

## 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** : Test Lead

**Ratings and principal characteristics** : CAT III 1000 V, CAT IV 600 V, 10A

**Model(s)** : TLDM

**Brand name** : AMPROBE

**Relevant Standard(s)/Specification(s)** : EN 61010-31:2002 (First Edition) + Amd 1:2008

**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)** : TP08090185-ETS (TP08090185-ETS)

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

**NOTE:** This annex is part of the Test Verification of Conformity and should be read in conjunction with it.

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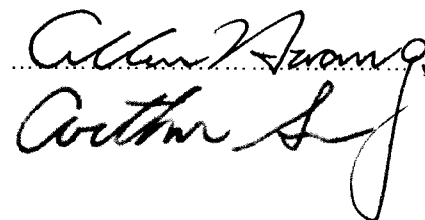


November 27, 2008

**TEST REPORT  
IEC/EN 61010-031  
Safety requirements for electrical equipment for measurement, control,  
and laboratory use  
Part -031: Safety requirements for hand-held probe assemblies for electrical  
measurement and test**

Report Reference No ..... : TP08090185-ETS

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



Approved by (+ signature) ..... : Arthur Sun

Date of issue ..... : November 27, 2008

Total number of pages ..... : Report, 18 Page + Photo, 2 Pages

**CB Testing Laboratory** ..... : Intertek Testing Services Taiwan Ltd

Address ..... : 6F, No. 423, Ruiguang Rd., Neihu District, Taipei 114, Taiwan

**Applicant's name** ..... : Fluke Corp.

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

**Test specification:**

Standard..... : IEC/EN 61010-31:2002 (First Edition) + Amd 1:2008

Test procedure..... : LVD

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

**Test Report Form No.** ..... : IEC 61010\_031C

Test Report Form(s) Originator..... : KTL (Korea Testing Laboratory)

Master TRF ..... : 2008-08

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

Test item description..... : Test Lead

Trade Mark..... : AMPROBE

Manufacturer..... : Chung Instrument Electronics Industrial Co., Ltd.

Model/Type reference..... : TLDM

Ratings ..... : CAT III 1000 V, CAT IV 600 V, 10A

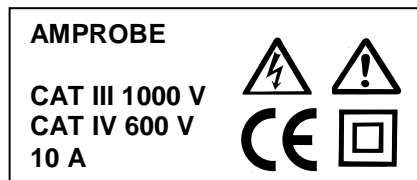
**Summary of testing:**

**Tests performed (name of test and test clause):**

- 5.3 Durability of Markings Test
- 6.3.1 Voltage, Current, and Capacitance Test
- 6.6 Voltage Test
- 6.7.4.1 Pull Test
- 6.7.4.2 Flexing/Pull Test
- 6.7.4.3 Rotational Flexing Test
- 6.7.5 Insulation of a Probe Cable
- 8.1 Rigidity Test
- 8.2 Drop Test
- 8.3 Impact Swing Test
- 9.2 Temperature Test
- 10.1 Maximum Ambient Temperature Test
- 10.2 a) Non-Metallic Enclosure Test (Non-operative treatment)
- 10.2 b) Non-Metallic Enclosure Test (Operative treatment)
- 11.2 Cleaning Test

**Summary of compliance with National Differences: N/A**

**Copy of marking plate**



**Test item particulars .....**

Type of item tested .....	Type A probe assemblies
Description of equipment function.....	The submitted item is the test lead for measurement.
Classification.....	Type A
Protection class .....	Class II
Measurement category .....	CAT III 1000 V, CAT IV 600 V
POLLUTION DEGREE.....	Pollution degree 2
Environmental rating .....	standard
Operating conditions .....	continuous
Mass of the equipment (kg) .....	< 1 Kg
Marked degree of protection to IEC 60529 .....	IPX0

<p><b>Possible test case verdicts:</b></p> <ul style="list-style-type: none"><li>- test case does not apply to the test object..... : N/A</li><li>- test object does meet the requirement ..... : P (Pass)</li><li>- test object does not meet the requirement ..... : F (Fail)</li></ul>
<p><b>Testing</b>..... :</p> <p>Date of receipt of test item..... : October 1, 2008</p> <p>Date (s) of performance of tests..... : October 1, 2008 ~ November 14, 2008</p>
<p><b>General remarks:</b></p> <p>The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. "(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report.</p> <p><b>Note: This TRF includes EN Group Differences together with National Differences and Special National Conditions, if any. All Differences are located in the Appendix to the main body of this TRF.</b></p> <p>Throughout this report a comma (point) is used as the decimal separator.</p> <p>This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.</p> <p>The test report only allows to be revised within three years from its original issued date unless further standard or the requirement was noticed.</p> <p>When determining the test conclusion, the Measurement Uncertainty of test has been considered.</p>
<p><b>General product information:</b></p> <p>The product covered by this report is test lead assembly for measurement; consist of crocodile clip, test lead, and test probe.</p>

IEC 61010-031			
Clause	Requirement + Test	Result - Remark	Verdict
5	MARKING AND DOCUMENTATION		P
5.1	Markings		Info
5.1.1	Markings applicable for whole probe assembly not located on operator removable parts	Mark on the surface of hand-held part	P
	Letter symbols (IEC 60027) used		P
	Graphic symbols (Table 1) used; or		P
	if other symbol used; explained in accompanying documentation		P
	In case of less space for required markings:	All markings are provided on the product	P
	- symbol 10 of table 1 used		P
	- all necessary information included in documentation		P
5.1.2	Identification		Info
5.1.2 a)	Name or registered trademark	AMPROBE	P
5.1.2 b)	For type B and C, also model no. or similar	Type A probe	N/A
	If designed for use with specific model this is made clear and	Not use with specific model	N/A
	model identified by marking or in documentation		N/A
5.1.3	Fuses	Not provided with any fuse	N/A
	All details necessary for fuse replacement		N/A
	Includes rated voltage and current breaking capacity		N/A
	If selected according to particular application; marked with symbol 10 and information in documentation		N/A
5.1.4	Necessary identification for TERMINALS, connectors etc		N/A
5.1.6	Rating		Info
	Maximum RATED voltage to earth		P
	(CAT I) Symbol 10 used	Not only for CAT I	N/A
	(CAT II-IV) Category marked	CAT III	P
	Nature of voltage (ac, dc etc.)	1000 Vac	P
	Reference connector intended for connection to voltages exceeding the values of 6.3.1.1		N/A

IEC 61010-031			
Clause	Requirement + Test	Result - Remark	Verdict
	For type A and type D only, the maximum RATED current unless specified for high impedance inputs	10 A	N/A
5.2	Warning markings		P
	Visible when ready for normal use		P
	If necessary marked with symbol 10		P
	Near or on particular parts of the PROBE ASSEMBLY		P
	Advise to disconnect or isolate during access to HAZARDOUS LIVE parts or		N/A
	marked with symbol 10 and information in the instruction manual		P
	Easily touched heated parts, if not self-evident, marked with symbol 9	Not over the temperature limit	N/A
5.3	Durability of markings		P
	The required markings are clear and legible (NORMAL USE)	See attached table 5.3	P
	Resist cleaning (clear, legible and not worked loose)		P
5.4	Documentation		P
5.4.1	General		P
5.4.1 a)	Technical specification		P
5.4.1 b)	Instructions for use		P
5.4.1 c)	Name and address of manufacturer or supplier		P
5.4.1 d)	The information specified in 5.4.2 to 5.4.4		P
	A clear explanation of warning symbols is in the documentation or		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		P
	Maximum voltage RATING	CAT III 1000 V, CAT IV 600 V	P
	Maximum current RATING	10 A	P
	Statement of the range of environmental conditions		P

IEC 61010-031			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.3	Operation		P
5.4.3 a)	Identification of operating controls		P
5.4.3 b)	Interconnection requirements		P
	Specification of accessories, materials etc		P
5.4.3 c)	Specification of intermittent operation limits		N/A
5.4.3 d)	Explanation of required and used symbols	Provided with in instruction manual	P
5.4.3 e)	Replacement of consumables		N/A
5.4.3 f)	Definition of measurement category (if marked with CAT)	Provided with in instruction manual	P
5.4.3 g)	If marked CAT I, a warning not to use in other CAT	Not this type	N/A
5.4.3 h)	Cleaning if necessary		P
5.4.3 i)	Warning for the lower CAT of a combination of a PROBE ASSEMBLY and an accessory		N/A
	A statement against use in a manner not specified by the manufacturer	Provided with in instruction manual	P
5.4.4	Maintenance		N/A
	Sufficient preventive maintenance and inspection for RESPONSIBLE BODY		N/A
	Parts to be supplied or examined by the manufacturer only		N/A
	RATING and characteristics of fuses (see 5.1.3)	No such device	N/A
6	PROTECTION AGAINST ELECTRIC SHOCK		P
6.1	General		P
6.1.1	Exceptions		Info
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/A
6.1.1 b)	PROBE TIPS, provided that they meet the requirements of 6.4.4		P
6.2	Determination of ACCESSIBLE parts		Info
	According to figure 3		P
6.3	Permissible limits for ACCESSIBLE parts		Info
	Measurements performed according to figure 4		P
6.3.1	Values in NORMAL CONDITION	See attached table 6.3	P

IEC 61010-031			
Clause	Requirement + Test	Result - Remark	Verdict
6.3.2	Values in SINGLE FAULT CONDITION		N/A
6.4	Insulation requirements for protection against electric shock		P
6.4.1	Connectors		P
6.4.1 a)	Connectors in fully mated position:		P
	i) Connecting probe to measuring equipment insulated by at least basic insulation		N/A
	ii) Intended to be HAND-HELD insulated by DOUBLE or REINFORCED INSULATION		P
6.4.1 b)	Connectors in partially mated position:		P
	insulated by at least BASIC INSULATION		P
	Voltage test with test finger (B.1)		P
6.4.1 c)	Connectors in unmated position:		P
	Except for locking or screw-held type connectors or limited current by PROTECTIVE IMPEDANCE:	Not this type	P
	i) HAZARDOUS LIVE parts not ACCESSIBLE		P
	Up to 1 kV a.c. or 1.5 kV d.c., not ACCESSIBLE		P
	Above 1 kV a.c. or 1.5 kV d.c., voltage test with test finger		N/A
	ii) Stackable connectors	Not this type probe	N/A
	HAZARDOUS LIVE parts separated by BASIC INSULATION from ACCESSIBLE parts		N/A
	CLEARANCE and CREEPAGE meet the requirements for BASIC INSULATION		N/A
	Voltage test in acc. to 6.6		N/A
6.4.2	HAND-HELD parts other than connectors		Info
	HAZARDOUS LIVE parts separated by DOUBLE or REINFORCED INSULATION from ACCESSIBLE parts		N/A
	CLEARANCE and CREEPAGE meet the requirements for DOUBLE or REINFORCED INSULATION		N/A
	Voltage test in acc. 6.6 (specify parts)		N/A
	REFERENCE CONNECTOR		N/A
6.4.3	Cables		P
	RATED for maximum voltage and current	1000 V, 10 A	P
	DOUBLE or REINFORCED INSULATION based on voltages (min 125 V/500 V) according to type of PROBE ASSEMBLIES.....:		N/A



IEC 61010-031			
Clause	Requirement + Test	Result - Remark	Verdict
	or for maximum RATED voltage .....	Type A, 1000 V	P
	Voltage test in acc. 6.6 (specify parts)		P
6.4.4	PROBE TIPS		Info
	BARRIER providing safe distance:	Limited: 14.3 mm	P
	- CLEARANCE and CREEPAGE meet the requirements for REINFORCED INSULATION		P
	Spring-loaded squeeze PROBE ASSEMBLIES: (rated for WORKING VOLTAGE ≤1 kV)	Not this type probe	N/A
	a) Actuation prevents touching HAZARDOUS LIVE parts		N/A
	b) Additional protective distance of 45 mm longer than for barrier		N/A
	Crocodile clips and similar without barrier: (rated for CAT I or II)	Not this type probe	N/A
	- have tactile indication		P
6.4.5	DOUBLE INSULATION and REINFORCED INSULATION		Info
	See 6.5, 6.6 and 6.7.2		P
6.4.6	PROTECTIVE IMPEDANCE		Info
	Appropriate HIGH-INTEGRITY single component used for protection (see 12.3)		N/A
	Components, wires and connections are suitably RATED even for SINGLE FAULT CONDITION		N/A
6.5	CLEARANCES AND CREEPAGE DISTANCES		Info
	CLEARANCES and CREEPAGE DISTANCES between circuits and parts	See attached table 6.5	P
6.6	Voltage tests		Info
	Humidity pre-conditioning (6.6.2) conducted		P
	Test voltages (6.6.4)	See attached table 6.6	P
6.7	Constructional requirements		Info
6.7.1	General		Info
6.7.1 a)	Security of soldered wiring connections		P
6.7.1 b)	Screws securing removable covers are captive if their length affects isolation distances	Not this type securing	N/A
6.7.1 c)	Accidental loosening		P
	The following is not used for safety purposes:		P

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Clause	Requirement + Test	Result - Remark	Verdict
	1) Materials which can be easily damaged (enamel etc)		P
	2) Non-impregnated hygroscopic materials		P
6.7.2	ENCLOSURES of PROBE ASSEMBLIES with DOUBLE or REINFORCED INSULATION		Info
	ENCLOSURE which surrounds all metal parts		P
	Small metal parts are separated from HAZARDOUS LIVE voltages by DOUBLE or REINFORCED INSULATION	Not provided with small metal part	N/A
	ENCLOSURES or parts made of insulating material fulfil requirements for DOUBLE or REINFORCED INSULATION.		P
	Protection for metal ENCLOSURES or parts is provided by one of the following:	Plastic Enclosure is provided	N/A
	a) provision of an insulating coating or BARRIER on the inside of the ENCLOSURE		N/A
	b) CLEARANCES and CREEPAGE DISTANCES cannot be reduced by loosening of parts or wires		N/A
6.7.3	Corona and partial discharge		P
	No corona or partial discharge while operating at maximum voltage		P
6.7.4	Cable attachment		P
	Withstand forces likely to be encountered		P
6.7.4.1	Pull test	See attached table 6.7.4.1	P
6.7.4.2	Flexing/pull test	See attached table 6.7.4.2	P
6.7.4.3	Rotational flexing test	See attached table 6.7.4.3	P
6.7.5	Insulation of a probe cable		P
	Probe cable with a wear indicator provide DOUBLE or REINFORCED INSULATION when new, and at least BASIC INSULATION when the wear indicator is reached		P
	PROBE CABLE without a wear indicator provide DOUBLE or REINFORCED INSULATION		N/A
	Voltage test in acc. 6.6 (specify parts):		P
	- REINFORCED INSULATION: one unconditioned sample before cycling treatment	9648 Vdc	P
	- BASIC INSULATION: contrasting colour became visible during the cycling treatment	6030 Vdc	P
	- REINFORCED INSULATION: 250 cycles treatment without contrasting colour becoming visible.		N/A

IEC 61010-031			
Clause	Requirement + Test	Result - Remark	Verdict
7	PROTECTION AGAINST MECHANICAL HAZARDS		P
	Handling during normal use shall not lead to hazard		P
8	MECHANICAL RESISTANCE TO SHOCK AND IMPACT		P
	Withstand shock and impact likely to occur in NORMAL USE		P
8.1	Rigidity test		Info
	20 N applied three times		P
8.2	Drop test		Info
	Three samples dropped		P
8.3	Impact swing test		Info
	Probe subjected to impact against a hardwood board		P
	After the tests of 8.1 to 8.3:		P
	Voltage tests in acc. to 6.6		P
	Inspections:		P
8a)	HAZARDOUS LIVE parts not accessible		P
8b)	ENCLOSURE shows no cracks (hazard)		P
8c)	CLEARANCES not less than their permitted values		P
8d)	BARRIERS not damaged or loosened		P
8e)	No damage which could cause spread of fire		P
9	TEMPERATURE LIMITS AND PROTECTION AGAINST THE SPREAD OF FIRE		P
9.1	General		Info
	Any heating does not cause a HAZARD in NORMAL CONDITION nor in SINGLE FAULT CONDITION		P
	No spread of fire outside the PROBE ASSEMBLY		P
	Easily touched surfaces not exceeding the following limits in NORMAL CONDITION :		P
	- metal less than 55 °C		N/A
	- non-metallic less than 70 °C		P
	- wires and cables less than 75 °C		P
	Temperatures in SINGLE FAULT CONDITION less than 105 °C		P
	Easily touched heated surfaces recognizable or marked with symbol 9 of table 1 (s. 5.2), if necessary for functional reasons		N/A

IEC 61010-031			
Clause	Requirement + Test	Result - Remark	Verdict
	Circuits separated by at least by BASIC INSULATION, if protection depends on separation of circuits		P
9.2	Temperature tests	See attached table 9.2	P
10	RESISTANCE TO HEAT		Info
10.1	Integrity of CLEARANCES and CREEPAGE DISTANCES		P
	Requirements of 6.5 are met at an ambient temperature of 40 °C of maximum RATED ambient temperature (if higher)		P
10.2	Resistance to heat		P
	Probe assemblies with non-metallic ENCLOSURES are resistant to elevated temperatures:		P
11	PROTECTION AGAINST HAZARDS FROM FLUIDS		P
11.1	General		Info
	OPERATOR and surrounding area are protected against HAZARDS from fluids if PROBE ASSEMBLIES containing or intended to be used with fluids		N/A
11.2	Cleaning		P
	Cleaning procedure applied three times to the PROBE ASSEMBLY		P
11.3	Specially protected PROBE ASSEMBLIES		N/A
	Where the equipment is RATED or marked by the manufacturer the requirements of IEC 60529 are fulfilled		N/A
	After the tests of 11.1 to 11.3:		N/A
	Accessible parts do not exceed the limits of 6.3.1		N/A
	Voltage tests in acc. to 6.6		N/A
12	COMPONENTS		Info
12.1	General		Info
	Safety components operated within their specified RATINGS		N/A
	Components approved by a recognized testing authority for conformity		N/A
	Those components comply with one of the following :		N/A
12.1 a)	comply with all applicable safety requirements in relevant IEC standards		N/A

IEC 61010-031			
Clause	Requirement + Test	Result - Remark	Verdict
	and subjected to the tests of this standard if necessary for application		N/A
12.1 b)	comply with all relevant requirements of this standard		N/A
	and subjected to the tests of relevant IEC component standard if necessary for application		N/A
12.1 c)	comply with all relevant requirements of this standard only if there is no relevant IEC standard		N/A
12.2	Fuses		Info
	Voltage RATING		N/A
	Breaking capacity and current rating .....		N/A
12.3	HIGH-INTEGRITY components		Info
	Positions of use		N/A
	Evaluated to IEC Publications		N/A
	A single electronic device which employs electron conduction in a vacuum, gas or semiconductor is not used as HIGH-INTEGRITY component		N/A
12.3.1	Resistors used in PROTECTIVE IMPEDANCE		Info
12.3.1 a)	Withstand twice the dissipation at RATED voltage		N/A
12.3.1 b)	Withstand twice the RATED voltage for 1 s		N/A
12.3.1 c)	Distance across resistor or assembly:		N/A
	fulfil requirements for DOUBLE or REINFORCED INSULATION		N/A
	If heating occurs at maximum working voltage, CLEARANCE complies with temperature corrected value		N/A
13	Prevention of HAZARD from arc flash and short-circuits		Info
13.1	General		P
	PROBE TIPS and crocodile clips are constructed to mitigate the risk of arc flash and short-circuits.		P
13.2	Exposed conductive parts		P
13.2. a)	PROBE ASSEMBLIES RATED for CAT III or IV, the exposed conductive part of a PROBE TIP $\leq$ 4 mm.	3.5 mm	P
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 mm		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
13.2. c)	Other PROBE ASSEMBLIES, the exposed conductive part of a PROBE TIP $\leq$ 19 mm.		N/A
13.2. d)	The outer surfaces of the jaws of crocodile or similar clips RATED for CAT II, III, or IV are not conductive.		P
	HAZARDOUS LIVE parts are not ACCESSIBLE when closed		P

IEC 61010-031			
Clause	Requirement + Test	Result - Remark	Verdict

<b>5.3</b>	<b>TABLE: Durability of markings</b>			<b>P</b>
Test agent .....	: Isopropyl alcohol			
Marking location	Remains Legible	Label Loose	Curled Edges	Result
Identification (5.1.2)	P	P	P	P
Fuses (5.1.3)	N/A	N/A	N/A	N/A
TERMINALS and operating devices (5.1.4)	N/A	N/A	N/A	N/A
Parts protected by Double / Reinforced equipment (5.1.5)	P	P	P	P
RATING (5.1.6)	P	P	P	P
Warning marking (5.2)	P	P	P	P

<b>6.3.1(2)</b>	<b>TABLE: Voltage measured</b>		<b>P</b>
Parts between:	Measured voltage (V) in normal condition	Measured voltage (V) In single fault condition	
Probe tip to Cable	5 Vrms	—	
Crocodile clip to Cable	6.08 Vrms	—	

<b>6.3.1(2)</b>	<b>TABLE: Current measured</b>		<b>N/A</b>
Parts between:	Current (mA) in normal condition	Current (mA) In single fault condition	
—	—	—	

<b>6.3.1(2)</b>	<b>TABLE: Capacitance measured</b>		<b>N/A</b>
Parts between:	Capacitance (μC)	Capacitance (mJ)	
—	—	—	

IEC 61010-031			
Clause	Requirement + Test	Result - Remark	Verdict

<b>6.5</b>	<b>TABLE: Clearance distance for basic insulation</b>		<b>N/A</b>
Measured between:		Measured value (mm)	Limited value (mm)
—		—	—

<b>6.5</b>	<b>TABLE: Clearance distance for double insulation</b>		<b>P</b>
Measured between:		Measured value (mm)	Limited value (mm)
Barrier to live parts (Crocodile clip)		16.0	14.3
Barrier to live parts (Probe tip)		54.0	14.3
Connector to live parts		30.0	14.3
Fully mated		20.0	14.3
Partially mated		16.0	14.3

<b>6.5</b>	<b>TABLE: Creepage distance for basic insulation</b>		<b>N</b>
Measured between:		Measured value (mm)	Limited value (mm)
—		—	—

<b>6.5</b>	<b>TABLE: Creepage distance for double insulation</b>		<b>P</b>
Measured between:		Measured value (mm)	Limited value (mm)
Barrier to live parts (Crocodile clip)		16.0	14.3
Barrier to live parts (Probe tip)		54.0	14.3
Connector to live parts		30.0	14.3
Fully mated		20.0	14.3
Partially mated		16.0	14.3

<b>6.6.4</b>	<b>TABLE: Electric strength measurements</b>		<b>P</b>
Test voltage applied between		Test voltage (V)	Result
Probe tip to Accessible part		9648	P
Probe tip to Cable		9648	P
Crocodile clip to Accessible part		9648	P
Crocodile clip to Cable		9648	P



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Clause	Requirement + Test	Result - Remark	Verdict

<b>6.7.4.1</b>	<b>TABLE: Pull test</b>			<b>P</b>
Cross section of the conductor mm <sup>2</sup>	Pull (N)	Displaced (mm)	Limit (mm)	Result
0.272	36	0.1	2	P
The cable shall not have been damaged				P
Reduce of creepage distances and clearance				P
Complied with voltage test				P

<b>6.7.4.2</b>	<b>TABLE: Flexing/pull test</b>			<b>P</b>
Testing force (N)	Displaced (mm)	Limit (mm)	Result	
5	0.8	2	P	
The cable shall not have been damaged				P
Reduce of creepage distances and clearance				P
Complied with voltage test				P

<b>6.7.4.3</b>	<b>TABLE: Rotation flexing/pull test</b>			<b>P</b>
Cross section of the conductor (mm <sup>2</sup> )	Displaced (mm)	Limit (mm)	Result	
0.272	0.3	2	P	
The cable shall not have been damaged				P
Reduce of creepage distances and clearance				P
Complied with voltage test				P

<b>8.1</b>	<b>TABLE: Rigidity test:</b>		<b>P</b>
Position:	Test Force (N)	Result	
Handle	20	P	
Tip	20	P	
Crocodile clip	20	P	

<b>8.2</b>	<b>TABLE: Drop test:</b>	<b>P</b>
Description	Result	
Drop from a height of 1 m for 3 times in the 3 positions expected to present the most severe condition	P	

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Clause	Requirement + Test	Result - Remark	Verdict

<b>8.3</b>	<b>TABLE: Impact swing test:</b>		<b>P</b>
Description			Result
Swing the probe body from a height of 2m onto the hard wood board			P

<b>9.2</b>	<b>TABLE: Temperature test</b>		<b>P</b>
	T1 (°C) .....	26.7	
	T2 (°C) .....	25.8	
	Test voltage (V) .....	10 A	
Temperature rise dT of part / at (Indoor unit)		Temperature measured (°C)	Temperature limited (°C)
Probe accessible part		38.8	70
Crocodile clip accessible part		41.0	70
Cable		41.3	70

<b>10.2 a)</b>	<b>TABLE: Electric strength measurements</b> (Non-operative treatment)		<b>P</b>
	Test temperature (°C) .....	70	
Test voltage applied between		Test voltage (V)	Result
Handle to probe tip		9648	P
Cable to probe tip		9648	P
<b>10.2 b)</b>	<b>TABLE: Electric strength measurements</b> (Operative treatment)		<b>P</b>
	Test temperature (°C) .....	60	
Test voltage applied between:		Test voltage (V)	Result
Handle to probe tip		9648	P
Cable to probe tip		9648	P

<b>11.2</b>	<b>TABLE: Electric strength measurements</b>		<b>P</b>
Test voltage applied between		Test voltage (V)	Result
Probe tip to Accessible part		9648	P
Crocodile clip to Accessible part		9648	P
Crocodile clip to Cable		9648	P

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Clause	Requirement + Test	Result - Remark	Verdict

12	TABLE: Components List				P
Object / part No.	Manufacturer / trademark	Type / model	Technical data	Standard	Mark(s) of conformity <sup>1)</sup>
Enclosure of Crocodile clip	Nan Ya Plastics (E130155)	6210G(C)	HB, 80 °C	Applicable parts of EN 61010-031	Test with the instrument
Enclosure of Test Probe	Chyi Feng (E148302)	CF-00128	V-0, 50 °C	Applicable parts of EN 61010-031	Test with the instrument
Enclosure of Test Lead	KAU TAI (E171497)	KT Series	V-0, 50 °C	Applicable parts of EN 61010-031	Test with the instrument
Cable of Test Lead	Leo Hui (E199279)	1803	2000 V, 80 °C, 18 AWG	Applicable parts of EN 61010-031	Test with the instrument

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

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