

Test Verification of Conformity

On the basis of the tests undertaken, the sample(s) of the below product have been found to comply with the essential requirements of the referenced specifications at the time the tests were carried out.

Applicant Name & Address : Fluke Corp.
6920 Seaway Blvd, M/S 266D, Everett, WA 98203 U.S.A.

Product(s) Tested : AC/DC Current Probe

Ratings and principal characteristics : Pollution degree 2, Class II
CAT III 300V
Battery Supply: 9 Vdc, use a alkaline type battery.

Model(s) : CT237B

Brand name : AMPROBE

Relevant Standard(s)/Specification(s) : EN 61010-1: 2001
EN 61010-2-032:2002

NOTE: The equipment covered by this document is subject to mandatory compliance with - the European LVD Directive 2006/95/EC.

Verification Issuing Office Name & Address : Intertek Testing Services Taiwan Ltd.
5F, No. 423, Ruiguang Road, Neihu District, Taipei 114, Taiwan

Verification/Report Number(s) : TP10030346-ETS (TP10030346-ETS)

NOTE 1: This verification is part of the full test report(s) and should be read in conjunction with it.

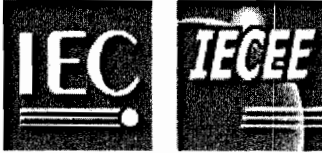
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SAMMY WU
DIRECTOR



May 12, 2010



Test Report issued under the responsibility of:

Intertek

**TEST REPORT
EN 61010-2-032**

**Particular requirements for hand-held and hand-manipulated current sensors
for electrical test and measurement**

Report

Report reference No.....: TP10030346-ETS

Compiled by (+ signature).....: Channing Chiou

Approved by (+ signature).....: Allen Huang

Date of issue.....: May 12, 2010

Contents.....: 45 pages test report

Channing Chiou
Allen Huang

Testing laboratory

Name.....: Intertek Testing Services Taiwan Ltd.

Address.....: 5F, No. 423, Ruiguang Road, Neihu District, Taipei 114, Taiwan

Testing location.....: 5F, No. 423, Ruiguang Road, Neihu District, Taipei 114, Taiwan

Applicant

Name.....: Fluke Corp.

Address.....: 6920 Seaway Blvd, M/S 266D, Everett, WA 98203 U.S.A.

Test Specification

Standard.....: EN 61010-1: 2001 and EN 61010-2-032: 2002

IEC 61010-1: 2001 and IEC 61010-2-032: 2002

Test procedure.....: CE marking services

Procedure deviation.....: N.A.

Non-standard test method.....: N.A.

Test Report Form

Test Report Form No.....: 61010-2-032_TRF(2002)

Master TRF.....: Reference No. 61010-1TRF(Ed 2), Dated 2001-11

Copyright blank test report.....: Intertek-Taiwan

Test Item Description	
Type of test object	AC/DC Current Probe
Trademark	AMPROBE
Model/type reference	CT237B
Manufacturer.....	Shanghai Shilu Instrument Co., Ltd. No. 139, Lane 2638, Hongmei South Road, Shanghai, China.
Rating.....	Pollution degree 2, Class II Clamp parts: CAT III 300V, AC 200A Battery Supply: 9 Vdc, by alkaline type battery.
Test item particulars	
Equipment mobility	Measurement
Description of equipment function	The submitted samples are a current probe with measuring current function.
Installation/overvoltage category	Installation category III 300V for clamp parts
Current sensor	Type A
Pollution degree	Pollution degree 2
Environmental rating.....	Normal
Equipment mobility.....	Hand-Held
Connection to mains supply.....	None
Operating conditions.....	Continuous
Overall size of the equipment (L x W x H) ...	Max. 185 mm × 70 mm × 30 mm
Mass of the equipment (kg)	Max. 0.28 Kg
Marked degree of protection to IEC 60529..	Ordinary (IPX0)
Class of equipment.....	Class II
Testing	
Date of receipt of test item	April 13, 2010
Date(s) of performance of test	April 13, 2010 ~ April 19, 2010
Test case verdicts	
Information only	Info(rmation)
Test case does not apply to the test object :	N(.A.)
Test item does meet the requirement	P(ass)
Test item does not meet the requirement ...:	F(ail)

General remarks:

1. "(see remark #)" refers to a remark appended to the report.
2. "(see appended table)" refers to a table appended to the report.
3. "(see Annex #)" refers to an annex appended to the report.
4. Throughout this report a dot is used as the decimal separator.
5. The test results presented in this report relate only to the object tested.
6. This report shall not be reproduced except in full without the written approval of the testing laboratory.

Additional information:

1. This report is submitted for the exclusive use of the client to whom it is addressed. Its significance is subject to the adequacy and representative character of the sample(s) and to the comprehensiveness of the tests, examinations or surveys made.
2. The CE marking may only be used if all relevant and effective EC directives are complied with.
3. The instructions specified by the standard have to be in official language of each country, however; only English is checked for this report. It is the applicant's responsibility to provide instruction in each official language of the EU.

IEC / EN 61010-2-032: 2002			
Clause	Requirement – Test	Result - Remark	Verdict

1	Scope and object		Info
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2	Normative references		Info
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3	Definitions		Info
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4	Tests		
4.1	General		Info
4.2	Sequence of tests		Info
4.3	Reference test conditions		Info
4.4	Testing in SINGLE FAULT CONDITION		P
4.4.1	General		Info
4.4.2	Application of fault condition:		N/A
4.4.2.1	Protective Impedance	See appended table	N/A
4.4.2.2	Protective Conductor	See appended table	N/A
4.4.2.3	Equipment or parts for short-term or intermittent operation	See appended table	N/A
4.4.2.4	Motor	See appended table	N/A
4.4.2.5	Capacitors	See appended table	N/A
4.4.2.6	Mains transformers		N/A
4.4.2.6.1	Short circuit	See appended table	N/A
4.4.2.6.2	Overload	See appended table	N/A
4.4.2.7	Outputs	See appended table	P
4.4.2.8	Equipment for more than one supply	See appended table	N/A
4.4.2.9	Cooling	See appended table	N/A
4.4.2.10	Heating devices	See appended table	N/A
4.4.2.11	Insulation between circuits and parts	See appended table	P
4.4.2.12	Interlocks	See appended table	N/A
4.4.3	Duration of tests		Info
4.4.4	Conformity after application of fault conditions	See appended table	P

IEC / EN 61010-2-032: 2002			
Clause	Requirement – Test	Result - Remark	Verdict
5	Marking and documentation		
5.1	Marking		P
5.1.1	General		P
	Required equipment markings are visible		P
	- from the exterior or		P
	- after removing a cover or opening a door or		N/A
	- after removal from a rack or panel		N/A
	Not put on parts which can be removed by an OPERATOR		P
	Letter symbols comply with IEC 60027		P
	Graphic symbols comply with table 1		P
	Graphic symbols used are explained in the accompanying documentation	Explained in user manual	P
5.1.2	Identification		P
	a) manufacturer's name or registered trade mark:	AMPROBE	P
	b) model number, name or other means	CT237B	P
	If applicable, factory identification (may be in code and internal)		N/A
(5.1.2)	Addition: Add the following new item after the note to item b): (EN 61010-2-032:2002)		
	aa) current sensor shall be marked as follows: (EN 61010-2-032:2002)		P
	1) Warning mark for specific model only (EN 61010-2-032:2002)		N/A
	2) Type A current sensor shall be marked with symbol 102 of table 1 (EN 61010-2-032:2002)		P
	3) Type B and Type C current sensor shall be marked with symbol 101 of table 1 (EN 61010-2-032:2002)		N/A
	The relevant symbol shall be marked adjacent to the marking of the measurement category (EN 61010-2-032:2002)		P

IEC / EN 61010-2-032: 2002			
Clause	Requirement – Test	Result - Remark	Verdict
5.1.3	Mains supply	Supplied by alkaline battery	N/A
	a) Nature of supply		N/A
	- a.c. RATED mains frequency or range of frequencies		N/A
	- d.c. with symbol 1		N/A
	b) RATED supply voltage(s), or range		N/A
	c) Maximum RATED power in watts or volt-amperes, or maximum RATED input current		N/A
	d) Equipment which the OPERATOR can set for different RATED supply voltages		N/A
	- indicates the set voltage		N/A
	- PORTABLE EQUIPMENT indication is visible from the exterior		N/A
	- If possible without a tool, changing the voltage setting changes the indication		N/A
	e) Accessory mains socket-outlets accepting standard mains plugs are marked		N/A
	- with the voltage if it is different from the mains supply voltage		N/A
	- for use with specific equipment		N/A
	If not marked for specific equipment it is marked with:		N/A
	- the maximum RATED current or power, and maximum permitted leakage current		N/A
	- symbol 14 with full details in the documentation		N/A
5.1.4	Fuses	Not provided with such device	N/A
	OPERATOR replaceable fuse marking		N/A
5.1.5	TERMINALS, connectors and operating devices		P
5.1.5.1	Terminals	Supplied by alkaline battery	N/A
	Connections for mains supply identifiable		N/A
	a) FUNCTIONAL EARTH TERMINALS		N/A
	b) PROTECTIVE CONDUCTOR TERMINALS		N/A

IEC / EN 61010-2-032: 2002			
Clause	Requirement – Test	Result - Remark	Verdict
	- Symbol is placed adjacent to or on the TERMINAL		N/A
	c) TERMINALS permitted to be connected to accessible parts		N/A
	d) TERMINALS supplied from the interior		N/A
	e) ACCESSIBLE FUNCTIONAL EARTH TERMINALS		N/A
5.1.5.2	Measuring circuit TERMINALS		P
	Unless a clear indication is provided, the TERMINALS shall be marked as follows		P
	a) Maximum RATED voltage to earth	300V	P
	b) Installation category	CAT III	P
	For permanently connected TERMINALS, information in documentation (See 5.4.3)	Not the specified product	N/A
	Excepted TERMINALS intended for specific equipment are identified		P
	Marking is adjacent to TERMINALS		P
	(if insufficient space) the marking is		N/A
	- on the RATING plate or		N/A
	- scale plate or		N/A
	- the TERMINAL is marked with symbol 14		N/A
(5.1.5.101)	Additional subclause: Voltage and current Rating of Jaws (EN 61010-2-032:2002)		
	Max. measuring voltage to earth (EN 61010-2-032:2002)	300V	P
	Installation category (EN 61010-2-032:2002)	CAT III	P
	Max. measuring current (EN 61010-2-032:2002)	AC 200A	P
5.1.6	Switches and circuit breakers	Not provided with such device	N/A
	One or both positions of the disconnecting device		N/A
	Symbols 9 and 10 not used for other switches		N/A
5.1.7	Equipment protected by DOUBLE INSULATION or REINFORCED INSULATION	On the battery cover of bottom enclosure	P

IEC / EN 61010-2-032: 2002			
Clause	Requirement – Test	Result - Remark	Verdict
	Protected throughout (symbol 11)	<input checked="" type="checkbox"/>	P
	Only partially protected (symbol 11 not used)		N/A
5.1.8	Field-wiring TERMINAL boxes	Not provided with such device	N/A
	If > 60°C, marking of temperature RATING of the cable:		N/A
	- adjacent to the field-wiring TERMINALS or		N/A
	- visible before and during installation		N/A
5.2	Warning markings		P
	are visible when ready for NORMAL USE		P
	are near or on applicable parts		P
	a) Symbols min 2.75 mm high	On the battery cover	P
	Text min 1.5 mm and contrasting colour	On the battery cover	P
	b) Engraved symbols or text min 2 mm high and raised or engraved min 0.5 mm (if not contrasting colour)	On the clamp part	P
	If necessary marked with symbol 14 or other symbol explained in manual		P
	Advise to disconnect or isolate during access to HAZRDOUS LIVE parts	On the battery cover of bottom enclosure	P
5.3	Durability of markings		P
	The required markings are clear and legible (NORMAL USE)		P
	Resist cleaning (clear, legible and not worked loose)		P
5.4	Documentation		P
5.4.1	General		P
	Equipment is accompanied by documentation which includes:		P
	a) Intended use		P
	b) Technical specification		P
	c) Instructions for use		P
	d) Name and address of manufacturer or supplier		P
	e) The information specified in 5.4.2 to 5.4.5		P

IEC / EN 61010-2-032: 2002			
Clause	Requirement – Test	Result - Remark	Verdict
	f) Definition of installation category (if marked with CAT)		P
	g) If marked CAT I, a warning not to use in other CAT	CAT III apparatus	N/A
	A clear explanation of warning symbols is in the documentation or		P
	Information is durably and legibly marked on the equipment		N/A
	Instructions for handling hazardous substances	Not provided with such part	N/A
5.4.2	Equipment RATINGS		P
	Documentation includes		P
	a) supply voltage or voltage range	Supplied by batteries	N/A
	the frequency or frequency range		N/A
	the power or current RATING		N/A
	b) a description of all input and output connections		P
	c) the RATING of insulation of external circuits (see 6.6.2)	Not provided with any external circuit	N/A
	d) statement of the range of environmental conditions		P
	e) a statement of the degree of protection (if rated IP XX)		N
5.4.3	Equipment installation		N/A
	Documentation includes instructions for		N/A
	a) assembly, location and mounting		N/A
	b) protective earthing		N/A
	c) connections to the supply		N/A
	d) Additional information for PERMANENTLY CONNECTED EQUIPMENT:		N/A
	- supply wiring requirements		N
	- external switch or circuit-breaker and external overcurrent protection		N/A

IEC / EN 61010-2-032: 2002			
Clause	Requirement – Test	Result - Remark	Verdict
	recommendation on switch or circuit-breaker location		N/A
	e) ventilation requirements		N/A
	f) special services		N/A
	g) maximum sound power level (see 12.5.1)		N/A
	h) instructions relating to sound pressure level		N/A
	i) ratings for permanently connected, not accessible measuring circuit terminals (see 5.1.5.2)		N/A
(5.4.4)	Equipment operation		P
	Replacement:: (EN 61010-2-032:2002)		
	Instructions for use include: (EN 61010-2-032:2002)		P
	a) identification of operating controls (EN 61010-2-032:2002)		P
	b) instructions for connection to accessories and other equipment (EN 61010-2-032:2002)	Test leads	P
	c) specification of intermittent operation limits (EN 61010-2-032:2002)		N/A
	d) explanation of required and used symbols (EN 61010-2-032:2002)		P
	e) replacement of replaceable parts (EN 61010-2-032:2002)	Batteries	P
	f) cleaning and decontamination (EN 61010-2-032:2002)		P
	g) application and removal of the current sensor (EN 61010-2-032:2002)		P
	h) instructions to de-energise the installation on which the current is measured, or to adopt safe operating procedures when working on hazardous live installations, during application and removal of Type b or Type C current sensors (EN 61010-2-032:2002)		N/A

IEC / EN 61010-2-032: 2002			
Clause	Requirement – Test	Result - Remark	Verdict

	i) a warning to the operator that individual protective equipment must be used (EN 61010-2-032:2002)		P
	j) instructions about the function of the tactile indicator or barrier, indicating the limit of safe access of the hand-held part (EN 61010-2-032:2002)		P
	k) a warning to the operator not to use a flexible current sensor (EN 61010-2-032:2002)	(See 6.9.101.5)	N/A
	l) a warning to the operator not to use the current sensor (EN 61010-2-032:2002)	(See 6.9.101.2)	P
	A statement against use in a manner not specified by the manufacturer (EN 61010-2-032:2002)		P
5.4.5	Equipment maintenance		P
	Instructions include:		P
	- sufficient preventive maintenance and inspection		P
	- if failure could cause hazard, inspection and replacement of hoses or other parts containing liquids		N/A
	- specific battery type for replaceable batteries	Alkaline type	P
	- any parts to be supplied or examined by the manufacturer only		N/A
	- RATING and characteristics of replaceable fuses	Not provided with such device	N/A

6	Protection against electric shock		
6.1	General		Info
6.1.1	Compliance is checked by the determination of accessible parts according to 6.2, the measurements according to 6.3 followed by the tests of 6.4 to 6.11.		Info
6.1.2	Exceptions		P

IEC / EN 61010-2-032: 2002			
Clause	Requirement – Test	Result - Remark	Verdict
	If necessary due to operating reasons the following parts may be accessible and hazardous live:		P
	a) Parts of lamps and lamp sockets after removal	Not provided with such device	N/A
	b) Parts intended to be replaced by the operator and accessible by the use of a tool only	Replaceable batteries	P
	c) Locking and screw-held measuring terminals	No such terminal	N/A
	Parts in a) and b) are not hazardous live 10 s after interruption of the supply		P
(6.1.2)	Addition: Add the following new item aa): (EN 61010-2-032:2002)		
	aa) conductive parts within a jaw opening, provided that they meet requirements of 6.9.101 (EN 61010-2-032:2002)		P
6.2	Determination of ACCESSIBLE parts		Info
6.3	Permissible limits for ACCESSIBLE parts		P
6.3.1	Values in NORMAL CONDITION	See appended table	P
6.3.2	Values in SINGLE FAULT CONDITION	See appended table	N/A
6.4	Protection in NORMAL CONDITION		P
	Prevent becoming HAZARDOUS LIVE from accessible part by		P
	a) BASIC INSULATION (see annex D)	Double insulation is provided	N/A
	b) enclosure or barriers	Plastic enclosure and barrier are provided	P
	c) impedance		N/A
	Enclosure and barriers shall meet the rigidity requirements of 8.1 (see 8.1)		P
	If enclosure or barriers provided protection by insulation, they shall meet the requirements of basic insulation		P
	Between accessible parts and hazardous live parts shall meet the requirements of basic insulation (see 6.7)		P

IEC / EN 61010-2-032: 2002			
Clause	Requirement – Test	Result - Remark	Verdict
	Solid insulation between accessible parts and hazardous live parts shall pass the voltage test for basic insulation (see 6.8)		P
6.5	Protection in SINGLE FAULT CONDITION		P
	Additional protection is provided as specified in 6.5.1 to 6.5.3 or		P
	by automatic disconnection of the supply (6.5.4)		N/A
6.5.1	Protective bonding	Not provided with such device	N/A
	ACCESSIBLE conductive parts:		N/A
	- are bonded to the PROTECTIVE CONDUCTOR TERMINAL or		N/A
	- are separated from parts which are HAZARDOUS LIVE, by earthed screen or barrier or		N/A
	- are separated from parts which are HAZARDOUS LIVE by DOUBLE/REINFORCED INSULATION		N/A
6.5.1.1	Protective bonding integrity	Not provided with such device	N/A
	a) PROTECTIVE BONDING consists of directly connected structural parts and/or		N/A
	discrete conductors		N/A
	Withstands all thermal and dynamic stresses		N/A
	b) Soldered connections mechanically secured		N/A
	Such connections are not used for other purposes		N/A
	Screw connections are secured against loosening		N/A
	c) Removing OPERATOR removable parts do not interrupt bonding to other parts		N/A
	d) Movable conductive connections not used, unless designed for electrical connection		N/A
	e) Exterior metal braids of cables not regarded as PROTECTIVE BONDING		N/A
	f) If mains supply is passed through the equipment, protective earth is also passed		N/A

IEC / EN 61010-2-032: 2002			
Clause	Requirement – Test	Result - Remark	Verdict
	The impedance of the protective path does not exceed 6.5.1.3		N/A
	g) Protective earthing conductors are bare or green/yellow		N/A
	Exceptions:		N/A
	- earthing braids, may be transparent		N/A
	- internal special protective conductors (such as ribbon cables)		N/A
	h) Equipment using PROTECTIVE BONDING provided with TERMINAL complying with 6.5.1.2		N/A
6.5.1.2	PROTECTIVE CONDUCTOR TERMINAL	Not provided with such device	N/A
	a) The contact surfaces of PROTECTIVE CONDUCTOR TERMINALS are all metal and risk of corrosion minimized		N/A
	b) Connection of an appliance inlet		N/A
	c) Equipment provided with a rewirable flexible cord has PROTECTIVE CONDUCTOR TERMINAL close to supply connections		N/A
	d) Equipment not requiring connection to a mains supply has PROTECTIVE CONDUCTOR TERMINAL close to the protected circuit		N/A
	Where the circuit has external TERMINALS		N/A
	e) Current-carrying capacity at least equivalent with mains supply terminals		N/A
	f) Plug-in type PROTECTIVE CONDUCTOR TERMINALS, makes first, breaks last		N/A
	g) If the PROTECTIVE CONDUCTOR TERMINAL is also used for other bonding, connection of the protective conductor shall be applied first and be secured independently or		N/A
	there shall be a warning marking		N/A
	h) If protective earth protects measuring circuits:		N/A

IEC / EN 61010-2-032: 2002			
Clause	Requirement – Test	Result - Remark	Verdict
	- PROTECTIVE CONDUCTOR TERMINAL current-carrying capacity is at least same as measuring circuit		N/A
	- PROTECTIVE BONDING is not interrupted by the presence of any switch or interrupting device		N/A
	i) FUNCTIONAL EARTH TERMINALS have independent connection		N/A
	j) PROTECTIVE CONDUCTOR TERMINAL screw size and engagement (min 3 turns)		N/A
	Contact pressure		N/A
6.5.1.3	Bonding impedance of plug-connected equipment		N/A
6.5.1.4	Bonding impedance of PERMANENTLY CONNECTED EQUIPMENT		N/A
6.5.1.5	Indirect bonding for test and measuring equipment		N/A
	a) Voltage limiting device		N/A
	b) Tripping device disconnecting mains		N/A
6.5.2	DOUBLE INSULATION and REINFORCED INSULATION	Double insulation is provided	P
	See 6.7, 6.8 and 6.9.2.		P
6.5.3	PROTECTIVE IMPEDANCE	Not provided with such device	N/A
	A PROTECTIVE IMPEDANCE is one or more of the following:		N/A
	- an appropriate HIGH INTEGRITY single component (see 14.6)		N/A
	- a combination of components		N/A
	- a combination of BASIC INSULATION and a current or voltage limiting device		N/A
	Components, wires and connections are suitably RATED even for SFC		N/A
6.5.4	Automatic disconnection of the supply	Not provided with such device	N/A

IEC / EN 61010-2-032: 2002			
Clause	Requirement – Test	Result - Remark	Verdict
	a) Supplied with the equipment or installation instructions specify its use as part of the installation		N/A
	b) Rated to disconnect the load within the time specified in figure 1		N/A
	c) Rated for maximum load conditions		N/A
6.6	Connections to external circuits		P
6.6.1	General		P
	Instructions or markings include:		P
	1) The rated conditions at which the terminal has been designed to operate		P
	2) The rating of the insulation required for the external circuit to conform to the requirements for protection, in normal condition and SFC		P
6.6.2	Terminals for external circuits		N/A
	TERMINALS which receive a charge from an internal capacitor (10 s)		N/A
	The following TERMINALS energized from the interior are not ACCESSIBLE:		N/A
	- TERMINALS with HAZARDOUS LIVE voltage exceeding 1 kV RMS or 1,5 kV DC		N/A
	- TERMINALS with floating voltage exceeding 1 kV RMS or 1,5 kV DC		N/A
	Voltage is not present when TERMINALS are disconnected or		N/A
	Such TERMINALS are marked to warn for HAZARDOUS VOLTAGES (symbol 12)		N/A
	Unmated measuring terminals which are hazardous live when the maximum rated voltage is applied to the terminal shall not be accessible		N/A
6.6.3	Circuits with TERMINALS which are HAZARDOUS LIVE		N/A

IEC / EN 61010-2-032: 2002			
Clause	Requirement – Test	Result - Remark	Verdict
	No mains circuits are connected to ACCESSIBLE conductive parts		N/A
	For other HAZARDOUS LIVE circuits with one terminal at earth potential		N/A
	Circuits designed to be operated with one ACCESSIBLE TERMINAL contact floating		N/A
6.6.4	ACCESSIBLE TERMINALS for stranded conductors		N/A
	a) No risk of accidental contact, 8 mm strand (also see 5.1.6 c)		N/A
	Unless self evident accessible terminals are marked to show whether they are connected to accessible parts		N/A
	b) Are anchored and will not work loose		N/A
6.7	CLEARANCES and CREEPAGE DISTANCES		P
	CLEARANCES and CREEPAGE DISTANCES between circuits and parts		P
6.7.1.1	CLEARANCES		Info
6.7.1.2	CREEPAGE DISTANCES		Info
6.7.2	MAINS CIRCUITS	See appended table	N/A
6.7.3	Circuits other than MAINS CIRCUITS	See appended table	N/A
6.7.4	Measuring circuits	See appended table (Material group: II)	P
6.8	Dielectric strength test		P
	Humidity pre-conditioning (6.8.2) conducted		P
	Voltage tests (6.8.4)	See appended table	P
6.9	Constructional requirements for protection against electric shock		—
(6.9)	Replace the title as follows: Constructional requirements for protection against electric shock and prevention of short-circuits (EN 61010-2-032:2002)		P
6.9.1	General		P

IEC / EN 61010-2-032: 2002			
Clause	Requirement – Test	Result - Remark	Verdict
	If a failure could cause a hazard:		P
	a) Security of soldered wiring connections		P
	b) Screws securing removable covers are captive		P
	c) Accidental loosening		P
	The following is not used for safety purposes:		P
	1) Materials which can be easily damaged (enamel etc)		P
	2) Non-impregnated hygroscopic materials		P
(6.9.101)	Additional subclauses: Insulation requirements for the JAW OPENINGS (EN 61010-2-032:2002)		
(6.9.101.1)	General (EN 61010-2-032:2002)		P
(6.9.101.2)	Pre-treatment of the JAW OPENING (EN 61010-2-032:2002)		P
(6.9.101.3)	Protection against touching the HAZARDOUS LIVE conductor (EN 61010-2-032:2002)	Double insulation are provided	P
(6.9.101.4)	HAND-HELD or hand-manipulated parts (EN 61010-2-032:2002)	Double insulation is provided	P
(6.9.101.5)	Insulation of a flexible CURRENT SENSOR (EN 61010-2-032:2002)	Not provided with any flexible current sensor	N/A
(6.9.101.6)	Pull test for endcaps of flexible CURRENT SENSORS	Not provided with any flexible current sensor	N/A
(6.9.101.7)	Protection against short-circuits caused by the JAWS and JAW OPENINGS (EN 61010-2-032:2002)		P
6.9.2	ENCLOSURES of equipment protected by DOUBLE or REINFORCED INSULATION	Double insulation is provided	P
	ENCLOSURE which surrounds all metal parts		P
	Small metal parts are separated from HAZARDOUS LIVE voltages by DOUBLE or REINFORCED INSULATION		P
	ENCLOSURES or parts made of insulating material fulfill requirements for DOUBLE/REINFORCED INSULATION.		P

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Clause	Requirement – Test	Result - Remark	Verdict
	Protection for metal ENCLOSURES or parts is provided by one of the following:		N/A
	- provision of an insulating coating or BARRIER on the inside of the ENCLOSURE or		N/A
	- CLEARANCES and CREEPAGE DISTANCES cannot be reduced by loosening of parts or wires		N/A
6.9.3	Over-range indication		P
	Over-range indicated.	“OL” is displayed for measuring resistance function. Shows the real value for measuring voltage, and current functions.	P
6.10	Connection to mains supply source and between parts of equipment		N/A
6.10.1	Mains supply cords	Supplied by batteries	N/A
	a) Mains supply cords are RATED for maximum equipment current (see 5.1.3c)		N/A
	The cable used complies with IEC 60227 or IEC 60245 (certified)		N/A
	b) If likely to contact hot parts, heat resistant (see also 5.4.5)		N/A
	c) Temperature rating of inlet and detachable cord are at least the highest required for either part		N/A
	d) Green/yellow covered conductors are used only for connection to PROTECTIVE CONDUCTOR TERMINALS		N/A
	Detachables cords with IEC 60320 mains connectors comply with:		N/A
	- IEC 60799 or		N/A
	- the current RATING of the mains connector		N/A
6.10.2	Fitting of non-detachable mains supply cords	Supplied by batteries	N/A
	Non-detachable cord protection:		N/A

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Clause	Requirement – Test	Result - Remark	Verdict
	- inlet or bushing with smoothly rounded opening		N/A
	- insulated cord guard protruding 5 x diameter		N/A
	The cord anchorage:		N/A
	- relieves the conductors from strains and twisting		N/A
	- protects the insulation from abrasion		N/A
	The protective earth conductor is the last to take the strain.		N/A
	a) Screw does not bear directly on the cord		N/A
	b) Knots are not used		N/A
	c) Cannot push the cord into the equipment, to the extent to cause a hazard		N/A
	d) No hazard from failure of the cord insulation in a cord anchorage which has metal parts		N/A
	e) A compression bushing is not used unless:		N/A
	- it clamps all types and sizes etc or		N/A
	- it is designed to terminate a screened mains supply cord		N/A
	f) Cord replacement:		N/A
	- does not cause a hazard		N/A
	- the method of strain relief is clear		N/A
6.10.3	Plugs and connectors	Not provided with any plug or connector	N/A
	a) Plugs, connectors and appliance couplers for mains supply comply with the relevant specifications		N/A
	b) Mains type plugs and sockets are not used incorrectly		N/A
	c) Plug pins of cord-connected equipment, which receive a charge from an internal capacitor , not H.L after 5 s		N/A
	d) Equipment with accessory mains socket-outlets:		N/A

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Clause	Requirement – Test	Result - Remark	Verdict
	- if it accepts a standard mains plug there is a marking according to 5.1.3 e)		N/A
	- if outlets have a protective earth contact, the supply connection includes a protective conductor terminal		N/A
6.11	Disconnection from supply source		N/A
6.11.1	General		N/A
	Equipment is provided with disconnecting device, except as specified in 6.11.1.1		N/A
6.11.1.1	Exceptions		N/A
	Short circuit or overload cannot cause a hazard		N/A
6.11.2	Requirements according to type of equipment		N/A
6.11.2.1	PERMANENTLY CONNECTED EQUIPMENT		N/A
	PERMANENTLY CONNECTED EQUIPMENT and multi-phase equipment		N/A
	Where a switch is not part of the equipment the documentation contains instructions (see 5.4.3)		N/A
6.11.2.2	Single-phase cord-connected equipment		N/A
	A disconnect device is used		N/A
6.11.2.3	Hazards arising from function		N/A
	An emergency switch is provided		N/A
	The emergency switch is correctly located		N/A
6.11.3	Disconnecting devices		N/A
	If the disconnecting device is part of the equipment, it is located as close to the supply as possible (Exception: EMI suppression circuits)		N/A
6.11.3.1	Switches and circuit-breakers		N/A
	When used as disconnection device:		N/A
	Meets relevant requirements of IEC 60947-1 and 60947-3 and are suitable for the application		N/A
	Marked to indicate function		N/A
	Not incorporated in mains cord		N/A
	Does not interrupt protective earth conductor		N/A

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Clause	Requirement – Test	Result - Remark	Verdict
	If has other contacts, meets separation requirements of 6.6 and 6.7		N/A
6.11.3.2	Appliance couplers and plugs		N/A
	Where an appliance coupler or separable plug is used as the disconnecting device (see 6.11.2.2):		N/A
	- it is readily identifiable and easily reached by the OPERATOR		N/A
	- single phase PORTABLE EQUIPMENT cord length (max 3 m)		N/A
	The protective earth conductor makes first, breaks last		N/A

7	Protection against mechanical hazards		
7.1	General		P
	Compliance is checked by 7.2 to 7.6. (No sharp edges or corners)		P
7.2	Moving parts	Not provided with any hazardous moving part	N/A
	Moving parts not able to crush, etc		N/A
	Exceptions have guards, covers or similar		N/A
	If certain maintenance must be done by the OPERATOR with cover removed:		N/A
	- A tool is required for access;		N/A
	- The instructions state that the OPERATOR must be trained;		N/A
	- The cover carry a warning marking prohibiting access by untrained personnel		N/A
7.3	Stability	Hand-Held apparatus	N/A
	Marking of non-automatic means		N/A
	a) 10° tilt test		N/A
	b) Multi-directional force test		N/A
	c) Downward force test		N/A
7.4	Provisions for lifting and carrying		N/A

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Clause	Requirement – Test	Result - Remark	Verdict
	Handles or grips withstand 4 times mass		N/A
	Equipment ≥ 18kg:		N/A
	- has means for lifting or carrying or		N/A
	- directions in documentation		N/A
7.5	Wall mounting		N/A
	Test of mounting brackets		N/A
7.6	Expelled parts		N/A
	Equipment contains or limits the energy		N/A
	Protection not removable without the aid of a TOOL		N/A

8	Mechanical resistance to shock vibration and impact		
	After the tests of 8.1 and 8.2 the equipment comply with:		P
	- Voltage tests		P
	- inspection, equipment meets the following requirements		P
	i) HAZARDOUS LIVE parts not ACCESSIBLE		P
	ii) ENCLOSURES show no cracks (hazard)		P
	iii) CLEARANCES not less than their permitted values		P
	iv) BARRIERS not damaged or loosened		P
	v) No moving parts exposed, except as permitted by 7.2		P
	vi) There is no damage which could cause spread of fire		P
8.1	Enclosure rigidity test		P
8.1.1	Static test	See appended table	P
	30 N applied by a rod		P
(8.1.2)	Dynamic test	See appended table	P
	Replacement: Replace the test by the following, but retain figure 4: (EN 61010-2-032:2002)		—
	Bases, covers, etc. parts (EN 61010-2-032:2002)		P

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Clause	Requirement – Test	Result - Remark	Verdict
8.2	Drop test		P
8.2.1	Equipment other than hand-held equipment and direct plug-in equipment	Hand-Held apparatus	N/A
8.2.1.1	Corner drop test (≤ 20 kg)	See appended table	N/A
8.2.1.2	Face drop test (> 20 kg)	See appended table	N/A
8.2.2	Hand held equipment and direct plug-in equipment	See appended table	P

9	Protection against the spread of fire		
	There shall be no spread of fire outside the equipment in NC or in SFC. (See figure 5)		P
	Conformity is checked by at least one of the following methods.		P
	a) Parts/Circuits with SFC evaluation (clause 4.4)		P
	b) Verifying elimination or reduction of the source of ignition within the equipment. (See 9.1)		N/A
	c) Verifying that if a fire occurs it will be contained within the equipment. (See 9.2)		N/A
9.1	Parts/circuits with elimination/reduction of sources of ignition		N/A
	a) Either 1) or 2)		N/A
	1) Energy limitation (See 9.3)		N/A
	2) Separation requirements		N/A
	b) Requirements related to flammable liquids (See 9.4)		N/A
	c) No ignition occurs when tested in SFC which could cause ignition (See 4.4)		N/A
9.2	Parts/circuits with containment of a fire within equipment		N/A
	a) Energizing of the equipment is controlled by a switch that is held closed by the operator		N/A
	b) The equipment and equipment enclosure conform to 9.2.1 and 9.4 b) or c) are test		N/A

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Clause	Requirement – Test	Result - Remark	Verdict
9.2.1	Constructional requirements		N/A
	a) Insulated wire min FV-1	See license and spec.	N/A
	Other parts min FV-2	See license and spec.	N/A
	b) Enclosure construction		P
	1) No openings in bottom within projection (figure 7) or		P
	Openings baffled or		P
	Perforation comply with table 12		P
	2) No openings in sides within projection (figure 7)		P
	3) Enclosure, baffle and/or barrier made of metal or are FV-1 or better and rigid enough	Plastic enclosure (V-0) is provided	P
9.3	Limited-energy circuit	Not provided with such circuit	N/A
	a) The potential appearing in the circuit is not more than 30 Vr.m.s. and 42.4 Vpeak, or 60 Vd.c.		N/A
	b) The current that can appear in the circuit is limited by one of the following means:		N/A
	1) the max. available current cannot exceed the relevant value of table 13		N/A
	2) current is limited by an overcurrent protective device according table 13		N/A
	3) a regulation network limits the max. available current cannot exceed the relevant value of table 13 in NC or as a result of one fault in the regulating network		N/A
	c) It is separated by at least basic insulation		N/A
	If an overcurrent protection is used, it shall be a fuse or a non-adjustable non-self-resetting electromechanical device		N/A
9.4	Requirements for equipment containing or using flammable liquids	Not provided with such flammable liquid	N/A
	a) Temperature max 25°C below fire point in NC and SFC		N/A
	b) Quantity of liquid not enough to spread fire		N/A

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Clause	Requirement – Test	Result - Remark	Verdict
	c) Flames are contained		N/A
9.5	Overcurrent protection	Not provided with such device	N/A
	Mains operated equipment protected by:		N/A
	- fuses		N/A
	- circuit-breakers		N/A
	- thermal cut-outs		N/A
	- impedance limiting circuits		N/A
	- other means (See also 6.5.)		N/A
	Overcurrent protection devices not in the protective conductor		N/A
	Fuses or single pole circuit-breakers not fitted in neutral of multi phase equipment		N/A
9.5.1	PERMANENTLY CONNECTED EQUIPMENT	Not this type	N/A
	Overcurrent protection device:		N/A
	- fitted within the equipment or		N/A
	- specified in manufacturer's instructions		N/A
9.5.2	Other equipment		N/A
	If overcurrent protection is provided it is within the equipment		N/A

10	Equipment temperature limits and resistance to heat		
10.1	Surface temperatures (table 15)		P
	Operated at the maximum rated ambient temperature (°C)	50 °C	P
10.2	Winding temperatures (table 16)		Info
10.3	Other temperatures		Info
10.4	Conduct of temperature tests		Info
10.5	Resistance to heat		P
10.5.1	Integrity of clearances and creepage distances		P
	Operated at an ambient temperature	See appended table	P
10.5.2	Non-metallic ENCLOSURES		P
	a) Non-operative treatment	See appended table	P
	b) Operative treatment	See appended table	N/A

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Clause	Requirement – Test	Result - Remark	Verdict
10.5.3	Resistance to heat of insulating material (Ball pressure or Vicat test)		N/A
	- Supporting parts for mains supply		N/A
	- Supporting parts for TERMINALS carrying > 0,5 A		N/A

11	Protection against hazards from fluids		
11.1	General		Info
11.2	Cleaning (according to instructions)		P
	Cleaning or decontamination by specified method	See appended table (Refer to instruction manual)	P
11.3	Spillage		N/A
	Liquid is likely to be spilt into the equipment in normal use	See appended table	N/A
11.4	Overflow		N/A
	Equipment likely to be moved while a container is full of liquid	See appended table	N/A
11.5	Battery electrolyte		N/A
	Cannot be impaired by leakage		N/A
11.6	Where the equipment is RATED and marked by the manufacturer (IEC 60529).		N/A
	Other than IP -0.....:	See sub-clause 5.4.2 (e)	N/A
	Subject appropriate treatment of IEC 529		N/A
11.7	Fluid pressure and leakage		N/A
11.7.1	Maximum pressure		N/A
	The maximum pressure does not exceed maximum RATED working pressure for parts	See appended table	N/A
	Maximum pressure used:		N/A
	Rated maximum from external supply		N/A
	Setting of incorporated overpressure device		N/A
	Maximum developed by incorporated air compressor		N/A
11.7.2	Leakage and rupture at high pressure		N/A

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Clause	Requirement – Test	Result - Remark	Verdict
	Pressure times Volume (200 kPa·l) and pressure (50 kPa)		N/A
	Pressure test with pressure according to figure 9		N/A
11.7.3	Leakage from low-pressure parts		N/A
	Equipment pass low pressure test (2 times max)		N/A
11.7.4	Overpressure safety device		N/A
	Conforms to ISO 4126-1		N/A
	a) Connected as close as possible		N/A
	b) Easily accessible for inspection, maintenance and repair		N/A
	c) Not capable of being adjusted without a TOOL		N/A
	d) Discharge opening suitably directed (person)		N/A
	e) Discharge opening suitably directed (hazard)		N/A
	f) Adequate discharge capacity		N/A
	g) No shut-off valve between device and protected system		N/A

12	Protection against radiation, including laser sources, and against sonic and ultrasonic pressure		
12.1	General		N/A
12.2	Equipment producing ionizing radiation		N/A
12.2.1	Ionizing radiation (1 µSv/h and 5 µSv/h)		N/A
	Ionizing radiation test	See appended table	N/A
12.2.2	Accelerated electrons (> 5 kV)		N/A
	Compartments cannot be opened without the use of a tool		N/A
12.3	Ultra-violet radiation (IRPA guidelines)		N/A
	Prevent unintentional escape of UV radiation that would be harmful to the operator		N/A
12.4	Micro-wave radiation (10 W/m ² at 5 cm)		N/A
	The power density of microwave radiation shall not exceed 10 W/m ²	See appended table	N/A
12.5	Sonic and ultrasonic pressure		N/A

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Clause	Requirement – Test	Result - Remark	Verdict
12.5.1	Sound pressure level		N/A
	Maximum sound power level in accordance with ISO 3746 or ISO 9614-1	See appended table	N/A
	Specify in the installation instructions by the manufacturer		N/A
12.5.2	Ultrasonic pressure		N/A
	The ultrasonic pressure shall not exceed specified limits of 110 dB	See appended table	N/A
12.6	Laser sources (see IEC 60825-1)		N/A
	In accordance with IEC 60825-1		N/A

13	Protection against liberated gases, explosion and implosion		
13.1	Poisonous and injurious gases		P
	Equipment shall not liberate dangerous amounts of poisonous or injurious gases (Attach any data/test reports used to demonstrate conformance)		P
13.2	Explosion and implosion		P
13.2.1	Components		N/A
	- Protection for components liable to explode (see also 7.6)		N/A
	- Pressure release devices correctly located		N/A
	- Pressure release device not obstructed		N/A
13.2.2	Batteries and battery charging		P
	Batteries shall not cause hazard as a result of excessive charge or discharge, or if a battery is installed with incorrect polarity.	Not provided with any battery charger in this apparatus	P
	If an explosion or fire hazard could occur through fitting a battery of the wrong type, there shall be a warning marking (symbol 14)	Limited by construction	N/A
	Warning marking shall warn against the charging of non-rechargeable batteries (symbol 14)		N/A

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Clause	Requirement – Test	Result - Remark	Verdict
	No possibility of explosion or fire caused by build-up of flammable gases		N/A
13.2.3	Implosion of cathode ray tubes		N/A
	CRTs (max 160 mm) are:		N/A
	- intrinsically protected or		N/A
	- ENCLOSURE provides protection		N/A
	Non-intrinsically protected tube have separate screen.		N/A
	If glass screen, not in contact with tube.		N/A
13.2.4	See 11.7		N/A

14	Components		
14.1	General		P
	Safety components comply with applicable safety requirements in relevant IEC standards		P
	Components are:		P
	- operated within their marked ratings or		P
	- tested under the conditions in the equipment		P
14.2	Motors		N/A
14.2.1	Motor temperatures	See appended table	N/A
	See SFC evaluation		N/A
14.2.2	Series excitation motors:		N/A
	Series excitation motors are directly connected to driven parts, if overspeeding could cause hazard		N/A
14.3	Overtemperature protection devices		N/A
	a) Constructed for reliable function		N/A
	b) RATED to interrupt voltage and current		N/A
	c) Operates in a SINGLE FAULT CONDITION only		N/A
	Self resetting devices are only used if the protected part cannot continue to function		N/A
	Self-resetting Overtemperature protection	See appended table	N/A
	Non-self-resetting Overtemperature protection	See appended table	N/A

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Clause	Requirement – Test	Result - Remark	Verdict

	Non-resetting Overtemperature protection	See appended table	N/A
14.4	Fuse holders		N/A
	Fuse holders does not permit access to hazardous voltages during fuse change		N/A
14.5	Mains voltage selecting devices		N/A
	Mains voltage selecting devices cannot be accidentally changed		N/A
	Marking of voltage selecting devices (See 5.1.3 d)		N/A
14.6	High integrity components		N/A
	Positions of use		N/A
	Evaluated to IEC Publications	See license & Spec.	N/A
14.7	Mains transformers tested outside equipment		N/A
	Mains transformers tested outside the equipment shall be tested in the same condition as exist inside equipment if these could affect the test results		N/A
14.8	Printed wire boards min FV-1 unless limited energy circuit		P
	The flammability classification of FV-1 of IEC 60707 or better		P
	Conformity is checked by performing the FV tests specified in IEC 60707	Approved components are used	P
14.9	Overvoltage limiting devices		N/A
	Impulse withstand voltages test		N/A
(14.101)	Additional subclause: Signal and measuring leads (EN 61010-2-032:2002)		P
	Requirements of leads	See remarks 4	P

15	Protection by interlocks		
15.1	General	Not provided with such device	N/A
	Interlocks are designed to remove a hazard		N/A
15.2	Prevention of reactivation		N/A

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Clause	Requirement – Test	Result - Remark	Verdict

	Interlocks can not be reactivated with test finger		N/A
15.3	Reliability		N/A
	Single faults not likely to occur or		N/A
	Single faults does not cause hazard		N/A

16	Measuring circuits (without internal protection)		
16.1	Current measuring circuits		P
	Instruments intended for connection to current transformers are protected		P
	Range switching does not cause hazard		P
(16.101)	Additional subclause: Current SENSORS with internal current transformers (EN 61010-2-032:2002)		N/A
	If a high voltage could be generated by interruption of the output signal of a CURRENT SENSOR, the construction shall provided adequate protection against any HAZARD arising (EN 61010-2-032:2002)		N/A
16.2	Multi-function equipment tests		P

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Clause	Requirement – Test	Result - Remark	Verdict

4.4	TABLE: Testing in SINGLE FAULT CONDITION					P
Results: 1 - clause; 2 - fault No.; 3 - fault description; 4 - test duration; 5 - test termination; 6 - compliance with 4.4.4; 7 – comments						
1	2	3	4	5	6	7
4.4.2.7	1	Output Short	2 H	Steady state	P	—
S: short circuits, O: Open circuits, H: Hours						

5.1.3 c)	Mains supply measurement				N
Test No.	Rated Value		Measured Value		Result
	Voltage (V)	Current (A) or Power (W /VA)	Voltage (V)	Current (A) or Power (W/VA)	
—	—	—	—	—	N
Limit: Measured Value < 110 % of Rated Value					

5.3	Durability of markings		P
Test agent	: Isopropyl alcohol		
Requirement:			Result
Legible			P
Worked loose			P
Curled at edges			P

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Clause	Requirement – Test	Result - Remark	Verdict

6.3.1(2)	Voltage measured		P
Parts between:	Measured voltage (V) in normal condition	Measured voltage (V) In single fault condition	
Battery cover to Handle part	0.15 Vac	0.15 Vac	
LCD cover to Handle part	0.18 Vac	0.18 Vac	
Test lead to Handle parts	0.23 Vac	0.23 Vac	
6.3.1(2)	Current measured		N
Parts between:	Current (mA) in normal condition	Current (mA) In single fault condition	
—	—	—	
6.3.1(2)	Capacitance measured		N
Parts between:	Capacitance (μC)	Capacitance (mJ)	
—	—	—	

6.5.1.3	Bonding impedance (Plug-connected equipment)		N
Test between:	Resistance ($\text{m}\Omega$)	Limit ($\text{m}\Omega$) Max.	
Accessible part and protective conductor terminal	—	100	

6.5.1.4	Bonding impedance (Permanently connected equipment)		N
Test between:	Measured voltage	Limit (V) Max.	
Accessible part and protective conductor terminal	—	10	

6.5.1.5	Bonding impedance (Indirect bonding for measuring and test equipment)		N
For voltage limiting devices	Measured	Limit (s) Max.	
Period of the voltage between accessible part and protective conductor terminal exceed the relevant values of 6.3.2 a)	—	0.2	

6.5.1.5	Bonding impedance (Indirect bonding for measuring and test equipment)		N
For voltage-sensitive tripping devices	Measured	Limit (s) Max.	
Tripping action at:	—	0.2	

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Clause	Requirement – Test	Result - Remark	Verdict

6.7	TABLE 1: Clearance distance for basic insulation			P
Measured between:		Measured value (mm)	Limited value (mm)	Result
Magnetic circuit to Jaw enclosure		3.0	3.8	
6.7	TABLE 2: Clearance distance for double insulation			P
Measured between:		Measured value (mm)	Limited value (mm)	Result
Barrier to Conductor		5.9	>10	P
6.7	TABLE 3: Creepage distance for basic insulation			P
Measured between:		Measured value (mm)	Limited value (mm)	Result
Magnetic circuit to Jaw enclosure		3.0	3.8	
6.7	TABLE 4: Creepage distance for double insulation			P
Measured between:		Measured value (mm)	Limited value (mm)	Result
Barrier to Conductor		5.9	>10	P

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Clause	Requirement – Test	Result - Remark	Verdict

6.8.4	TABLE 1: Electric strength measurements		P
Test voltage applied between		Test voltage (V)	Result
Measuring terminal to Accessible parts		5008 Vdc	P

6.10.2	Cord anchorage test			P	
	Pull (N)	Torque (N.m)	Displaced (mm)	Limit (mm)	Result
	30	0.1	0.1	2	P
Reduce of creepage distances and clearance					P
Complied with voltage test					P

6.10.3	Stored charge on capacitors test			N
Test conditions:	Voltage at the beginning	Voltage after 5s constant	Remarks:	
Power switch ON	—	—	—	
Power switch OFF	—	—	—	

7.3	Stability test			N
Description		Test degree (°)	Result	
Other than HAND-HELD equipment		10	N	
7.3	Stability test			N
Description		Test Force (N)	Result	
floor-standing equipment		250	N	
≥ 1 m height, ≥ 25 kg		250	N	
7.3	Stability test			N
Description		Test Force (N)	Result	
Floor-standing equipment		800	N	

7.4	Lifting and carrying test:			N
Position:		Test Force (kg)	Result	
Handle / grip		—	N	

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Clause	Requirement – Test	Result - Remark	Verdict

7.5	Wall mounting test		N
Position		Test Force (kg)	Damaged
Mounting brackets		—	N

8.1.1	Static test:		P
Position:		Test Force (N)	Result
Top enclosure		30	P
Front enclosure		30	P
Side enclosure		30	P
Back enclosure		30	P
Bottom enclosure of PORTABLE equipment		30	P

8.1.2	Dynamic test:		P
Description			Result
After the test, HAZARDOUS LIVE parts behind visible damaged windows or displays shall not be ACCESSIBLE			P
And other parts of the ENCLOSURE shall meet the requirements for BASIC INSULATION			P

8.2.1.1	Corner drop:		N
Description			Result
110 ± 10 mm			N
The angle of 30°			N

8.2.1.2	Face drop:		N
Description			Result
25 ± 2.5 mm			N
The angle of 30°			N

8.2.2	Drop test:		P
Description			Result
In the position expected to present the most severe condition			P

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Clause	Requirement – Test	Result - Remark	Verdict

9.3 a)	Maximum potential in circuit voltage			N
Test parts	Measurement voltage (V)			Result
—	—			N
9.3 b)	Current limitation			N
Test parts	Maximum available current (A)	Overload protection after 120 s (A)		Result
—	—	—		N
9.3 c)	Circuit separation at least basic insulation			N
Test parts	Measured spacing (mm)	Limited spacing (mm)		Result
—	—	—		N

10.4	TABLE: Temperature rise measurements				P
Model No.:	CT237B	—	—	—	
Test voltage (V)	300V	—	—	—	
T1 (°C)	22.0	—	—	—	
T2 (°C)	21.8	—	—	—	
Temperature of part / at (Indoor unit)	Measured (°C)			Limited (°C)	
PCB	26	—	—	—	
Handle part	25	—	—	80	
Knob	26	—	—	80	
Battery cover	26	—	—	80	
—	—	—	—	—	
Winding temperature rise measurements:					
Temperature rise dT of winding:	R1 (Ω)	R2 (Ω)	DT (K)	Required dT (K)	Insulation class
—	—	—	—	—	—

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Clause	Requirement – Test	Result - Remark	Verdict

10.5.1	TABLE: Temperature rise measurements		P
Model No.:	CT237B	—	—
Test voltage (V)	300V	—	—
T1 (°C)	40.2	—	—
T2 (°C)	40.0	—	—
Temperature of part / at (Indoor unit)	Measured (°C)		Limited (°C)
Enclosure (Metal)	—	—	70
Enclosure (Non-metallic)	49.3	—	80
10.5.1	Table: Integrity of clearances and creepage distances:		P
Test part:			Result
Creepage distance			P
Clearance			P

10.5.2 a)	TABLE: Electric strength measurements (Non-operative treatment)		P
Test temperature (°C)	70		
Test voltage applied between	Test voltage (V)		Result
Measuring terminal to Accessible parts			P
Jaw operation to Accessible parts			P
Measuring terminal to Jaw opening			P
Magnetic circuits to Accessible parts			P
10.5.2 b)	TABLE: Electric strength measurements (Operative treatment)		N
Test temperature (°C)	—		
Test voltage applied between:	Test voltage (V)		Result
—	—		N
Test voltage applied between:	Peak voltage for impulse testing		Result
—	1.2/50 μS		
—	—		N

10.5.3	TABLE: Ball Pressure Test		P
Insulating parts	Test temperature (°C)	Impressed diameter (mm)	Result
PCB	125	0.7	P
Limit: ≤ 2 mm			

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Clause	Requirement – Test	Result - Remark	Verdict

11.2	TABLE: Electric strength measurements		P
Test voltage applied between:		Test voltage (V)	Result
Measuring terminal to Accessible parts		5008 Vdc	P
11.2	Voltage measured		P
Parts between:	Measured voltage in normal condition	The voltage level of normal condition	
Accessible parts	4.2 Vac	30 Vr.m.s., 42.4 Vpeak or 60 Vd.c.	

11.3	TABLE: Electric strength measurements		N
Test voltage applied between:		Test voltage (V)	Result
—		—	N
11.3	Voltage measured		N
Parts between:	Measured voltage in normal condition	The voltage level of normal condition	
Accessible parts	—	30 Vr.m.s., 42.4 Vpeak or 60 Vd.c.	

11.4	TABLE: Electric strength measurements		N
Test voltage applied between:		Test voltage (V)	Result
—		—	N
11.4	Voltage measured		N
Parts between:	Measured voltage in normal condition	The voltage level of normal condition	
Accessible parts	—	30 Vr.m.s., 42.4 Vpeak or 60 Vd.c.	

11.7.1	Fluid pressure measurements		N
Test part:	Measured pressure	Rated pressure	
—	—	—	

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Clause	Requirement – Test	Result - Remark	Verdict

11.7.2	Leakage and rupture at high pressure test		N
Description			Result
No leakage of hazardous fluid			N

12.2.1	Radiation measurement		N
Measurement ($\mu\text{Sv} / \text{h}$)			Result
—			N
Limit: $< 1 \mu\text{Sv} / \text{h}$ at 100 mm for intended to emit equipment. $< 5 \mu\text{Sv} / \text{h}$ at 50 mm for non-intended to emit equipment.			

12.4	Radiation measurement		N
Measurement (W / m^2)			Limit (Max.)
—			$10 \text{ W} / \text{m}^2$ at 50 mm

12.5.1	Sound level measurement		N
Measurement (dBA)			Limit (Max.)
—			85 dBA

12.5.2	Ultrasonic pressure measurement		N
Measurement (dB)			Limit
—			110 dB

13.2.2	Batteries and battery charging test		N
Battery type			
Battery rating			
Reverse polarity installment test			
Single component failures description		Test termination	Result
			N

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Clause	Requirement – Test	Result - Remark	Verdict

14.9	TABLE: Impulse Test		N
Test voltage applied between	Test voltage (V)	Sign of overload, degradation	Result
		N	N

16.1	Electric strength measurements		N
Test voltage applied between:	Test voltage (V)		Result
—	—		N

16.1	Range changing switch test		N
Requirement:			Result
Mechanical breakdown			N
Burning insulation			N
Flaming particles			N
No interruption would cause a hazard			N

16.2	Multifunctional meters and similar equipment		N
Maximum RATED voltage applied (V)			
Test voltage applied between	Test voltage (V)		Result
			N
Requirement:			Result
Mechanical breakdown			N
Burning insulation			N
Flaming particles			N

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Clause	Requirement – Test	Result - Remark	Verdict

14	TABLE: Components List					P
Object / part No.	Manufacturer / trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Enclosure	Sabic Innovative Plastics B V	357X	V-0, 120°C, min. 1.5 mm thick	Applicable parts of EN 61010-2-032	Test with the instrument	
PCB	Yan Tat Technology Ltd	Y-01	V-0, 130°C, 0.63 mm thickness	Applicable parts of EN 61010-2-032	Test with the instrument	

1) an asterisk indicates a mark which assures the agreed level of surveillance

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Clause	Requirement – Test	Result - Remark	Verdict

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Clause	Requirement – Test	Result - Remark	Verdict

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