Shenzhen CTL Testing Technology Co., Ltd.
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TEST REPORT
IEC 60332-1-2
Tests on electric and optical fibre cables under fire conditions - Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame

Report reference No. ..... :	**CTL1505061146-S**
Tested by (name + signature) ..... :	Sanji Guan
Supervised by (name + signature) ... :	Jacky Chen
Approved by (name + signature) ..... :	Tracy Qi
Date of issue ..... :	May 13,2015
Testing Laboratory Name ..... :	YLLACONZA&ASOCIADOS DEL PERU S.A.C
Address ..... :	AV:ARGENTINA # 215 LIMA- LIMA - PERÚ
Applicant's Name ..... :	YLLACONZA&ASOCIADOS DEL PERU S.A.C
Address ..... :	AV:ARGENTINA # 215 LIMA- LIMA - PERÚ
Test specification	
Standard ..... :	IEC 60332-1-2:2004
Test procedure ..... :	N/A
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC 60332-1-2-A
TRF originator ..... :	CTL
Master TRF ..... :	Dated 2015-05

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 ..... :	CABLES FPL LSZH, FPLR LSZH, FTP-FPLR LSZH, CABLES GPT, CABLES VULCANIZADOS, CABLES CPT VERDE AMARILLO PUESTA A TIERRA, CABLES APANTALLADOS LSZH, CABLES ALARMA LSZH, CABLE UTP LSZH, CT6 Y CT5E.
Trademark ..... :	CONDUSUR, EMECX
Manufacturer ..... :	YLLACONZA & ASOCIADOS DEL PERU S.A.C Av.ARGENTINA No. 215 (CC NICOLINI PSJE.3 SHOP AS.1) LIMA - LIMA

Model and/or type reference	:	CABLES FPL LSZH, FPLR LSZH, FTP-FPLR LSZH, CABLES GPT, CABLES VULCANIZADOS, CABLES CPT VERDE AMARILLO PUESTA A TIERRA, CABLES APANTALLADOS LSZH, CABLES ALARMA LSZH, CABLE UTP LSZH, CT6 Y CT5E.
Ratings	:	--

Summary of testing:

Testing location:

Shenzhen CTL Testing Technology Co., Ltd.

Floor 1-A, Baisha Technology Park, No.3011, Shahexi Road, Nanshan District, Shenzhen, China 518055

Tests performed (name of test and test clause):

The sample(s) tested complies with the requirements of IEC 60332-1-2.

These tests fulfil the requirements of standard ISO/IEC 17025.

When determining the test conclusion, the Measurement Uncertainty of test has been considered.

Summary of compliance with National Differences:

Compliance with the National requirements of CENELEC common modification.

Copy of marking plate:

YLLACONZA & ASOCIADOS DEL PERU S.A.C

CABLES FPL LSZH, FPLR LSZH, FTP-FPLR LSZH, CABLES GPT, CABLES VULCANIZADOS, CABLES CPT VERDE AMARILLO PUESTA A TIERRA, CABLES APANTALLADOS LSZH, CABLES ALARMA LSZH, CABLE UTP LSZH, CT6 Y CT5E.

CE

Made in China

Remark: the marking plates of other models are in the same pattern.

The above marking are in the minimum requirements required by safety standard. For the final production sample, the marking which do not give rise to misunderstand may be add.

华检检测 CTL approved Shenzhen CTL Testing Technology Co., Ltd.

Test item particulars :	
Equipment mobility :	[ ] movable [ ] hand-held [x] transportable [ ] stationary [ ] for building-in [ ] direct plug-in
Connection to the mains :	[ ] pluggable equipment [ ] type A [ ] type B [ ] permanent connection [ ] detachable power supply cord [ ] non-detachable power supply cord [x] not directly connected to the mains
Operating condition :	[x] continuous [ ] rated operating / resting time:
Access location :	[x] operator accessible [ ] restricted access location
Over voltage category (OVC) :	[ ] OVC I [ ] OVC II [ ] OVC III [ ] OVC IV [x] other: No direct connection with mains
Mains supply tolerance (%) or absolute mains supply values :	N/A (No direct connection with mains)
Tested for IT power systems :	[ ] Yes [x] No
IT testing, phase-phase voltage (V) :	N/A
Class of equipment :	[ ] Class I [ ] Class II [x] Class III [ ] Not classified
Considered current rating of protective device as part of the building installation (A) :	16A
Pollution degree (PD) :	[ ] PD 1 [x] PD 2 [ ] PD 3
IP protection class :	IPX0
Altitude during operation (m) :	Up to 2000m
Altitude of test laboratory (m) :	below 2000m
Mass of equipment (kg) :	--
Possible test case verdicts:	
- test case does not apply to the test object :	N (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 :	May 05, 2015
Date(s) of performance of tests :	May 05, 2015 to May 13, 2015

General remarks:

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.

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.

General product information:

Network Cable, housed with plastic enclosure.
All models are identical in the electrical part except the appearance and model number.
All tests were conducted on the representative model CAT3.

IEC 60332-1-2			
Clause	Requirement	Remark	Result
4	**Test apparatus**		**P**
	The apparatus specified in IEC 60332-1-1 shall be used.		P
5	**Procedure**		**P**
5.1	Sample		P
	The test sample shall be a piece of single insulated conductor or cable (600 ± 25) mm long.	600 mm	P
5.2	Conditioning		P
	Before testing, all test pieces shall be conditioned at (23 ± 5)℃ for not less than 16 h at a relative humidity of (50 ± 20) %.	25℃,65%RH	P
	In the case of a single insulated conductor or cable with a finish of paint or lacquer, this conditioning shall follow an initial period where the test piece shall be kept at a temperature of (60 ± 2) ℃ for 4 h.	60℃for 4 h	P
5.3	Positioning of test piece		P
	The test piece shall straightened and be secured to two horizontal supports by means of a suitable size of copper wire, in a vertical position in the centre of the metal screen, as described in 4.2 of IEC 60332-1-1, so that the distance between the bottom of the upper support and the top of the lower support is (550 ± 5) mm.		P
	In addition, the test piece shall be positioned so that the bottom of the specimen is approximately 50 mm from the base of the screen (see Figure 1).		P
	The vertical axis of the test piece shall be arranged centrally within the screen (i.e. 150 mm from each side and 225 mm from the rear).		P
5.4	Flame application		P
	Precautions shall be taken to safeguard personnel against the following when conducting tests:		P
	a) the risk of fire or explosion;		P
	b) the inhalation of smoke and/or noxious products, particularly when halogenated materials are burned;		P
	c) harmful residues.		P
5.4.1	Positioning of flame		P
	One burner, as described in 4.3 of IEC 60332-1-1, shall be ignited and the recommended flow rates of gas and air adjusted.		P
	The burner shall be positioned so that the tip of the inner blue cone impinges on the surface of the test piece at a distance of (475 ± 5) mm from the lower edge of the upper horizontal support, whilst the burner is at an angle of 45° ± 2° to the vertical axis of the test piece (see Figure 2).		P
	For flat-form cables, the flame impingement shall be on the middle of the flat side of the cable.		P
5.4.2	Test duration		P

IEC 60332-1-2			
Clause	Requirement	Remark	Result
	The flame shall be applied continuously for the period of time corresponding to the diameter shown in Table 1.		P
	At the end of the specified test duration, the burner shall be removed and the flame of the burner extinguished.		P
6	**Evaluation of test results**		**P**
	After all burning has ceased, the test piece shall be wiped clean.		P
	All soot shall be ignored if, when wiped off, the original surface is undamaged.		P
	Softening or any deformation of the non-metallic materials shall also be ignored.		P
	The distance from the lower edge of the top support to the upper onset of charring and the distance from the lower edge of the top support to the lower onset of charring shall be measured to the nearest millimetre.		P
	The onset of char shall be determined as follows.		P
	Press against the cable surface with a sharp object, for example, a knife blade. Where the surface changes from a resilient to a brittle (crumbling) surface indicates the onset of charring.		P
Annex A	**Recommended performance requirements**		**P**
	The performance requirements for a particular type or class of insulated conductor or cable should preferably be given in the individual cable standard.		P
	In the absence of any given requirement it is recommended that those given below should be taken as a minimum acceptable level.		P
	The single insulated conductor or cable shall pass the test if the distance between the lower edge of the top support and the onset of charring is greater than 50 mm.		P
	In addition, a failure shall be recorded if charring extends downwards to a point greater than 540 mm from the lower edge of the top support.		P
	If a failure is recorded, two more tests shall be carried out.		P
	If both tests result in passes, the single insulated conductor or cable shall be deemed to have passed the test.		P

---------- END OF THE REPORT ----------

Annex 1

Photo documentation

Photo 1 overall view

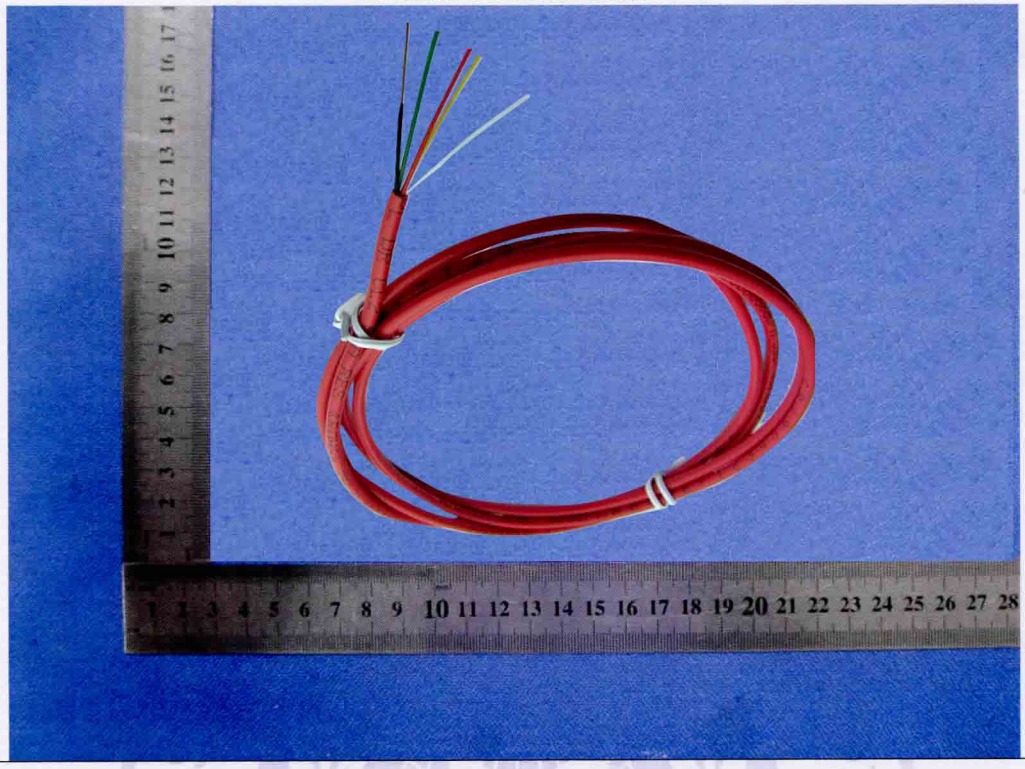
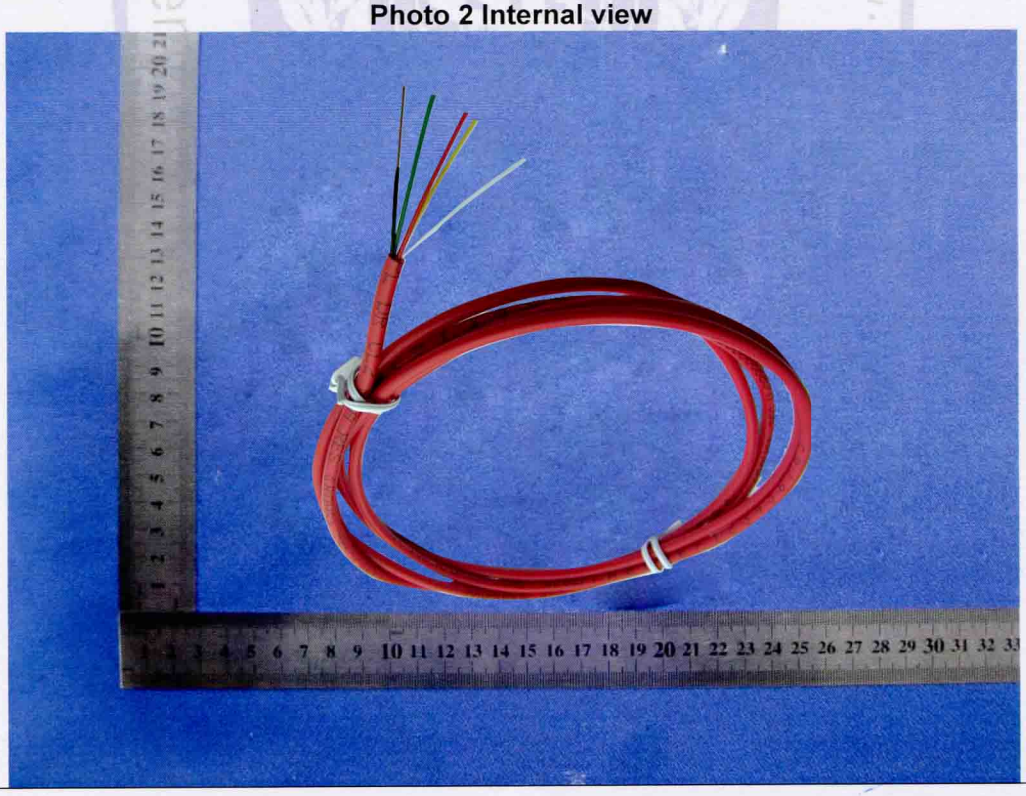


Photo 2 Internal view



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