Germin	10		5		
			IEC/E	EN 61010	-1 111					
lause	Requirement — Test	S.C.		eruheau	Result — Re	emark 🕔	11/10		Contraction of the second	Verdict
					Continent	Ele	an Texanologia	MU1		
.5.4	TABLE: protective im	pedance	The feetinger 11	11/10		Contrat	1	Comoto9	Form A.12	N
		·	A single	e compor	nent					
	Component	Location	Measur	Current	Calculated		ated Dewer	Verdict	Comments	
			voltage	A	dissipation W	voltage V	dissipation W			
		Same and	200	notoqu	117		attor	lech		
	- Change	Alles	Zincaliante	11	and and a second		Certo		the recent I	
	Concerne	E Stranger Alle	C <sup>2</sup>	Z	allon Tech				A A A A A A A A A A A A A A A A A A A	
			A combinati	ion of con	nponents					
	Component		L	ocation				(	Comments	
		Carl D	- Calmo	NIL	11/2		Confine and	- No	ANH	
		NIII/IA				11.			tion .	
	Catcallo	1000						CES		
IOTE – A Supplem	PROTECTIVE IMPEDANCE shall not entary information:	be a single electronic device tha	at employs electron co	onduction in	a vacuum, gas	or semicondu	ctor.			
IOTE – A Supplem	PROTECTIVE IMPEDANCE shall not entary information: TABLE: Current- or v	be a single electronic device tha	at employs electron co	onduction in	a vacuum, gas	or semicondu	ctor.			N
NOTE – A Supplem	PROTECTIVE IMPEDANCE shall not entary information: TABLE: Current- or v Component	be a single electronic device that oltage-limiting device Location	at employs electron co	Measured	a vacuum, gas	or semicondu	ctor.	Verdict	Comments	N
NOTE – A Supplem	PROTECTIVE IMPEDANCE shall not entary information: TABLE: Current- or v Component	be a single electronic device tha oltage-limiting device Location	at employs electron co	Measured	a vacuum, gas	or semicondu	ated Current	Verdict	Comments	N
NOTE – A Supplem 5.5.6	PROTECTIVE IMPEDANCE shall not entary information: TABLE: Current- or v Component	be a single electronic device that oltage-limiting device Location	at employs electron co	Measured	a vacuum, gas	or semicondu Ra Working voltage V	ated Current	Verdict	Comments	N
IOTE – A Supplem 5.5.6	PROTECTIVE IMPEDANCE shall not entary information: TABLE: Current- or v Component	be a single electronic device that oltage-limiting device Location	at employs electron co	Measured	a vacuum, gas	or semicondu Ra Working voltage V	ted Current A	Verdict	Comments	N
NOTE – A Supplem 5.5.6 -	PROTECTIVE IMPEDANCE shall not entary information: TABLE: Current- or v Component	be a single electronic device that	at employs electron co	Measured	a vacuum, gas	or semicondu Ra Working voltage V 	eted Current A 	Verdict	Comments	N
<u>IOTE – A</u> Supplem 5.5.6 - -	PROTECTIVE IMPEDANCE shall not entary information: TABLE: Current- or v Component	be a single electronic device tha oltage-limiting device Location	at employs electron co	Measured	a vacuum, gas Current A 	or semicondu Ra Working voltage V 	ted Current A 	Verdict	Comments	N
Supplem	PROTECTIVE IMPEDANCE shall not entary information: TABLE: Current- or v Component	be a single electronic device tha oltage-limiting device Location	at employs electron co	Measured	a vacuum, gas	or semicondu Ra Working voltage V 	ated Current A  	Verdict		N
NOTE – A Supplem 5.5.6	PROTECTIVE IMPEDANCE shall not entary information: TABLE: Current- or v Component	be a single electronic device that	at employs electron co		a vacuum, gas	or semicondu Ra Working voltage V 	ated Current A 	Verdict	Comments	N
<u>AOTE – A</u> Supplem 5.5.6 - Supplem	PROTECTIVE IMPEDANCE shall not entary information: TABLE: Current- or v Component	be a single electronic device tha	at employs electron co		a vacuum, gas	or semicondu Ra Working voltage V 	ated Current A 	Verdict		N
Supplem	PROTECTIVE IMPEDANCE shall not entary information: TABLE: Current- or v Component	oltage-limiting device Location	at employs electron co		a vacuum, gas	or semicondu Ra Working voltage V 	ted Current A  	Verdict		N
<u>AOTE – A</u> Supplem 5.5.6 - Supplem	PROTECTIVE IMPEDANCE shall not entary information: TABLE: Current- or v Component	oltage-limiting device tha	at employs electron co	Measured	a vacuum, gas	or semicondu Ra Working voltage V 	ated Current A 	Verdict		N
Supplem	PROTECTIVE IMPEDANCE shall not entary information: TABLE: Current- or v Component	be a single electronic device tha	at employs electron co	Measured	a vacuum, gas	or semicondu Ra Working voltage V 	ated Current A 	Verdict		N
Supplem	PROTECTIVE IMPEDANCE shall not entary information: TABLE: Current- or v Component	be a single electronic device tha	at employs electron co		a vacuum, gas	or semicondu Ra Working voltage V 	ated Current A 	Verdict	 	
Supplem	PROTECTIVE IMPEDANCE shall not entary information: TABLE: Current- or v Component	be a single electronic device tha	at employs electron co		a vacuum, gas	or semicondu Ra Working voltage V 	ated Current A 	Verdict		N ator: VE
Bupplem	PROTECTIVE IMPEDANCE shall not entary information: TABLE: Current- or v Component	oltage-limiting device Location	At employs electron co		a vacuum, gas	or semicondu Ra Working voltage V 	ated Current A 	Verdict	  	N ator: VE

#### Page 46 of 92 Shill and IEC/EN 61010-1 NIII110

Clause	Requireme	ent — Test	tion feeting	1	10	3112	Contin	Result -	- Remark	111	11/10		Contraction	Verdict
6.7	TABLE: C		and CRE	EPAGE di	stances	- Areaman and	NII.	116	Continu	20	on terminious		Form A.13	Р
6.4.2	ENCLOSUR	ES and prote	ective ba	rriers	Cert	HCaron	Ě	8	Mechanic	al resistan	ce to shoc	k and im	pact	
6.4.4	Impedance	e Protection	and and a state of the state of	NIII/10			Certification	9.6.1	Overcurre	ent protecti	on basic in	sulation	between MAINS parts	_
6.5.4	Protective	impedance		- Contraction	SIL	10		10.5.1	Integrity o	f CLEARAN	CES and C	REEPAGE	∃ distances	_
3.5.6	Current- o	r voltage-lim	itina dev	/ice		re- notos	111/10			Certification		Technolous		_
Location	Mea (initia	sured	Verdict		Mecha	anical tests	s (note)		Test at max.	Measure (if red	d after test uuired)	Verdict	Comments	
(see Form A.5)	CREEPAGE	CLEARANCE		Applied force	Rię (8	gidity 3.2)	D (8	)rop 8.3)	RATED	CREEPAGE	CLEARANCE			
	mm	mm		N	Static (8.2.1)	Impact (8.2.2)	Normal (8.3.1)	Hand-held Plug-in	(10.5.1)	mm	mm			
Two terminals of fuse	>6.0	>3.0	Р	30N	P	P	Р	and the second s	40°C	>6.0	>3.0	P	ВІ	
_ive parts to enclosure	>12.0	>6.0	P	30N	P	PI	Р		40°C	>12.0	>6.0	P	RI	
		- And - I	1.	Certo		- I and	1			Lee Cer	dication	I W	Concession ANU/100	
	- Concerne	N.	- Constant			Certini	E	Lon Technolog	SIII/2			Certification		
		Z	in Ter-	5		117.	Centill		E Internet	1111	110		Contraction of the second	
	tary informa	ition:										Contraction of the second	an and a state of the state of	

Page 47 of 92

#### Report No. CSTS140227045

Clause	Require	ement — Test				Result — R	emark	Verdict
		Contraction of		111	3	ert	-	10
6.8	TABLE	: Dielectric st	rength tes	ts	19		Form A.14	P
4.4.4.1 b)	Conform	nity after appli	cation of sir	NGLE FAULT CO	NDITIONS	5 <sup>1</sup>	Continue	Р
6.4	Primary	means of pro	tection <sup>2</sup>	C6.	Z	ion tector		P
6.6	Connec	tions to extern	al circuits		Cert	2	the sum the state	N
6.7.	Insulation	on requiremen	ts² (see Anr	nex K)			- Contraction	P
6.10.2	Fitting o	of non-detacha	ble mains s	upply cords <sup>1</sup>	E Car	11/	144	N
9.2 a) 2)	Elimina	ting or reducin	g the sourc	es of ignition	within th	e equipment	Commond All	N
9.4 c)	Limited	-energy circuit	manual 11	10		Contractor	E Reamond	N//
9.6.1	Overcu	rrent protectior	n basic insu	lation betwee	n MAINS	- parts	Centification	= N
<sup>1</sup> Record the fa	ault, test or t	reatment applied b	efore the diel	ectric strength te	st. <sup>2</sup> Humic	ity precondition	ing required.	Concasan
2	Test sit	e altitude			:	Electron	100m	
C	Test vo	Itage correction	n factor (se	e Table 10)	:	Contract	NA	—
Locatio reference Forms A.2	on or es from and A.5	Clause or sub-clause	Humidity Yes/No	Working voltage V	Te: r.m.s	st voltage ./peak/d.cV	Comments	Verdict
Two terr of fu	minals se	4.4.4.1 b), 6.4, 6.7	Yes	600V rms	2210	/ rms	BI	P
Live pa enclos	rts to sure	4.4.4.1 b), 6.4, 6.7	Yes	600V rms	3510 \	/ rms	RI	P
	1 Same	EV.			- Alle	THE REAL		,
	3000	And ALL	Ş					

6.10.2	5.10.2 TABLE: Co		ge				Form A.15 VN
L	ocation	Mass kg	Pull N	Verdict	Torque Nm	Verdict	Comment
- The start	E C			Centili		echno.	
Dielectric st	rength test for 1 m	in. (6.8.3.1)	·	114	Certi	V r.m	.S.
Supplement	ary information:	Contraction to	ALLA.	. Constant	NUL	Cer	2 Martine 2

TRF No. IEC61010\_1F

	2					IE	C/EN 6	1010-	1 1								
Clause	Requir	ement — Test	1	094	11/2	Res	ult — F	Remark		Contraction of the second	11	11/10			Contract	flon .	Verdic
7.	TABLE	E: Protection agai	nst mechanica	HAZAF	RDS		11/2	6	Certer		Z	on termination	3		F	orm A.16	Р
7.3.4	Limitat	ion of force and pre	essure	Cerum	C8-	11	- Land	ologi	111	110			Contracto	ion i	50	10/0519	_
7.3.5	Gap lir	nitations between r	noving parts			Cen	Inco			chnology	NIII/	6			Cartification		_
		Clause	7.3.4				Clause	7.3.5	.1			Cla	ause 7.	.3.5.2			
		Continuous	Temporary	_		Mir	nimum	gaps (	mm)	1	1	Maxim	num ga	ips (mm)			
Part / Locat	tion	Contact présure max. 50 N /cm <sup>2</sup> @ 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	Verdict	Comr	nents
Enclosure		max. 50 N /cm² @ max. 150 N	max. 250 N / 3 cm² @ max. 0,75 s		11			Carrie		- Contraction			100	S111	P		
			11		Zine	ation .	1		1094		1	Certific		E	chine	5111	
9	TABLE	Protection again	nst the spread of	of fire	Comments of the second s	and the second s	2	11 The contraction	511		C.	to stion	11103		Ň	orm A.17	Р
Item	So	ource of HAZARD or onsidered (circuit, c	area of the equi component, liqui	pment d etc.)	F (9;	Protec Meth a. 9b (	tion od or 9c)				Р	rotectio	n detai	ls			Verdic
1	All live	parts		Contract of	(	9c	- I come	Fire e	enclosu	ure prov	ided		Zareau	· ·	S	alogue a	Р
		The sum testimes	S			Certif	ICaron		- Control	nnatogy	NIII,	1		(	Contration		
	17.	Co.	Zualin team	5	1 Ann			6	runce			094	1111	6		· ·	
	500004	AMU		- June 140	burn	5	Burgh			C.	entification		- Conne Techno	1000	11/10		
Suppleme	ntary info	mation:															

Page 49 of 92

#### Report No. CSTS140227045

		IEC/EN 6	1010-1				
Clause R	equirement — Test	Certin	F	Result — F	Remark		Verdict
	78 50	6	Cer		- Andrea	11	11/10
9.3.2 T	ABLE: Constructional rec	uirements	10		For	m A.18	N
14.7 P	rinted circuit boards					Centific	Ν
Connealine in		Certif	E	Technool	1		
Material tested			Cert		Incasion Technic	3	_
Generic name		Sall:	MUL			- Incanon Tec	_
Material manuf	facturer		- Com	11.	11	See	_
E.	Martice MILLING		Cartification	Ň	A standard and	111.	
Туре	E Contraction			Contrat	EX.	Constant of the second	_
Colour		· .			Contract	atrall	
Conditioning d	etails		allon technol	SUM	len .		_
Contraction	E Comment AV	Y.		Zaran	300	1 Par	
			Sample	1	Sample 2	Sar	nple 3
Thickness of s	pecimen	mm 🔰	Technology	11/1	<i>Q</i> .	2	runcation feet
Duration of flar	ming after first Application	S Sectore		and the search	NIIII		
Duration of flar After second a	ning plus glowing	s	5	ican.	2 Section of the sect	11	
Specimen burr	ns to holding clamp	Yes/No	1111	110		Carancan	ontech
Cotton ignited		Yes/No	E	echnologis	11/1/10		
Sample result	States and States	Pass/Fail	Continue		- Contraction	NIII/	6
Supplementary	/ information:	Stores .	1	Cer	dia.	Ellector	olono I

Recognized PCB material used

TRF No. IEC61010\_1F

				Pag	ge 50 of 92			Report No. CSTS1402	22704
		NULL	, and the second s	IEC/E	N 61010-1	MILLE	Certine		
Clause	Requirement	— Test		Ę	Result —	Remark	111/1/16	Ve	rdict
9.4	TABLE: Lim	ited-energy circuit		I ANNI ANNI			The sum of the second s	Form A.19	Ρ
	Item	9.4 a)	9.4 b) Cur	rent and powe	r limitation	9.4 c)	Decision		
(ser	or Location e Form A.17)	Maximum potential in circuit voltage r.m.s./d.c. V	Maximum available current A	Maximum available power VA	Overload protection after 120 s A	Circuit separation	Yes/No	Comments	
		Stand MULLA		Zanata	50		Contra		
	E.		NIIII		France and the	1 S	Por ALL		
	2	Contricat	E Contractor	NIII		Trine aller ter		the second second	
	310	in the second se	Contracto	E Constant	NII//1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1		Contraction		
	2	South States		Certifica	- Contractor	NIII/1			
	0				Certifica	E Longeon	NIIII	German	
	Alle		Treation Terror		317.	Continue	Electron	NILL.	
			5	Tration feet	Contract of the second	112	Center		
	Cartification	E stannong	1100	U	teation to		ALL		
		Enter Ele	Termenter 111	1110	J	Cation Com	Colores a		
		Contract	B/E	active and	110	2	Cation		
	a los reconstruction	N. M.	Certificatio	E C	chrone 11	11/2			
Supplem	nentary informatio	n: battery supplied and	is considered lin	mited –energy	circuit				



#### Page 52 of 92

#### Report No. CSTS140227045

2		12.	IEC/EN 61010-1			
Clause	Requirem	ent — Test	Certin	Result — Rema	rk	Verdict
10.	TABLE :	Temperature Measure	ments		Form A.21A	P
10.1	Surface t	emperature limits - NORI	MAL CONDITION an	d / or SINGLE FAULT	CONDITION	Р
10.2	Tempera	ure of windings- NORMA	L CONDITION and	/ or SINGLE FAULT CO	NDITION	N
10.3	Other ten	perature measurement	S	2	Same State	N N
Operating	conditions:	Normal operation.			Contraction for	MIN
Frequenc	<b>у</b> :	Hz Test roor	n ambient temper	rature (ta) 2	5.0 °C	

Voltage:	V	Test dura	ation	11/10		2 h 🥖 15 min 🔊 🚫
Part / Locatio	on	t <sub>m</sub> °C	t <sub>c</sub> ∘C	t <sub>max</sub> °C	Verdict	Comments
Button surface	- Conner	25.6	40.6	85	Р	
Enclosure	er une allen	25.8	40.8	85	P	Zusan Staller
PCB		26.2	41.2	130	P	Call Internation
C7	11/10	26.3	41.3	105	Р	
Internal wire	ion reduced a	26.5	41.5	80	Р	E recommenter AMU
Interior surface of enc	losure 🗦	26.9	41.9	Ref.	Р	Contract Contractor
Ambient	Cert	25.0	40	2111	6	Cruticali

 NOTE 1 - t<sub>m</sub> = measured temperature

 t<sub>c</sub> = t<sub>m</sub> corrected (t<sub>m</sub>-t<sub>a</sub>+ 40 °C or max. RATED ambient)

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

 NOTE 2 - see also 14.1 with reference to component operating conditions

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

 NOTE 4 - see Form A.21B for details of winding temperature measurements

 Supplementary information:

TRF No. IEC61010\_1F

Page 53 of 92

#### Report No. CSTS140227045

NG.	alogy AL	1.	Cert	IEC/EN	N 61010-1	1	10		<	Certificati
Clause	Requiremen	nt — Test	ML	Ce	rus.	R	R <mark>esult</mark> — F	Remark	1 and	Verdict
10.2	TABLE: Te Resistance	mperatu e method	re of win Temper	dings ature Mea	asuremen	ts	1	For	m A.21B	N
4.4.2.7	MAINS trans	formers	•	Contractor			Christian and	MILL	Centin	
14.2.1	Motor temp	eratures	1/10		Ę	runcation	2	Connel all		
Operating	perating conditions:							A UNCON COM	2 Ale	nanga III
Frequency		Hz	Test ro	om ambie	nt tempera	ature	(ta1/ta2)		°C (ini	tial / fina
Voltage	×	V	Test du	ration			Certine	h	mir	111
Part / D	esignation	$\begin{array}{c} Rcold \\ \Omega \end{array}$	Rwarm $\Omega$	Current A	tr K	tc ∘C	tmax °C	Verdict	Comm	ients
Z	cation to				Certi		augn Techn	2111	1/10	
t, = t <sub>ma:</sub> NOTE 2 - Ind <u>NOTE 3 - Re</u> Suppleme	<ul> <li>temperature rise</li> <li>x = maximum perr</li> <li>dicate insulation cl</li> <li>cord values for NC</li> <li>ntary informati</li> </ul>	nitted tempo ass (IEC 60 DRMAL COND	erature 1085) under 11TION and /	comments or SINGLE FA	$t_c = t_r \text{ corrections}$	ected ( <i>t</i>	t <sub>c</sub> = t <sub>r</sub> - { t <sub>a2</sub> -	t <sub>a1</sub> } + [40 °C or	max RATED	ambient]) ary
10.5.2	TABLE: Re	sistance	to heat	of non-m		LOSU	JRES	Fo	rm A.22	Р
and technol	Test method	d used		-		: a	)			
Central	Non operati	ve treatm	ent		9	: [١	/]	Technology	NIII	Р
11/12	Empty ENCL	OSURE	Technic	S		: [	]	these	E	N
Technology	Operative tr	reatment.			2		]	1.	Certain	N
Temperature during tests						: 7	0°C	- Contraction	111	
ENCLOSURE samples tested were										
Description Material						Comments				Verdict
End	Enclosure V-0						No damage			

 Dielectric strength test (6.8)......
 3510
 V
 r.m.s./peak/d.c.
 P

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

 Supplementary information:

TRF No. IEC61010\_1F

Page 54 of 92

Clause	Requiremen	t — Test	11/2		Result -	– Remark	10	Verd
10 5 3	TABLE: Ins	ulating Mate	arials	11/16	Cer		Form A 23	P
10.5.3.1)	Balloressure	test		and the second second				P
10.0.0 1)	Max allowe	d impression	diameter	- A	2 mm	SIL	ż.	
P	Part	т	est temperatu	ire	Im	pression Dia	ameter	Vero
	art		°C			(mm)		Vere
Encl	losure		70		- and	1.1	Cortinue	
Р	CB	NIII/10	125	Contine alion to	11	0.7	ML	
Supplemen	tary information	on:	NIIII		il.	incation fee	E Color	5
10.5.3 2)	Vicat softeni	ing test (ISO	306)	Elenand	111	11/10		N
	Part		Vicat soft	ening temper °C	ature	Thickness (m	of sample m)	Verc
ALL	Cert	11	The Technon	1111/10		- Cont	Call	

	S CHA	Contilica	E Martin NILLIA	Contraction			
	Z. Shi	9	IEC/EN 61010-1		True alon to		
Clause	Requirement — Test	S	Result — Remark	k		Contraction	Verdict
	C*	Hon fech	A Continue	2 main 90	ALL		•

Page 55 of 92

8	ТА	TABLE: Mechanical resistance to shock and imp										NUE.	orm A.24	Р
11	Pro	otection ag	gainst HAZ	ARDS from	fluids	entitie	E Sugar Sector	5111/	10		Contraction	E Common St		Ν
Voltage tests	can be	e carried out o	once after per	forming the te	sts of clause 8	and clause 11.	However, if vo	Itage tests are	carried out sep	arately after e	ach set of tests, tw	vo forms car	n be used.	
			Clause	8 tests			Clause	11 tests						
Locatio (see form	n A.5)	Static (8.2.1) 30 N	Impact (8.2.2)	Normal (8.3.1)	Handheld Plug-in	Cleaning (11.2)	Spillage (11.3)	Overflow (11.4)	IEC 60529 (11.6)	Working voltage V	Test voltage V	Verdict	Comm	ents
		v <i>S</i>	V		5000	-		Contraction		600V	2210 V rms	Р	BI	
See form /	4.5	1	1 North Contraction of the Internet of the Int	V	E-man		Recorder 1		Centra	600V	3510 V rms	P	RI	
		Contration	1 A	and said	ML	Certa	N.	The second	5		Contraine	ALL.		
			Z	ation V		ML.	Cert		incation feedball	Share	3	C.	ance	
NOTE – Use	r.m.s.,	d.c. or peak	to indicate the	e used test vol	tage.	S	201	0	e	- Technol	NIII I	6		
Suppleme	ntary	informatior												



Page 56 of 92

Clause	Require	ment - Test		Centifica	Result -	Remark	110	Verd
		- And			Contractor	-	a contract 1	IIII
11.7.2	TABLE	: Leakage and	rupture at	high pressu	ire	Certification	Form A.25	N
Pa	art	Maximum permissible working pressure Mpa	Test pressure MPa	Leakage Yes / No	Deformation Yes / No	Burst Yes / No	Comn	nents
		Con	E	Te Teener			- Contraction	
and the second second	S		Condition		aton recommon			
	Contration	E		Con		allon Technicol	SUI	
110	~	Contration sco	5	ne ont	Cart	(Martin		1
(chinament	11/1/10		Contraction of the	E C	Annalogue All	1		Z
Ê	Con technologie	11111		Contraction	E S	China and	MIZ.	Cartan
Certin	C8*	E Jun Lecture 64	111111		Contraction of the second	E E	American	ML
		Carther	E Contraction	S.11/1		- Contra	at the second se	
NOTE - see	also Annex	G with requiremen	ts for USA and	Canada.	NII/		Ś	entification
Suppleme	ntary infor	mation:						
Certi								
S111/10								
44 7 2				and allow	E standard	NIIII.	6-1 1	
11.7.3	Leakag	e from low-pr		S	Care	Sall	·	
	Part	pr	ressure	еакаде		Commer	nts	
			Mpa Y	′es / No				
atton feet		A	Content	$\equiv 0$				
		1110			atton			
<	The second			Certon	in the second	allow to and	SUIII/2	
16				and and a	i i i i i i i i i i i i i i i i i i i			11
in the second second								
								11 M
Suppleme	ntary inform	mation:						
Suppleme	ntary inform	mation:						
Suppleme	ntary inform	mation:						
Suppleme	ntary infor	mation:						
Suppleme	ntary infor	mation:						
Suppleme	ntary infor	mation:						
Suppleme	ntary infor	mation:						
Suppleme	ntary infor	mation:						
Suppleme	ntary infor	mation:						
Suppleme	ntary infor	mation:						
Suppleme	ntary infor	mation:						

Page 57 of 92

Cart		5l		Result — Remark	Verdic
		Stalle .	-		
12.2.1	TABLE: Ionizing ra	adiation	10	Form A 26	N
12.2.1.2	Equipment intende	d to emit radiation	Start St		
Loca	tions tested	Measured values µSv/h	Verdict	Comments	
	Con III	Stand Stand		Erner Eller	thnology
and any	Aller a	The second	3	Contract Contract	
allon		0	Zalante	S.C.	e.
Ç	And Sol	and an and the second		Zamer Sch	
10	Constant	E Contrast	ML		5111
charles of	11/16	Green		ALL	
- È			The second		Continue
Cereman					ML
	Contractor		1.		S.
			11/2		
NULL.		Contraction 2	- Cont		sum sum feet
Supplement	ary information: Equipment not inter Max. allowed effect	nded to emit radiation ive dose rate at 100 m	m	1 μSv/h	N
Supplement 12.2.1.3	ary information: Equipment not inter Max. allowed effect	nded to emit radiation ive dose rate at 100 m Measured values	m: Verdict	1 μSv/h	N
Supplement 12.2.1.3 Loca	Equipment not inter Max. allowed effect	nded to emit radiation ive dose rate at 100 m Measured values µSv/h	m: Verdict	1 μSv/h Comments	N 
Supplement	ary information: Equipment not inter Max. allowed effect tions tested	nded to emit radiation ive dose rate at 100 m Measured values µSv/h	m: Verdict	1 µSv/h Comments	N 
Supplement 12.2.1.3 Loca	ary information: Equipment not inter Max. allowed effect tions tested	nded to emit radiation ive dose rate at 100 m Measured values µSv/h	m: Verdict	1 μSv/h Comments	N 
Supplement	ary information: Equipment not inter Max. allowed effect tions tested	nded to emit radiation ive dose rate at 100 m Measured values µSv/h	m: Verdict	1 μSv/h Comments	N 
Supplement 12.2.1.3 Loca	ary information: Equipment not inter Max. allowed effect tions tested	nded to emit radiation ive dose rate at 100 m Measured values µSv/h	m: Verdict	1 µSv/h Comments	N -
Supplement 12.2.1.3 Loca	ary information: Equipment not inter Max. allowed effect tions tested	nded to emit radiation ive dose rate at 100 m Measured values µSv/h	m: Verdict	1 μSv/h Comments	N 
Supplement 12.2.1.3 Loca	Equipment not inter Max. allowed effect tions tested	nded to emit radiation ive dose rate at 100 m Measured values µSv/h	m: Verdict	1 μSv/h Comments	N 
Supplement 12.2.1.3 Loca	Equipment not inter Max. allowed effect tions tested	nded to emit radiation ive dose rate at 100 m Measured values µSv/h	m: Verdict	1 μSv/h Comments	N 
Supplement 12.2.1.3 Loca	Equipment not inter Max. allowed effect tions tested	nded to emit radiation ive dose rate at 100 m Measured values µSv/h	m: Verdict	1 μSv/h Comments	N
Supplement	Equipment not inter Max. allowed effect tions tested	nded to emit radiation ive dose rate at 100 m Measured values µSv/h	m: Verdict	1 μSv/h Comments	N 

Page 58 of 92

E	ANIII	IE	C/EN 0101	U-1	2	1. 1	erti
Clause	Requirement — Test	Mu	Cer	Result	— Remark	Le .	Verdict
12.5.1	TABLE: Sound level	Contraction of the second	111/10	141 1	Contracto	Form A.27	N
l	ocations tested	Measured dB	t values A	Calc	ulated maxii pressure	num sound level	
At ope and at	rator's normal position bystanders' positions						
a)//	Contraction	i i i	and the second s	NIII.	7.0°	- Constant and	1
b)	SNILLING .	Contract of the second	itton .	Contrast -	Mu	Cer	Ē
c)	Standard NULL		Č.	or uncario	Come to git	MILLE	
d)	Earl Standard	S111/	10	C.	entreation.	Ellectrone	
e)	ALL .	- Callon Tech	IN IL	11/10		Conneatur	È
f) 💦		Certin					
12.5.2	Ultrasonic pressure	allon Technol	11/1/20		Centifican	E e	N
l	ocations tested	Measured	d values		Comme	nts	
		dB	kHz				
At operato	or's normal position	navogu 11	11/16	105	Zure a loo to com	1	1094
At 1 m fro	m the ENCLOSURE		a Technology		C.	There	11
a)	Shill and a start of the start	Contractor		- Reconcest			Z
b)	States States		0	the same	Construction and the second	NIIII	
c)	En and the second	2	-		Incar	E Constant	1111
d)	Wheel a	The sum feels		Level .		Centificat	E
e)	NULLER	Con	U	a team	Level .	<u>ми.</u>	Certific
NOTE – No applicable fr	limit is specified at present, but a equencies between 20 kHz and	a limit of 110 dl 100 kHz.	B above the re	eference pressure	value of 20 µPa	a is under consid	eration for
Suppleme	entary information:	- Contection	NIII	6		cation .	- Annala
							ALLE A

Page 59 of 92

Clause	Requirement — Test	Certifi	Result - Re	emark	11/10	Ver
10			Carrie	Ele	recommended 11	11,
13.2.2	TABLE: Batteries			Certifica	Form A.28	Tech
	Battery load and charging circuit diag	ram:				
Certification						
11/10						
and the second						
1						
- And						
-						
» NIII						
E						
Conuncati						
	Battery type	11/10	L1028	Certification	E S	
S CO	Battery manufacturer/model/catalogu	e No	1/10		Crune a	
and the second	Battery ratings	E.e	1×12V		á	_
Certer	Reverse polarity instalment test	Cardina	No hazard	Carle Com	SIII/	1
	Single component failures		No nazara	rdict	5	01099
	Component	Open	oircuit		Short circu	
Battery				-		
Dattery		Cer	2		S	
10	Contraction	NIII.	C <sup>4</sup>		- Contraction	
mology 11		- Contraction	MIL		Cev	2
E.	NUL.	Contraction		8	MILL	0.0
Certuin			Confication		Contract of the second	MI,
		11/1/10		Cal	ication .	
			NIII/10		Č.	Incation
Zuran In		and a start	Contraction of the	N11/	14	
Ce.		2	ettite		ectimology 1111	11/10
Supplem	entary information:					
- Comerce						
and the allow						
11/10		11//,	1		- Constant	

Page 60 of 92

Clause	Doguiromant T	oot	Certificatio	Dogult Domont	1/0
Ciduse	Requirement — I				verd
1/ 2	TABLE: Overtom	noraturo pro	tection day		20 N
1.J	TABLE. Overtell	perature pro		Form A	.23 N
			Reliability	/ test	
(	Component	Туре	Verdict	Comments	
		(NOTE)	S1172		
11/1		Callen Inc.			an technology
and any	Alle	3	Callen Techni	Store Comment	
in callon call	S Colores			- Internet	
	Children St	Cont .			1/2
1		Come 11	1100		110000
10	Contine	Ele	o reconcilia	WIII Contraction	St.
Tean 11		Certifica		ANULAS AND ANULAS	
E.	and recommendation	14	Cart		
Contribu		NHI1	6		
	Conner	-	1004	14 Jan	
N111	14	Conneation	<u> </u>		Z. Star
E	chronics NII//		- and allow	Solo Mu	Saure
Contincat	E Connerse	NIII.		Zuranna S. C. Con	
	Conneation	E States	ALL		Stores and
MILLE		Contraction for	200		And the State
	Aller	<i>C</i>	- Technon		entifica
annealtan fe	S Color	1177	Carti		
		Colorado Colorado		The second still	
	2	ation feed	Road	En Ele	ion fectine and
annology	1111	7	and the second		
The sea feel		<u> </u>	dine.	Stilling Stilling	~
		10			
	Constant El Const	Smean III	1110	Contraction 2	alass Al
NOTE: NSR = non-s NR = non-res SR = self-res	elf-resetting (10 time setting (1 time) setting (200 times)	es)			
Suppleme	ntary information:		Centre	E	
Centific					
21111					
E Sugar					
Certifica					
S1111/1					
E Contraction					
1 AL					
arean.	Contraction 2	Conne a Mil		The start	10
		Catton	Colores as		in Technol
MILLA	Ę.				
	SWI12				

Page 61 of 92

	Requirement	Tost		Recult D	emark	Vardia
Jiduse	Requirement	- Test		Result — R	emark	veruic
4.4.2.7	TABLE: MAIR	s transformer	1000		Form A.30	N
1.4.2.7.2	Short circuit	C.O.	Zalan real		- Com	N
14.6	MAINS transfo	ormers tested outside	e equipment 🗦	The states of th		Ν
Гуре	C.	- Treamand	Whee	U	The state	-
/anufactu	rer:	Contra I	Transformer 111	1116	Z	_
est in equ	ipment	Certai	È	Treaman 111	1/16	IU.
est on be	nch		Contineau	Ë	Termonal NIII/	
est repea	ted inside equip	oment (see 14.6)	10 million	Contineat	- Contraction	111
Optional –	Insulation class	(IEC 60085) of the	lowest rated wind	ding :	Centimes	_
Vinding ide	entification	1111	Zhanna	10	and the second second	Centifica
ype of Pro	otector for wind	ing (Note 1)		Zurene and	5	ALL.
Elapsed tin	ne 🧭		NIII		Concession recent	500
Current, A	primary	Contraction	Electronom	11/1/10		Zanana
	secondary	I.	Contraction	Electrone	111/16	
Vinding te	mperature, °C p	primary		Continearto	E.	11/1/1
see Note 2	2) secondary				English	In Technology
īissue pap Pass / Fai	er / cheeseclot	n OK ?			<u></u>	
/oltage tes	sts (see Note 3)	S Colorest	117	11	States States	1 Part
Primary to	secondary	V	and a state of the	Cert	E Star	
Primary to	core	v		Emergen All	1	21
Secondary	to secondary	V	Contractor		Survey AVI/	Cer
Secondary	to core	v <u></u>	10	Certificatio		11
/erdict	11.		1111/2	3	Contrication	È
Note 1: Note 2:	Primary fuse Secondary fuse Overtemperature p Impedance protecti Indicate method of If resistance metho	rotection on measurement d is used, record resistan	- PF / ( - SF / ( - OP / ( - Z TC = with the R = resistanc ce in cold and warm	) A ) A ) °C ermocouple ee method condition in FormA	.208!	
iote 3:	Record the voltage results use NE	applied and the type of version of the second secon	oltage (r.m.s. / d.c. /   or B = breakdow	peak) and for n	SULL.	and cause
upplemen		SNILLING.				
incare a	A standard			A CONTRACTOR	States States	
						<u></u>

Page 62 of 92

Clause	Requirement	— Test	Certin	Result — F	Remark	Verdie
4.4.2.7	TABLE: MAI	NS transformer	1111/1		Form A.31	N
4.4.2.7.3	Overload tes	ts (for MAINS transfo	ormers)	11/1/10	Contract Contract	N
14.6	MAINS transfo	ormers tested outsi	de equipment 🗦	- Contraction of the		N
Туре		- Solar			Summer 11/1/	_
Manufactur	er:	Gundan 2		11		_
Test in equ	ipment	U.		Constraint	11.	2
Test on ber	nch	NII//	Contraction	E a	ANU ANU	
Test repeat	ed inside equip	ment (see 14.6)	11/10	Contrain		.11
Optional –	Insulation class	(IEC 60085) of the	lowest rated wind	ing :	Certification	_
Winding ide	entification	1.	- Contraction	1111		Centificat
Type of Pro	tector for windir	ng (Note 1)	Carolin		SUIT	
Elapsed tim	ne 🧹	S S		Cent.	2	5
Current, A	primary	Contraction	E Commonder	Alle		incelon feet
	secondary		Contraction	E Constant		
Winding ter	nperature, °C p	rimary		Conneation	E A I	11/10
(see Note 2	2) secondary	The second second			Contraction of the second	Rectine and
Tissue pap (Pass / Fail	er / cheesecloth )	OK ?	- Contraction (1)		MU1	9 <sup>0</sup>
Voltage tes	ts (see Note 3)	S	C.		NUL	6
Primary to	secondary	<u> </u>				
Primary to	core	v	the star	and the second	Contin	
Secondary	to secondary	<u>VIII</u> V	. Elen		and the second second	Cer
Secondary	to core	<u> </u>	1/16	Francation	E Celan	
Verdict	C.	E.C.	and sold NIII		Contraction 1	E
Note 1: Note 2: Note 3:	Primary fuse Secondary fuse Overtemperature p Impedance protect Indicate method of If resistance metho Record the voltage results use N	rotection on measurement d is used, record resista applied and the type of B = no breakdown	- PF / ( - SF / ( - OP / ( - Z TC = with the R = resistanc ance in cold and warm voltage (r.m.s. / d.c. / or B = breakdow	) A ) A ) °C ermocouple condition in Form, peak) and for n	A.20B!	
Supplemen	tary information	20	Contraction	- Contraction	STILL B	
Centificat	- Constant	NULLE	Ű	ation for		

					IEC/EN	61010-1						
Clause	Requirement –	- Test	SCA		Centre	Result -	– Remark	month II	11/10		Contraction	Verdi
14.8	TABLE: Trans	ient overvolt	age limiting de	vices	NII/	1	Continue	T	State State	1 Provi	Form A.32	N
Compone	ent / Designation	Overvoltage Category	MAINS voltage V rms	Test voltage V	t <sub>m</sub> °C	t <sub>c</sub> °C	t <sub>max</sub> °C	Rupture Yes / No	Circuit breaker tripped	Verdict	Commen	ts
		really	E Contraction			Let .	Cation	E C	Martin MILLE	9		
	and the second second	N N	enter	The summer of the second				Contineation		11	1110	
		and all	111		atten technon	5111	10		Contraction	Ele	Treme and	
		on the second se		11	89 ° ° ° °	Z	echno			Contineat	1 A	
	6	Certific		Energy All	1100	Cert	2	- Contraction	S		Contine	
	Soon WIII/	6	- Contained		Rechmono Day	MU			Zera			
	E Serie	S111/	10	Certificatio			11,	1110		uncation recom	200	
	Contin	E C	111/1/	10.3		Crincation	Ě	Technologu	NULLA	C <sup>res</sup>	Contraction for	
	ALL	Certific	- Contraction	5111/1	in the second seco		Certificat		Careanaaaa 11	11/10		
	E Coloran	MU	Carr	- Contained	1	- Con		C.	E.	Ton Technology	NIIII	
	Contraction of	- Constant	MU	Cert	2	a on techni	1	- Au	Contract		E an technology	
		Conneation	2 Company	Aller	0		Incation feels	1			Continues	
est room	ambient tempera	ture:	°C	- Constant			Ce	219	on factor and a state	10		
$OIE - l_m = 1$	= $t_m$ corrected ( $t_m$ - $t_a$ + 4 x = maximum permitte	<b>0 °C</b> or max. RATE d temperature 5 positive and 5 I	ED ambient) negative impulses w	ith the applicable	impulse wit	thstand volta	ge, spaced	up to 1 min a	part, from a hybrid im	pulse gene	rator (see IEC 61180-	1).
t <sub>c</sub> = t <sub>ma</sub> conformity is cuppleme	ntary information:											
t <sub>c</sub> : t <sub>ma</sub> conformity is Suppleme	ntary information:						Sutto -					

#### Report No. CSTS140227045

7	stion feedback	1	6		IEC/EN	6101	0-1	Ele	Technology	1	11/10		
Claus	se F	Requireme	nt – Test	10				Resul	t — Re	emark	Technology	11	Verdic
Anne	ex H T	ABLE: Q	ualification	of cor	nformal	coati	ng	111,	Ade	dition	to Form	A.xx	N
Certificati	p	rotection	against pol	lution			Z	ation Technologi	1		anost .		N
Tech	nical proper	ties											
Manu	ufacturer		Contract Contract	ŝ		094	<u>, 11</u> ,	1.2			5	incation fee	
Туре	111	110			Catton	1		chnology		17.	Chi		-3
Meet	requiremen	nts of ANS	I / UL 746E.		: [yes /	no] 🍕	diffication		1	mology		1	0
Manu	ufacturer de	claration c	of coating ma	terial	[yes /	no]			Timeste	in fear	N	- notosu	
Oper	ating tempe	rature of c	coating	<u></u>	[]°C	11	11				Zilleaus	prec	S
Com	parative trac	king inde	x (CTI)	and the state of	[]	N	a molecul		111,				20
Insula	ation resista	nce	<u></u>		[]Ω	Cancatt	ne.	1		Pogu	SML.		Celt
Diele	ctric strengt	h			[]V			2	Ication			094	MIL
UV re	esistance (if	required)			[yes /	no]					concation feet	-	
Flam	mability rati	ng		Sting			1099		1		ie.	170	time tion feels
Prepa	aration of th	e test spe	cimens		[yes /	no]		S.C.	259			0	
Item	Test condi	tioning	Parameter	Td			San	nples			Verdic t	Cor	nments
				h	1	2	3	4	5	6			
1	Scratch rea	sistance			Turcation	(a. Contraction of the second s	11.	10				Certifica	
	Visual insp	ection	MD.		0		Zine	ion Tech	11		1. Sal		
2	Cold 🧹	catter			111.				2	ication fee	1		- And
3	Dry heat		Constant	E	- Connello	9			ter 1		2	luston temp	1
4	Rapid tem change	p.		Cont	ica ·	NII.	Callen Tech	rology	5111	1 Const			U
5	Damp hea	t 🖹	James and	×11/	1.				- Incallor		5	aless.	
6	Adhesion of coading	of		- Contraction	echnologi	1111	1 Anna		11.		- Contraction		-
	Visual insp	ection	110			er unication		1×		<b>3</b> 14	ML		Certific
7	Humidity	E C	chronology 11	11/10				Zun	tion	1.		94	
8	Insulation resistance	Contraction	- Alexandre	on rectmon	111	11/1				Vo	and a start of the	MIN.	A Standard
	Visual insp	ection			Carut	dia.	5		malogu		1,		
Certif	attr	E Cart	N11/	4		1	2	Incaline fo		1	- notost	1	1.
	L	and the allow	S	a and			, C			20	Tech	111	110

Supplementary information:

TRF No. IEC61010\_1F

Page 65 of 92

#### Report No. CSTS140227045

	Alle	Centra	IE	C/EN 61010-1	11/10		ç	ertificatio
Clause R	equirement -	- Test		Contra	Result —	Remark	2	Verdic
6.7.2.2.2 T	ABLE: Relia	bility of pot	ted c	omponents	Ade	dition to F	orm A.14	N
S Company	317.	Contract		The second still	11/10		Contract	In Sta
Temperature Cyc	ling Test							
Manufacturer			: \\	11/16	Ę	15	200	
Туре		and the second s	E	NIII/	10		Courses in	111
Construction	10		Contra	E	111	1110		U
Potting compound	d			Continue	Ele	o rechnology	111/1/10	
CREEPAGE distan	ces measure	ed		and the second second	Certifica		- Sun technologi	111
CLEARANCES mea	sured		al a fee	100		0	All Contraction of the Contracti	Ele
Thickness throug	h insulation.		:	Encarron ter	E C	Jogu	0 E c	Centilitie
Adhesive test Pa	ss/Fail		110		Contraction in	S.	and a star	MD
Test temperature	Т °С		200 000	NIIII		ZP	on ter	
Cycles at U= AC	500 V				Le	eakage cur m	rent (500 ∖ A	/)
Number of cycles	;		Date	9	68 h / 125 °C	1 h / 25 °C	2 h / 0 °C	1 h / 25 °C
1. Cycle from		Contraction in	to 🗅		1	Certh	Ele	n Technolu
2. Cycle from	11/1/10		to		- Andrew		Centh	
3. Cycle from 🗾	Contraction of the	11/1/10	to	- Contraction	11/	Concest.		
4. Cycle from		- Connect of	to	1110	U	dication 1	E	1094
5. Cycle from	C.	unca	to	111/1/			Conneation	111
6. Cycle from			to		111	1/10		Cert
7. Cycle from		and the Ball	to	Certaint	E.C.	Technolos	11/1/10	
8. Cycle from	Frances	ator 1	to	and a state	Certhic		allon Technology	2111
9. Cycle from		Z	to	2 January		Cel		Elen
10. Cycle from	NIII,	6	to	Contraction of the			11	Certi
After Cycling Tes	t : 🖹 🥼	10004 N111/	10		Company to	E C	a formation and	MIZ.
Humidity conditio	ning	E	malos	SUILING		48 h	111	a summer
Requirements for	dielectric st	rength (s. ins	ulatic	on diagram)	Test vol	tage V r.m	.s Ve	erdict
Basic insulation		V r.m.s.		Carol I	alon fechad	S	201	
Additional insulat	ion	V	r.m.s	3.11//		- Contraction	3	10
Reinforced insula	ition	V r.m.s.	1	Colorest		Certif	Elen	Technic

TRF No. IEC61010\_1F

	SULL		Councation .	E Care		- Cert		and an reality			
		3		Entre	C/EN 61010	-1 3111	1/10		The sum to	and an and an	
Clause	Requirement — Te	est	SCA		Res	ult — Rema	rk	11/10		Contraction 1	Verdic
6.	TABLE: Working	voltage of S	witch Mode Po	ower Supply		Contine	2	ion The Inninosis	A	ddition to Form A.5	N
Location	n / Measuring track	Insulation (Form A.5)	RMS voltage V	Peak voltage V	Required cl mm	Measured cl mm	Required cp mm	Measured cp mm	Verdict	Comments	
	Ilice	J	Callen Technik			Centifican	Eller	alogs NIII	110	1	
	Treamonday N11/	100	J	and I	- Contract	117	Constitution		Rechnology	NII//	
		111/	110	20		and a st	111	Continue		Lang remain 11	
	Contraction			14	- Com	atton tes		MD	2		
		Continca		anosu 1111/	5	č	a streaments	E C	ion 11	11	
	S		Contineat	E	N111	1/0		Contration	No.		
	Zurano	5	14	Certifica	E	measure 111	11/10		Certificat	E Cal	
		The sum real			Certimo		on reconcilion	111/1		Connand State	
	NIII.c		Zincaline the	5		Continu		- Technolog	5111/2	6	
		NH/I		Zan	5		0	con.	- Augusteen	SUIL	
	Centification	- Technology	11/1/10		Zancana	200	alogsk al		Central	E Sun to make	
	C	Contraction	a recorded	NIIII		Creation in		Incologia	117	Certain	
			Centification	- Constanting	11/1/10		- Contract	11		AND A	
	The sum terms	- Cont		and a start of the	Con technologie	NIII/10		- C	catton	2 Constraints	
	29	Star 1	Contraction of the second	Cont		- Contraction	5111/2	5.		Contraction :	
	1116	U	and the second second			cention	Eller	2111	10	< C	
Input sup	oly voltage:	V	Hz	on term	le la		Centine	E	echnesed	NULLA.	
Suppleme	entary information:			- Contraction				Certain			
RF No. IE	EC61010_1F									TRF origin	ator: VI

#### Page 67 of 92

Report No. CSTS140227045

cation	IEC/EN 61010-2-031	NIII IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Cur
Clause 💈	Requirement + Test	Result - Remark	Verdic
11/2		Com	2111
4.4		1111	- Contraction
4.4.1 🗾	General		Ň
4.4.2	Application of fault conditions	(see Form A.1)	N
4.4.2.1	PROBE ASSEMBLIES OR PARTS FOR SHORT-TERM OR INTERMITTENT OPERATION		N
4.4.2.2	OUTPUTS	All and All an	N
4.4.2.3	INSULATION BETWEEN CIRCUITS AND PARTS		11, N
4.4.2.4	Components	Contra E	N
4.4.3	Duration of tests	Ser Contraction	N
4.4.4	Conformity after application of SINGLE FAULT	(see Form A.2)	N
11/10		and a start	ological 2
5	MARKING AND DOCUMENTATION	Josef Contract	Р
5.1.1	General		Р
14	Markings applicable for whole probe assembly not located on operator removable parts	Markings molded in the probe body	P
anolesu 111	Letter symbols (IEC 60027) used	ALL COM	P
	Graphic symbols (Table 1) used; or	Symbol A used	Р
NIII	if other symbol used; explained in accompanying documentation		N
E Contraction	In case of less space for required markings:	Same Alling	N
Contract	- symbol 10 of table 1 used		N
	- all necessary information included in documentation	Gundan E	N N
5.1.2	Identification	110 Contraction	_
Concernant of the	Equipment is identified by:	ANNI ANNI ANNI ANNI ANNI ANNI ANNI ANNI	Р
5.1.2 a)	Name or registered trademark	See page 1	P
5.1.2 b)	For type B and C, also model no. or similar	Туре А	N
on technology	If designed for use with specific model this is made clear and	SUCCESSION	N
Corri	model identified by marking or in documentation	The second states	Ν
5.1.3	Fuses	No fuse employed	N
J111	All details necessary for fuse replacement	SILLING	N
Z	Includes rated voltage and current breaking capacity	E Annother Willing	N
	If selected according to particular application; marked with symbol 10 and information in documentation		117,N
5.1.4	TERMINALS AND OPERATING DEVICES		N
Contraction	Necessary identification for TERMINALS, connectors etc.		N

TRF No. IEC61010\_2F

#### Page 68 of 92

Report No. CSTS140227045

Cal.	IEC/EN 61010-2-031		Ce
Clause 🧧	Requirement + Test	Result - Remark	Verdio
11/2		Cart Standard	SIL
5.1.6	Rating	ANI/2	F
Ele	Maximum RATED voltage to earth	600 V CATII	P
Cerunica	(CAT I) Symbol 10 used	Provent and a second	N
•	(CAT II-IV) Category marked	CATII	Р
	Nature of voltage (ac, dc etc.)	Applicable to both r.m.s and dc	N
Continue	Reference connector intended for connection to voltages exceeding the values of 6.3.1.1	No reference connector	N
	For type A and type D only, the maximum RATED current unless specified for high impedance inputs	MAX 2A molded in the probe body	Р
5.2	Warning markings		Р
	Visible when ready for NORMAL USE	Contraction of the second	P
10	If necessary marked with symbol 10	E Consumer	P
in the second second	Near or on particular parts of the PROBE ASSEMBLY		P
10.	Advise to disconnect or isolate during access to HAZARDOUS LIVE parts or	Enterna Enterna	N
ALL	marked with symbol 10 and information in the instruction manual	S.C.	ZN
	Easily touched heated parts, if not self-evident, marked with symbol 9		N
5.3	Durability of markings		P
- Aleren	The required markings remain clear and legible in NORMAL USE	(see Form A.3)	Р
	Resist cleaning (clear, legible and not worked loose)		P
5.4	Documentation	Lan Contract	Р
5.4.1	General	Store and a store of the store	Р
	Documentation includes:	Zerra Sol	011
5.4.1 a)	Technical specification	Col Zanamaran	P
5.4.1 b)	Instructions for use	NII//	P
5.4.1 c) 🗦	Name and address of manufacturer or supplier	E Share Stiller	P
5.4.1 d)	Information specified in 5.4.2 to 5.4.4	See 5.4.2 to 5.4.4	P
	A clear explanation of warning symbols is in the documentation or	NULL.	P
	Information is durably and legibly marked on the equipment		P
	Statement that symbol 10 means documentation needs to be consulted		P
5.4.2	Ratings	Con Star	Р
Conditional	Maximum voltage RATING	600V CATII	P

TRF No. IEC61010\_2F

### Page 69 of 92

Report No. CSTS140227045

atte	IEC/EN 61010-2-031		0
Clause 🧧	Requirement + Test	Result - Remark	Verdi
14		Cart Stranger	311
neelegu	Maximum current RATING	MAX 2A	P
E	Statement of the range of environmental conditions		P
5.4.3 🥍	Operation	Entrantin 2 Second	NP.
	Instructions for use include:	Contraction of	
5.4.3 a)	Identification of operating controls		N
5.4.3 b)	Interconnection requirements	1111/1	N
	Specification of accessories, materials etc.	E III	// N
5.4.3 c)	Specification of intermittent operation limits		N
5.4.3 d)	Explanation of required and used symbols	Contraction of the second	Р
5.4.3 e)	Replacement of consumables		N
5.4.3 f)	Definition of measurement category (if marked with CAT)	600V CATII	P
5.4.3 g)	If marked CAT I, a warning not to use in other CAT		N
5.4.3 h) 📄	Cleaning if necessary	S Starten SWI	Р
5.4.3 i)	WARNING FOR THE LOWER CAT OF A COMBINATION OF A PROBE ASSEMBLY AND AN ACCESSORY		N
1	A STATEMENT AGAINST USE IN A MANNER NOT SPECIFIED BY THE MANUFACTURER		N
5.4.4 🦯	Maintenance	Zana Salan	Р
NIII	Sufficient preventive maintenance and inspection for RESPONSIBLE BODY		P
- Commenter	Parts to be supplied or examined by the manufacturer only		Р
	RATING and characteristics of fuses (see 5.1.3)	Zamer Still	N
111/1/10		1. 25	Technol
6	PROTECTION AGAINST ELECTRIC SHOCK	and all the	Р
6.1	General	(see Form A.4)	Р
6.1.1	Exceptions		P
Treman and	Following HAZARDOUS LIVE parts may be accessible to an OPERATOR:	SWIII C	P
6.1.1 a) 🍃	Parts intended to be replaced by the operator (for example, fuses), but only if they have a warning marking according to 5.2		N
6.1.1 b)	PROBE TIPS, provided that they meet the requirements of 6.4.4	Refer to clause 6.4.4	P
6.2	Determination of accessible parts	Element State	Ν
	According to figure 3	Obvious to determine the accessible parts	N
6.3	Permissible limits for ACCESSIBLE parts		Р
Contraction	Measurements performed according to figure 4	States and States	Р
6 2 4		see Form A 6	D

TRF No. IEC61010\_2F

#### Page 70 of 92

Report No. CSTS140227045

cation	IEC/EN 61010-2-031	S COM	Cert
Clause 👌	Requirement + Test	Result - Remark	Verdic
110		Contraction of the Contraction	2111
6.3.2	Values in SINGLE FAULT CONDITION	see Form A.7	-N
6.4 🏓	Insulation requirements for protection against electric shock	States and	Р
6.4.1	Connectors used on PROBE ASSEMBLIES shall meet the applicable requirements of a) to c) below:	No such part	N
6.4.1 a)	Connectors in fully mated position:		N
Conneation	i) Connecting probe to measuring equipment insulated by at least basic insulation		N
1111/2	ii) Intended to be HAND-HELD insulated by DOUBLE or REINFORCED INSULATION		N
6.4.1 b)	Connectors in partially mated position:	Termony NIIII	N
	insulated by at least BASIC INSULATION	E States Still	N
11/10	Voltage test with test finger (B.1)		N
6.4.1 c)	Connectors in unmated position:	ans Corner	N
	Except for locking or screw-held type connectors or limited current by PROTECTIVE IMPEDANCE:		N
10	i) HAZARDOUS LIVE parts not ACCESSIBLE	Con Transfer	N
moles 111	Up to 1 kV a.c. or 1.5 kV d.c., not ACCESSIBLE	AND A	N
Ze	Above 1 kV a.c. or 1.5 kV d.c., voltage test with test finger	2	N
	ii) Stackable connectors		N
	HAZARDOUS LIVE parts separated by BASIC INSULATION from ACCESSIBLE parts		N
Contraction	CLEARANCE and CREEPAGE meet the requirements for BASIC INSULATION		N
NIIII	Voltage test in acc. to 6.6		N
6.4.2	HAND-HELD parts other than connectors	Comments and Comments	Р
	HAZARDOUS LIVE parts separated by DOUBLE or REINFORCED INSULATION from ACCESSIBLE parts	see Form A.4	P
	CLEARANCE and CREEPAGE meet the requirements for DOUBLE or REINFORCED INSULATION	see Form A.9	P
	Voltage test in acc. 6.6 (specify parts)	see Form A.10	PI
	REFERENCE CONNECTOR	Contraction	N
6.4.3	Cables	Shilling .	P
	RATED for maximum voltage and current of NORMAL USE		P
	DOUBLE or REINFORCED INSULATION based on voltages (min 125 V/500 V) according to type of PROBE ASSEMBLIES		N
	or for maximum RATED voltage	Rated 600V CATI	Р

TRF No. IEC61010\_2F

#### Page 71 of 92

Report No. CSTS140227045

IEC/EN 61010-2-031				
Clause	Requirement + Test	Result - Remark	Verdic	
11/2		Contraction of the second	3111	
danalogu 11	Voltage test in acc. 6.6 (specify parts)	see Form A.10	P	
6.4.4 刘	PROBE TIPS		P	
Certific	BARRIER providing safe distance:	Enterin Electron	NP.	
SUII	-CLEARANCE and CREEPAGE meet the requirements for REINFORCED INSULATION	see Form A.9	P	
- Contraction	Spring-loaded squeeze PROBE ASSEMBLIES: (rated for WORKING VOLTAGE ≤1 kV)	No such part	N	
	a) Actuation prevents touching HAZARDOUS LIVE parts		N	
	b) Additional protective distance of 45 mm longer than for barrier	STILL STATE	N	
12.	Crocodile clips and similar without barrier: (rated for CAT I or II)		N	
- Constant	- have tactile indication	En Criticalité	N	
6.4.5	DOUBLE INSULATION and REINFORCED INSULATION		P	
	See 6.5, 6.6 and 6.7.2	Entre Electron	RI	
6.4.6	PROTECTIVE IMPEDANCE	Contraction	= N	
	Appropriate HIGH-INTEGRITY single component used for protection (see 12.3)	No such component	N	
	Components, wires and connections are suitably RATED even for SINGLE FAULT CONDITION		N/N	
6.5	CLEARANCES AND CREEPAGE DISTANCES		P	
Connealise for	CLEARANCES and CREEPAGE DISTANCES between circuits and parts	see Form A.4 and Form A.9	Р	
6.6	Voltage tests	Enterna E	Р	
	Humidity pre-conditioning (6.6.2) conducted	110 Contraction	Р	
or the allow the	Test voltages (6.6.4)	see Form A.4 and Form A.10	Р	
6.7	Constructional requirements	Zaman SC	P	
6.7.1	General	Con Constanting	P	
6.7.1 a)	Security of soldered wiring connections	NULL.	N	
6.7.1 b) 🍃	Screws securing removable covers are captive if their length affects isolation distances		N	
6.7.1 c)	Accidental loosening	Constant and	N	
1111	The following is not used for safety purposes:	NULL	P	
The second	1) Materials which can be easily damaged (enamel etc.)		P	
	2) Non-impregnated hygroscopic materials	Command S	P	
6.7.2	ENCLOSURES of PROBE ASSEMBLIES with DOUB	LE or REINFORCED	P	
Contification	ENCLOSURE which surrounds all metal parts		Р	

TRF No. IEC61010\_2F
# Page 72 of 92

Report No. CSTS140227045

cath.	IEC/EN 61010-2-031		Ce
Clause 🧧	Requirement + Test	Result - Remark	Verdio
110		Contraction of the Contraction	2111
And A LAND	Small metal parts are separated from HAZARDOUS LIVE voltages by DOUBLE or REINFORCED INSULATION	No such part	N
	ENCLOSURES or parts made of insulating material fulfil requirements for DOUBLE or REINFORCED INSULATION.	see Form A.4 and Form A.9	NII P
- Contraction	Protection for metal ENCLOSURES or parts is provided by one of the following:		N
Alle	a) provision of an insulating coating or BARRIER on the inside of the ENCLOSURE		N
	b) CLEARANCES and CREEPAGE DISTANCES cannot be reduced by loosening of parts or wires	Shirts and a start of the start	N
6.7.3	Corona and partial discharge	Elenand MUU	P
	No corona or partial discharge while operating at maximum voltage		P
6.7.4	Cable attachment	NIIII	P
Z	Withstand forces likely to be encountered	Element NI	Р
6.7.4.1	Pull test	see Form A.11	P
6.7.4.2	Flexing/pull test	see Form A.11	P
6.7.4.3	Rotational flexing test	see Form A.11	P
6.7.5	Insulation of a probe cable	Contraction	MP.
	Probe cable with a wear indicator provide DOUBLE or REINFORCED INSULATION when new, and at least BASIC INSULATION when the wear indicator is reached	Wear indicator employed	P
	PROBE CABLE without a wear indicator provide DOUBLE or REINFORCED INSULATION		N
Solosi -	Voltage test in acc. 6.6 (specify parts):	see Form A.10	Р
armeation fee	- REINFORCED INSULATION: one unconditioned sample before cycling treatment		Р
	- BASIC INSULATION: contrasting colour became visible during the cycling treatment	200	P
111N	- REINFORCED INSULATION: 250 cycles treatment without contrasting colour becoming visible.		N
7	PROTECTION AGAINST MECHANICAL HAZARDS	Contraction reduced	P
1111	Handling during normal use shall not lead to hazard		P
8	MECHANICAL RESISTANCE TO SHOCK AND IMPA	ACT	P
Continu	Withstand shock and impact likely to occur in NORMAL USE		MIP.
	Conformity is checked by performing the tests of 8.1 to 8.3. The PROBE ASSEMBLY is notoperated during the tests.		P

TRF No. IEC61010\_2F

# Page 73 of 92

Report No. CSTS140227045

catile	IEC/EN 61010-2-031		Ce
Clause	Requirement + Test	Result - Remark	Verdio
110		Car	311
	After completion of the tests, the PROBE ASSEMBLY shall pass the voltage tests of 6.6 (withouthumidity preconditioning) and is inspected to check that:		P
<i>8</i>	a) HAZARDOUS LIVE parts not accessible	Contraction of the	Р
5	b) ENCLOSURE shows no cracks (hazard)	SILLIN C	P
Contraction for	c) CLEARANCES not less than their permitted values	(see Form A.9)	P
	d) BARRIERS not damaged or loosened	Contraction 2	P
S	e) No damage which could cause spread of fire	11/16 Contract	Р
8.1	Rigidity test	Restrand	Р
	20 N APPLIED THREE TIMES		P
8.2	Drop test	Contra Tech	P
a constant	Three samples dropped	Contraction Contraction	Р
8.3	Impact swing test	Solor All	Р
16.	Probe subjected to impact against a hardwood board		P
manager NII	After the tests of 8.1 to 8.3:	AND A	ΞP
E	Voltage tests in acc. to 6.6	(see Form A.10)	P
9	TEMPERATURE LIMITS AND PROTECTION AGAIN	ST THE SPREAD OF FIRE	NIP.
9.1	General	Contraction	Р
- Ale	Any heating does not cause a HAZARD in NORMAL CONDITION nor in SINGLE FAULT CONDITION		Р
Cert	No spread of fire outside the PROBE ASSEMBLY		P
	Easily touched surfaces not exceeding the following limits in NORMAL CONDITION :	11	Р
The street of th	- metal less than 55 °C	No such part	N
£.	- non-metallic less than 70 °C	Element IIII	Р
11/16	- wires and cables less than 75 °C		P
in terminate	Temperatures in SINGLE FAULT CONDITION less than 105 °C	SHILL SHILL	N
	Easily touched heated surfaces recognizable or marked with symbol 9 of table 1 (s. 5.2), if necessary for functional reasons	No such part	N S <sup>NII</sup>
	Circuits separated by at least by BASIC INSULATION, if protection depends on separation of circuits		N
9.2	Temperature tests	see Form A.12	P
10	RESISTANCE TO HEAT		P
10.1	Integrity of CLEARANCES and CREEPAGE	Shilling a	Р

TRF No. IEC61010\_2F

#### Page 74 of 92

Report No. CSTS140227045

catto	IEC/EN 61010-2-031	Shiring .	Car
Clause	Requirement + Test	Result - Remark	Verdic
110		Contra Cont	3111
And ALL	Requirements of 6.5 are met at an ambient temperature of 40 °C of maximum RATED ambient temperature (if higher)	see Form A.9	P
10.2	RESISTANCE TO HEAT	Contra E Contra	NIP,
5111/	Probe assemblies with non-metallic ENCLOSURES are resistant to elevated temperatures:	see Form A.13	Р
11	PROTECTION AGAINST HAZARDS FROM FLUIDS	Marian MILLING	N
11.1	General	E Standard MI	1/, N
	OPERATOR and surrounding area are protected against HAZARDS from fluids if PROBE ASSEMBLIES containing or intended to be used with fluids	No fluid employed	N
11.2	Cleaning	Zenne SC	N N
	Cleaning procedure applied three times to the PROBE ASSEMBLY		N
11.3	Specially protected PROBE ASSEMBLIES	Seller Alle	N
and the second second	Where the equipment is RATED or marked by the manufacturer the requirements of IEC 60529 are fulfilled		N
- SC	After the tests of 11.1 to 11.3:	S	N
- Const	Accessible parts do not exceed the limits of 6.3.1	E Solo	N
	Voltage tests in acc. to 6.6		N
12	COMPONENTS	NILLIA E	Р
12.1	General	Shilling Shilling	Р
Certin	Safety components operated within their specified RATINGS	see Table 3, probe body and cable	P
	Components approved by a recognized testing authority for conformity	see Table 3	Р
12.1 a)	comply with all applicable safety requirements in relevant IEC standards		Р
	and subjected to the tests of this standard if necessary for application		P
12.1 b) 📄	comply with all relevant requirements of this standard		N
G	and subjected to the tests of relevant IEC component standard if necessary for application		N
12.1 c)	comply with all relevant requirements of this standard only if there is no relevant IEC standard	SNULL E	N
12.2 🧷	Fuses	Electron and a	Ν
	Voltage RATING	No fuse	W/N
NIII,	Breaking capacity and current rating		N
12.3	HIGH-INTEGRITY components		Ν
Cartificati	Positions of use	No such component	N

TRF No. IEC61010\_2F

# Page 75 of 92

Report No. CSTS140227045

p.	IEC/EN 61010-2-031	SOL	Certi
Clause	Requirement + Test	Result - Remark	Verdict
1/2		Carl Standard	3111
	Evaluated to IEC Publications	NUL2	= N
Aller	A single electronic device which employs electron conduction in a vacuum, gas or semiconductor is not used as HIGH-INTEGRITY component		N
12.3.1	Resistors used in PROTECTIVE IMPEDANCE	Contract	N
12.3.1 a)	Withstand twice the dissipation at RATED voltage		N
12.3.1 b)	Withstand twice the RATED voltage for 1 s	The sum and a state of the second	N
12.3.1 c)	Distance across resistor or assembly:	Element St	N
	fulfil requirements for DOUBLE or REINFORCED INSULATION	see Form A.9	N
and a second	If heating occurs at maximum working voltage, CLEARANCE complies with temperature corrected value		N
13	Prevention of HAZARD from arc flash and short-circui	ts	P
13.1	General	111111	P
Ę	PROBE TIPS and crocodile clips are constructed to mitigate the risk of arc flash and short-circuits.		P
13.2	Exposed conductive parts	Contract	EP
13.2. a)	PROBE ASSEMBLIES RATED for CAT III or IV, the exposed conductive part of a PROBE TIP $\leq$ 4 mm.		N
13.2. b)	Special applications within CAT I where the energy levels not support arc flash or fire, the exposed conductive part of a PROBE TIP $\leq 80 \text{ mm}$		N
13.2. c)	Other PROBE ASSEMBLIES, the exposed conductive part of a PROBE TIP $\leq$ 19 mm.	10.17mm	P
13.2. d)	The outer surfaces of the jaws of crocodile or similar clips RATED for CAT II, III, or IV are not conductive.		N
All	HAZARDOUS LIVE parts are not ACCESSIBLE when closed		N

TRF No. IEC61010\_2F

# Page 76 of 92

///////////////////////////////////////	Requirement - Test		Result	Remark	Verdict
		MILLA	i (Couit		VCICIO
1.4.2	TABLE: Summary of SINGLE FAULT CONE	DITIONS		Form A.1	N
	In the second state of the	Caruteration	E C	amenda AMU	
Subclause	Title	Does not apply	Carried out	Comments	
4.4.2.1	EQUIPMENT OR PARTS FOR SHORT-TERM OR INTERMITTENT OPERATION	ton reciperonu		see Form A.2	ALL AND A
1.4.2.2	OUTPUTS OF TYPE B AND TYPE C PROBE ASSEMBLIES		and and a		10
1.4.2.3	INSULATION BETWEEN CIRCUITS AND PARTS	autors a	17.	Contraction of the second	Treamout 111
1.4.2.4	Components of type B and type C PROBE ASSEMBLIES		ion technology		
ist below a	all SINGLE FAULT CONDITIONS not cove	red by 4.4.	2.1 to 4.4.2	2.4:	204
11/10		ALL			S'
on rechmology	NULL CONTRACTOR	5	malagy	Com.	Zer
	NILL'IS	Contration	E S	Summer ALL/	6
0			Certifica		AND.
and a	. Entre	NIIII III		Contraction	E APP
S	Ser and a series of the series	- Carte and	SIII	6	Contraction

### Page 77 of 92 Report No. CSTS140227045 IEC/EN 61010-2-031 Requirement — Test Result — Remark Verdict Clause 4.4 TABLE: Testing in SINGLE FAULT CONDITION - Results Form A.2 Ν Td 4.4.3 Fault No. Fault description How was test terminated Meets (NOTE) Comments 4.4.4 NOTE Td = Test duration in h:min:s Record voltage test on Form A.10 and temperature tests on Form A.12 Record in the comments column for each test whether carried out during or after SINGLE FAULT CONDITION. Supplementary information: TRF No. IEC61010\_2F TRF originator: VDE

### Page 78 of 92

Report No. CSTS140227045

			IEC/EN 61010-2-03	B1		
Clause	Requirement	t — Test	111	Result — Remar	K SULLA	Verdict
				Centr	E anna A A	201
5.3	TABLE: Dur	ability of marking	S	2	Form A.3	E
	Markin	g method (see NO	IE)		Agent	
1) Adhesive	e label	ALLY STATE	<i></i>	A Water		
2) Ink printe	ed 🧹		Margare All	B Isopropyl alcor	nol 70%	
3) Laser ma	arked	Cartification		C (specify agent)		Acation feet
4) Filmcoat	ted (plastic foil	control panel)	Contineant	D (specify agent)	1140	
5) Imprinte	d on plastic (m	oulded in)		E (specify agent)	Reaman All	1110
ML.	Certhi	and to make	SUCCES	Contract	È	Technology
NOTE – When fixing method,	re applicable inclu , adhesive and sur	de print method, label m face to which marking is	naterial, ink or paint type s fixed.		Continent	
	Marking loc	ation		Marking method (see	above)	
Identificatio	on (5.1.2)	The second	5111	Contraction		04
FUSES (5.1.	.3)	Crus		10	Certification	NA NA
TERMINAL	S and operatin	ng devices (5.1.4)	20	Trans 1111/1		Centifi
DOUBLE/F	REINFORCED	equipment (5.1.5)	5	- aun recine	5	
Rating (5.1	.6)		5	Cart	El aver techni	200
Warning m	arking (5.2)	- Contract	5		Ce	- Caller II
No.	and technology 11	11/10	Contraction	- Contraction		Cartle
20		Pomaine logible	Label loose	Curled edges	Commen	ts
Method	Test agent	Itemains legible	Laber 10030	•		
Method	Test agent	Verdict	Verdict	Verdict		
Method 5	Test agent	Verdict Yes <del>/ No</del>	Verdict Yes / No	Verdict <del>Yes /</del> No	P <del>/F/N</del>	A
Method 5 5	Test agent     A+B     A+B	Verdict Yes <del>/ No</del> Yes <del>/ No</del>	Verdict <del>Yes /</del> No <del>Yes /</del> No	Verdict <del>Yes /</del> No <del>Yes /</del> No	P <del>/ F / N</del> P <del>/ F / N</del>	A A
Method 5 5 5 5	Test agent       A-/-B       A-/-B       A-/-B	Verdict Yes <del>/ No</del> Yes <del>/ No</del> Yes <del>/ No</del>	Verdict <del>Yes /</del> No <del>Yes /</del> No <del>Yes /</del> No	Verdict <del>Yes /</del> No <del>Yes /</del> No <del>Yes /</del> No	P <del>/ F / N</del> P <del>/ F / N</del> P <del>/ F / N</del>	A A A

Supplementary information:

TRF No. IEC61010\_2F

Clause	Requiremen	t — Test	2111	10		Re	sult — Remai	rk	Verdic
6	TABLE: Pro	otection aga	inst ele	ctric sho	ock - Blo	ock dia	gram of syste	emForm A.4	Р
	ALC: NO TO		Δ-	Pro	obe tip	]			
				← [   [	Probe b Probe	arrier			
Dollution do	aroo : 2	Carturcauton	E	echundra C	Noncolt			2	
Location or	Insulation type	Maximum working	С	REEPAGE (NOT	Distance E 3)	e e	CLEARANCE (NOTE 3)	Test voltage	Comment
description	(NOTE 1)	voltage (NOTE 2)	PWB mm	СТІ	Other mm	СТІ	mm	(NOTE 2) V	
Probe tip to barrier	RI	600V		-U	>12.0	1	>6.0	3536 V rms	Contrast.
Probe tip to probe body	RI	600V		<u></u>	>12.0	Contraction	>6.0	3536 V rms	111
NOTE 1 – Type BI = BASIC INSU DI = DOUBLE IN PI = PROTECTIV RI = Reinforced SI = Suppleme	e of insulation: JLATION ISULATION /E IMPEDANCE d INSULATION ntary INSULATION	P	OTE 2 - T eak impuls	ypes of vol se test volta r.m.s. d.c. peak	tage age (pulse	)	NOTE 3 - INS (OVERVOLTAG or POLLUTION these should	STALLATION CATEG GE CATEGORIES) I DEGREES which be shown under	GORIES differ from "Comments"
Supplement	ary Informatio	on:	11/1	And the survey of the	111	110	Certain	- Contraction of the second se	The state

### Page 80 of 92

	Allon to	IEC/E	N 61010-2-031	E	111/1	
Clause	Requirement — T	est	4	Result — Rer	nark	Verdict
	Cer.		3		Contineation	Elle
6.2	TABLE: List of A	CCESSIBLE parts	- The allow the comment	3000	Form A.5	P
6.1.1	Exceptions		C.	Zancarlon techno	S	_
6.2	Determination of A	ACCESSIBLE parts	Alle	Cer	Zana S	—
Item	Des	scription	Determina (NC	tion method TE 5)	Exception unde (NOTE 4)	r 6.1.1 )
Probe body	E Reconstruct	-	Vi	sual	<u> </u>	
	Contraction	E Contract 1	VIII a	5	Hallon SC	2004
IOTE 2 – Spec IOTE 3 – Parts rovide suitable IOTE 4 – Capa IOTE 5 – The	cial consideration should s are considered to be A e insulation (see note to acitor test may be required determination methods	d be given to inadequate ACCESSIBLE if they cou paragraph 1 of 6.4). red are: visual; rigid test fing	Insulation and high Id be touched in the ler; jointed test fing	voltage parts (see absence of any co er; pin 3 mm diame	: 6.2) overing which is not con	sidered to
Supplement	ary information:					3
of the past of the	MU	Constantion .			Can.	20
TRF No. IEC	C61010_2F				TRF origina	ator: VDE

# IEC/EN 61010-2-031 Clause Requirement — Test Result — Remark Verdict

Page 81 of 92

	8°	17		1 (300 1101	E 1)		200		Cent	lu-	Ele	Technology 11	Form A.6	Р
Exceptio	ns 😽		ALL	Certin	2	The sum fector	11.1 Ge	eneral		22010	Certificat	È.	Technology	—
Values ir	NORMAL CO	ONDITION		MIZ.	C	er.	11.2 Cl	eaning	3	10 m		Contines		—
11/10		<	Certification	E Color	indu . 11	11.	11.3 Sp	ecially pro	otected F	PROBE A	ASSEME	BLIES	1	
	Voltage Current Ca				Сара	citance	10 s /	/ 5 s test (NOTE) Comments						
V r.m.s.	V peak	V d.c.	Test circuit A1/A2/A3	mA r.m.s.	mA peak	mA d.c.	μC	mJ	V	μC	mJ			
109.4	154.7		A1 🧋	0.11	0.43	omos -	<u></u>	- 4		- The	a ter a and	1000	SNU/	
2	Callon In	N			Centur		. Technolo	111	110			Calification	E S	
	Values ir Values ir V r.m.s. 109.4 e requiremen ntary inform	Values in NORMAL Control         Voltage         V       V         r.m.s.       peak         109.4       154.7         e requirements of 6.3.1 inclustor	Values in NORMAL CONDITION         Voltage       V         V       V       V         r.m.s.       peak       d.c.         109.4       154.7          e requirements of 6.3.1 include drying information:       0	Values in NORMAL CONDITION         Voltage         V       V       Test circuit A1/A2/A3         109.4       154.7        A1         e requirements of 6.3.1 include drying out (if specified) ntary information:       A1       A1	Values in NORMAL CONDITION         Voltage       Current         V       V       Test       mA         r.m.s.       peak       d.c.       circuit       r.m.s.         109.4       154.7        A1       0.11         e requirements of 6.3.1 include drying out (if specified).       Mathematical specified).	Values in NORMAL CONDITION         Voltage       Current         V       V       V       Test       mA       mA         r.m.s.       peak       d.c.       circuit       r.m.s.       peak         109.4       154.7        A1       0.11       0.43         e requirements of 6.3.1 include drying out (if specified).       main term       main term	Values in NORMAL CONDITION         Voltage       Current         V       V       V       Test circuit A1/A2/A3       mA mA peak       mA d.c.         109.4       154.7        A1       0.11       0.43       -         e requirements of 6.3.1 include drying out (if specified).	Values in NORMAL CONDITION11.2 Classical of the second stress of	Values in NORMAL CONDITION       11.2 Cleaning         11.3 Specially pr         Voltage       Current         V       V         r.m.s.       peak         d.c.       A1/A2/A3         109.4       154.7         -       A1         0.11       0.43         -       -         e requirements of 6.3.1 include drying out (if specified).         That y information:	Values in NORMAL CONDITION       11.2 Cleaning         11.3 Specially protected F         Voltage       Current         V       V         V       V         r.m.s.       peak         d.c.       circuit circuit A1/A2/A3         109.4       154.7          A1         0.11       0.43          -          -         e requirements of 6.3.1 include drying out (if specified).	Values in NORMAL CONDITION       11.2 Cleaning         11.3 Specially protected PROBE A         Voltage       Current         Voltage       0.10 s / 5 s test for the second	Values in NORMAL CONDITION         11.2 Cleaning         11.3 Specially protected PROBE ASSEME         Voltage       Current       Capacitance       10 s / 5 s test (NOTE)         V       V       V       Test circuit A1/A2/A3       mA mA peak       mA d.c.       μC       mJ       V       μC       mJ         109.4       154.7        A1       0.11       0.43        -       -       -       -         e requirements of 6.3.1 include drying out (if specified).         Interview of 6.3.1 include drying out (if specified).	11.2 Cleaning         Values in NORMAL CONDITION       11.2 Cleaning         11.3 Specially protected PROBE ASSEMBLIES         V       V       V       Test       mA       mA       mA       d.c.       10 s / 5 s test (NOTE)         V       V       V       V       Test       mA       mA       mA       peak       d.c.       mJ       V $\mu$ C       mJ         109.4       154.7        A1       0.11       0.43        -       -       -       -       -         e requirements of 6.3.1 include drying out (if specified).	Values in NORMAL CONDITION         11.2 Cleaning           Values in NORMAL CONDITION         11.3 Specially protected PROBE ASSEMBLIES           Voltage         Current         Capacitance         10 s / 5 s test (NOTE)         Comments           V         V         V         Test d.c.         mA circuit A1/A2/A3         mA peak         mA d.c.         μC         mJ         V         μC         mJ           109.4         154.7          A1         0.11         0.43         -         -         -         -         -           e requirements of 6.3.1 include drying out (if specified).         -         -         -         -         -         -         -



TRF No. IEC61010\_2F

ANCE EGRITY single con Location	Result — Remark	Verdict       Form A.8       N       Domments
ANCE EGRITY single con Location	F nponent Co	Form A.8 N
EGRITY single con Location	nponent Co	omments
Location		omments
pination of compon		E C
pination of compon		to the second
pination of compon		6. ···
pination of compon		0
pination of compon	110	alloga NIIII
pination of compon	Contract	- Contraction
affice .	ents	Contineen
Location	Co	omments
WIII.	Concernation	Sale
ANIT ANT		Elisten St
E Contraction	11//	
Continu	The fundation	NII//
	Con.	
ATION and a curre	ent or voltage limiting	g device
Location	Ca	omments
<i>bu</i>		Transal MILLING
2		
		Carine -
		1000
Transation NULL	1. 	Ze st
	ATION and a curre Location	ATION and a current or voltage limiting Location C

	The allow the				IEC	/EN 61010-2-03	N111/2						
Clause	Requiremen	nt — Test	allon Technol	1		Result -	– Remark	111 Jul	11/10			Contraction of	Verdict
6.5	TABLE: CL	EARANCES	and CRE	EPAGE dist	ances	NIII	Certan	-	an Teampellar		alogu	Form A.9	Р
6.4	INSULATION	REQUIREM	ENTS FOR	PROTECTIO	N AGAINST ELECTRIC	SHOCK	11/10		Z	Auton	1		Р
6.7.2	ENCLOSU	RES of PR	OBE AS	SEMBLIES	with DOUBLE or RE	EINFORCED INS	ULATION		6		2	neation real	Р
3	Mechanical	resistance	e to shoc	k and impac	ot	Contra	C <sup>all</sup>	Eller	anous 111	11/10		8	Р
10.1	Integrity of	CLEARAN	ICES and	d CREEPA	GE DISTANCES			Certificat	Ele	In Technologic	2111	11/10	Р
Location	Meas (initial	ured – 6.7)	Verdict		Mechanical tests (r	note)	Test at max.	Measured (if rec	d after test quired)	Verdic	t	Comments	
(see Form A.4)	CREEPAGE DISTANCE	CLEARANCE		Applied force	Rigidity	Drop	RATED ambient	CREEPAGE	CLEARANCE				
	mm	mm		N	(8.1)	(8.2)	(10.2)	mm	mm				
Probe tip to barrier	>12.0	>6.0	NP/	30N	20N	1m	40°C	>12.0	>6.0	P	RI		
Probe tip to probe body	>12.0	>6.0	Р	30N	20N	1m	40°C	>12.0	>6.0	P	RI	Contraction	
NOTE – Re	fer to Form A	A.10 for vol	Itage test	s following	the above tests.	E Common and	MIL.	60		- Contraction	Tech	1000	
Supplement	tary informat	ion: 🗾	uon fechi	3000		Continentia		1111	11/10	60		Contrainer to	
	MU	05		Allon Technin	SCA		Certulica	Ele	Technology	MIL.	6		
RF No. IEC	61010_2F					TRI	- originato	or: VDE					

# Page 85 of 92

# Report No. CSTS140227045

Clause		0100 <sup>5</sup>	1	EC/EN 610	10-2-031	-	N CO		Certific
	Require	ment — Test	and all	1112	Certu	Resu	lt — Remark		Verdict
6.6	TABLE:	: Voltage tests	;	a technologie	111/10			Form A.10	Р
4.4.4	Conformity after application of fault conditions <sup>1</sup>						N		
6.4 🧹	Insulation requirements for protection against electric shock							Р	
6.7.2	ENCLOSURES of PROBE ASSEMBLIES with DOUBLE or REINFORCED							P	
6.7.5	Insulatio	on of a probe c	able	2	in feeding		1 August	Control	Р
8	Mechan	ical resistance	to shock a	ind impact		uncation feet	1		Р
11	Protecti	on against haz	ards from f	luids			The same	10	N N
<sup>1</sup> Record the	fault, tes	t or treatment	applied be	fore the vol	tage test	1110		Zer	
Electron	Test site	altitude				healogu	Alle		
Centific	Test vol	tage correction	factor (se	e Table 10	)		E Common and	ML.	—
Location references Forms A.2 a	from from	Clause or sub-clause	Humidity Yes/No	Working voltage V	Test volt r.m.s./pea	tage k/d.cV	Comme	ents	Verdic
Probe tip to	barrier	6.4, 6.7.2, 6.7.5, 8	Yes	600 V	3536 V	rms	RI	NII//	Р
Probe tip to body	probe	6.4, 6.7.2, 6.7.5, 8	Yes	600 V	3536 V	rms 🏱	RI 🍃		N'P'
Probe tip to body Supplementa	probe ary inform	6.4, 6.7.2, 6.7.5, 8 nation:	Yes	600 V	3536 V	rms	RI		P

TRF No. IEC61010\_2F



# Page 87 of 92

-	a line in the second se				0 2 001				
Clause Requirement — Test				Result —			Remark Verdic		
9.	TABLE :	ABLE : Temperature Measurements Form A.12					Р		
9.1 🗾	Surface to CONDITI	emperature li ON	imits - NOł	PRMAL CONDITION and / or SIGNLE FAULT P					
Operating c	conditions:	Normal oper	ration.		1		The second second		
	6							Incason recommendation	
Frequency			Test room ambient temperature (ta)				25.0 °C		
							S Aller		
Voltage V			Test duration				2 h 15 min		
Pa	art / Locatio	on	t <sub>m</sub> °℃		t <sub>max</sub>	Verdict	Comments	;	
Probe body			31.4	46.4	70	Р		e e e e e e e e e e e e e e e e e e e	
Cable	Contraction fee	E	26.6	41.6	75	P	Still.		
Ambient		Contraction of	25.0	40.0	<u></u>			State State	
Supplemen	tary inform	ation:						Tuncation feels	
Supplemen	tary inform	ation:	Concession of	N. S.	and and a	111.	Certif	- Anna te or da	
								in the second	
								C.	
- Contraction	Technology 1		NIII/6	Centre	ation	2 Contraction		NI/	
- Contraction	Training All				146				
	A Contraction of the Contraction				ation Internation				
	All ALL								
	NII C								
	ALL								
	NULL STATE								

#### Page 88 of 92



#### Page 89 of 92

#### Report No. CSTS140227045

#### Appendix 1 Equipment List

No.	Equipment	Manufacturer	Model No.	Serial No.	Calibration date	Calibration due date
CES-S-002	Data Acquisition / Switch Unit	Agilent	34970A	MY44011615	2013.10.24	2014.10.23
CES-S-003	Thermocouple wire	OMEGA	TT-K-30-1000		2013.10.24	2014.10.23
CES-S-004	Temp. & Humid. Chamber	Gongwen 🧹	GDS-250	080943	2013.10.24	2014.10.23
CES-S-005	Oven Chamber	Rongfeng	101A-3	31446	2013.10.24	2014.10.23
CES-S-006	DC Electronic Load	ARRAY	3711A 🤇	A06BI03017	2013.10.24	2014.10.23
CES-S-007	DC Electronic Load	ARRAY	3711A	A06BI02095	2013.10.24	2014.10.23
CES-S-008	DC Electronic Load	ARRAY	3711A	A06BI03015	2013.10.24	2014.10.23
CES-S-009	DC Electronic Load	ARRAY	3711A	A06BH02122	2013.10.24 🧷	2014.10.23
CES-S-010	Oscilloscope	Tektronix	TDS3012B	YT204842	2013.10.24	2014.10.23
CES-S-011	Digital Power Meter	Qingzhi	8716C	870806042	2013.10.24	2014.10.23 🤇
CES-S-012	Digital Power Meter	Qingzhi	8716C	870806037	2013.10.24	2014.10.23
CES-S-013	Ohm Meter	Yang Zi	YD2511	11-2250	2013.10.24	2014.10.23
CES-S-014	Multi Meter	Fluke	115C	96721596	2013.10.24	2014.10.23
CES-S-015	Desktop Multi Meter	Fluke	45	7662018	2013.10.24	2014.10.23
CES-S-016	Desktop Multi Meter	Fluke	45	8095018	2013.10.24	2014.10.23
CES-S-017	Desktop Multi Meter	Fluke	45	6792039	2013.10.24	2014.10.23
CES-S-018	Grounding Bond Meter	Yang Zhi	YD2654B	54B-053	2013.10.24	2014.10.23
CES-S-019	Leakage Current Meter	EXTECH	7611	1330848	2013.10.24	2014.10.23
CES-S-020	Insulation Resistance Tester	Yang Zhi	YD9820A	20A-1750	2013.10.24	2014.10.23
CES-S-021	Hi-Pot Tester	Yang Zhi	YD2650A	088	2013.10.24	2014.10.23
CES-S-022	Electronic Scale	Balance	BCSS-F-6	081050	2013.10.24	2014.10.23
CES-S-023	Push-Pull Scale	Japan Instrumentation	NK-300	67420	2013.10.24	2014.10.23
CES-S-024	Digital Caliper	YATO	YT211	840156	2013.10.24	2014.10.23
CES-S-025	Electronic Thermo-Hygrometer	Shanghai Qixiang	CTH-608	20953	2013.10.24	2014.10.23
CES-S-026	Goniometer 🥍	Wenzhou	JZC-B2	15032	2013.10.24	2014.10.23
CES-S-027	Tumbling Barrel	Zhilitong	GT-1	G010308	2013.10.24	2014.10.23
CES-S-028	Audio Generator	LWDQGS 🗾	TAG-101	308909	2013.10.24	2014.10.23
CES-S-029	Noise Generator	Ningbo Zhongce	DF1681	071001107	2013.10.24	2014.10.23
CES-S-030	Plug Torque Tester	Zhilitong	LJ-1 💋	LJ010908	2013.10.24	2014.10.23
CES-S-031	Test Probe 13	Zhilitong	TP13	D3L15	2013.10.24	2014.10.23
CES-S-032	Test Probe 41	Zhilitong	TP41	D30L80	2013.10.24	2014.10.23
CES-S-033	Finger Nail Probe	Zhilitong	FN-1	D12N30	2013.10.24 📃	2014.10.23
CES-S-034	Test Finger Probe B	Zhilitong	TF-B	D12J3	2013.10.24 🥯	2014.10.23
CES-S-035	Rigid Finger Probe	Zhilitong	RFP	D12N50	2013.10.24	2014.10.23
CES-S-036	Test Probe	Zhilitong	D4L100	60065-913	2013.10.24	2014.10.23 📎
CES-S-037	Test Probe	Zhilitong	TP-C	60065-915	2013.10.24	2014.10.23
CES-S-038	Test Probe D	Zhilitong	TP-D	60065-914	2013.10.24	2014.10.23
CES-S-039	Test Probe	Zhilitong	FG2C	D12L80	2013.10.24	2014.10.23
CES-S-040	Test hook	Zhilitong	TH-1 \\//	W8L180T1	2013.10.24	2014.10.23
CES-S-041	Accessibility Probe	Zhilitong	ZA-1	A1310	2013.10.24	2014.10.23
CES-S-042	UL Finger Probe	Zhilitong	ULP-01	D5L97	2013.10.24	2014,10,23
CES-S-043	Steel Ball	Zhilitong	GQ-1	G121008	2013.10.24	2014.10.23
CES-S-044	Ball Pressure Tester	SINNA	SN3407	08051808	2013.10.24	2014.10.23
CES-S-045	Ball Pressure Tester	SINNA	SN3407	08082302	2013 10 24	2014 10 23
CES-S-046	Hammer	SINNA	SN3406	08083102	2013 10 24	2014 10 23
CES-S-047	Torque Driver	Kanon	121 TDK	08G338	2013 10 24	2014 10 23
CES-S-049	Glow Wire Test Set	SINNA	7RS-2	08091118	2013 10 24	2014 10 23
CES-S-050	Needle Flame Test Set	SINNA	7Y-2	08091125	2013 10 24	2014 10 23
CES-S-052	DC Power Supply	Manson	SIM-9106	G360800228	2013 10 24	2014.10.20
CES S 053	bardonod stool pin	Zhilitong	SIN-9100	D25N30	2013 10 24	2014.10.23
CES-S-054	narueneu steer pin	Shanghai	TGT_100	526	2013.10.24	2014.10.23
CES-S-055	Jiahui	JH-60	176358	600mmx450mmx	2013.10.24	2014.10.23
CES_S_050	Test rod	Zhilitong	T7-14		2013 10 24	2014 10 22
CES 5 060	Vibratian tastar		12-14	20100229	2013.10.24	2014.10.20
050-0-000	VIDIATION LESTER	Snengsniwei	3VV-1F	20100228	2013.10.24	2014.10.23
050000	Digital Dawar Matar	Ceprel			2013.10.24	2014.10.23
050.0002		Qingzhi	0/1381	0/0909080	2013.10.24	2014.10.23
CES-S-063		Gongwen	50-500	100311	2013.10.24	2014.10.23
CES-S-064	Draught-proof enclosure	i engbo —	IB180	Q100226	2013.10.24	2014.10.23 🛁

#### Page 90 of 92

#### Report No. CSTS140227045

#### Equipment List

No.	Equipment	Manufacturer	Model No.	Serial No.	Calibration date	Calibration due date
CES-S-065	Hammer	Zhilitong	CJ-3	C031026	2013.10.24	2014.10.23
CES-S-066	Hammer	Zhilitona	CJ-3	C031027	2013.10.24	2014.10.23
CES-S-067	Hammer	Zhilitona	CJ-3	C031028	2013.10.24	2014.10.23
CES-S-068	Data Acquisition / Switch Unit	Agilent	34970A	US37013205	2013.10.24	2014.10.23
CES-S-069	Leakage Current Tester	Simpson	228	7173286	2013 10 24	2014 10 23
CES-S-070	Temp. & Humid. Chamber	Weihuang	WHTH-1000- 40-880	100631	2013.10.24	2014.10.23
CES-S-071	Salt spary tester	Hengiang	KH-160	1	2013.10.24 📈	2014.10.23
CES-S-072	Oscillating tube	damsion	DMS-E01	2011DNS- F010401	2013.10.24	2014.10.23
CES-S-073	sprav nozzle	Lihui	LH56	63125	2013 10 24	2014 10 23
CES-S-074	immersion tester	kunshang	IPX7-1	SK2018M5	2013 10 24	2014 10 23
CES-S-075	Test Probe 18	Aodesaichuang	AUTO-18	auto110721-18- 01	2013.10.24	2014.10.23
CES-S-076	Test Probe 19	Aodesaichuang	AUTO-19	auto110721-19-	2013.10.24	2014.10.23
CES-S-077	Data Acquisition / Switch Unit	Agilent	34970A	MY44052414	2013.10.24	2014.10.23
CES-S-078	Data Acquisition / Switch Unit	Agilent	34970A	MY44052411	2013.10.24	2014.10.23
CES-S-079	Digital Power Meter	Yokogawa	WT210	91K223105	2013.10.24	2014.10.23
CES-S-080	Desktop Multi Meter	Agilent	34401A	MY44008459	2013 10 24	2014 10 23
CES-S-081	Desktop Multi Meter	Agilent	34401A	MY44008472	2013.10.24	2014.10.23
CES-S-082	Oscillograph Probe	Agilent	P4100	2012010701	2013 10 24	2014 10 23
CES-S-083	Hi-Pot Tester	MEIRUIKE	RK2672D	RK72D111130-	2013.10.24	2014.10.23
CES-S-084	Digital Power Meter	Qinazhi	8713B1	871109016	2013.10.24	2014.10.23
CES-S-085	Switching Mode Power Supply	ZHAOXIN	KXN-6030D	KXN.PS.JPS	2013.10.24	2014.10.23
CES-S-086	Torque Driver	Aigu	10DPSK	356019	2013.10.24	2014.10.23
CES-S-087	Magnifying glass	German	10x	12234	2013.10.24	2014,10,23
CES-S-088	Regulated Power Supply	APC	AE-11010G	F310120052	2013 10 24	2014 10 23
CES-S-089	Air Pressure Gauge	Tianva 🧹	N509		2013.10.24	2014.10.23
CES-S-090	Step Temperature Room	Long An	LA-ORT28	LA-201206001	2013.10.24	2014.10.23
CES-S-091	"GO" Gauge for F27 Caps	KINGPO	7006-27B-1	/	2013 10 24	2014 10 23
CES-S-092	"NOT GO" Gauge for E27 Caps	KINGPO	7006-28A-1	1	2013.10.24	2014,10,23
CES-S-093	"GO" Gauge for dimension "S1" of E27 Caps		7006-27C-1	1	2013.10.24	2014.10.23
CES-S-094	Gauge for E27 Caps for testing contact making	KINGPO	7006-50-1		2013.10.24	2014.10.23
CES-S-095	Gauge for E27 Caps for testing protection against accidental contact during insertion	KINGPO	7006-51A-2	1	2013.10.24	2014.10.23
CES-S-096	Oscilloscope	Tektronix	TDS3012B	C010353	2013.10.24	2014.10.23
CES-S-097	Single wing drop tester	FEILING	FL8618	1	2013.10.24	2014.10.23
CES-S-098	Data Acquisition / Switch Unit	Agilent	34970A	MY44006829	2013.10.24	2014.10.23
CES-S-099	Thermocouple wire	OMEGA	TT-J-30-1000		2013.10.24	2014.10.23
CES-S-100	Touch current tester	Ceprei	410B	1207AG10	2013.10.24	2014.10.23
CES-S-101	Cord oscillating tester	Dongguan lixiong	LX-1211	1 Connertie	2013.10.24	2014.10.23
CES-S-102	Lampholder digital torsion meter	Inventfine Instrument Co., Ltd.	CH338	1301004	2013.10.24	2014.10.23
CES-S-103	Straight steel pin	CES	CES-S-103	E Suppose	2013.10.24	2014.10.23
CES-S-104	Digital Caliper	Guanglu	SF2000	C1211225254	2013.10.24	2014.10.23
CES-S-105	Digital Caliper	Guanglu	SF2000	C1211225024	2013.10.24	2014.10.23
CES-S-106	Timer	PURSUN	PS-528	/	2013.10.24	2014.10.23
CES-S-107	Timer	PURSUN	PS-529	1	2013.10.24	2014.10.23
CES-S-108	Switching Mode Power Supply	GW INSTEK	GPS-1850D	EN820728	2013.10.24	2014.10.23
CES-S-109	Digital Power Meter		PF9901	1005046	2013.10.24	2014.10.23
CES-S-110	Digital Power Meter	EVERFINE	PF9901	G100731CJ63312 37	2013.10.24	2014.10.23
CES-S-111	Tape line	YANGGUANG	YG-206	1	2013 10 24	2014 10 23
CES-S-112	Electronic Thermo-Hvarometer	UYIGAO	CTH-608	UA13706944	2013.10.24	2014.10.23
CES-S-113	Pressure Gauge	YEATHE	CES-S-113		2013 10 24	2014 10 23
	I. I. Sourie Guuge		5-0 0 110		1_0.0.0.21	120.110.20



