

TEST REPORT IEC 61984 Connectors – Safety requirements and tests	
Report Number	LCSA020323017S
Date of issue	2023-02-20
Total number of pages	24 pages
Name of Testing Laboratory preparing the Report	Shenzhen LCS Compliance Testing Laboratory Ltd. Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China
Applicant's name	Shenzhen Yilian Connection Technology Co., Ltd.
Address	No. 12, Dongda Road, Dongkeng Community, Fenghuang Street, Guangming District, Shenzhen City, Guangdong Province, China
Test specification:	
Standard	IEC 61984:2008
Test procedure	Type test
Non-standard test method	N/A
Test Report Form No.	IEC61984C
Test Report Form(s) Originator	VDE Prüf- und Zertifizierungsinstitut GmbH
Master TRF	Dated 2017-06
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Test item description	M12 4Pin female and male connector with cable
Trade Mark	YlinkWorld
Manufacturer	Same as the Applicant
Model/Type reference	M12 4pin, M5, M8, M12, M16, M23,7/8
Ratings	20A 50-250V~ IP68

TRF No. IEC61984C



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Testing procedure and testing location:		
Testing Laboratory:	Shenzhen LCS Compliance Testing Laboratory Ltd.	
Testing location/ address	Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China	
Tested by	Zora Chen / Test engineer	<i>Zora Chen</i>
Checked by	Tim Liu / Project engineer	<i>Tim-Liu</i>
Approved by.....	Hart Qiu / Technical manager	<i>Hart Qiu</i>
List of Attachments (including a total number of pages in each attachment): Attachment No.1: Photo documentation (2 pages)		
Summary of testing:		
Tests performed (name of test and test clause): The submitted samples were found to comply with the requirements of: ➢ Electrical safety IEC 61984:2008; EN 61984:2009	Testing location: Shenzhen LCS Compliance Testing Laboratory Ltd. Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China	
Summary of compliance with National Differences (List of countries addressed):		
EU group differences		
<input checked="" type="checkbox"/> The product fulfils the requirements of EN 61984:2009.		

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Copy of marking plate:

The artwork below may be only a draft.

<p style="text-align: right;">YlinkWorld</p> <p>M12 4Pin female and male connector with cable Model: M12 4pin Rating: 20A 50-250V~</p> <p>CE IP68</p> <p>Shenzhen Yilian Connection Technology Co., Ltd. Made in china</p>

Remark:

1. The height dimension of CE mark should not less than 5mm.
2. Name and address of the Importer and Manufacturer must be affixed on the product when the product placed on the EU market.

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Test item particulars	
Classification of installation and use: connector	
Supply Connection: Non-rewirable connector	
.....:	
Possible 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: 2023-02-03	
Date (s) of performance of tests: From 2023-02-03 to 2023-02-20	
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.	
Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.	
The text of the International Standard IEC 61984:2008 was approved by CENELEC as a European Standard without any modification.	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60335-1:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies): Same as the Manufacturer	
General product information and other remarks:	
1. Tests are conducted on model M12 4pin to represent the other model.	
2. All models have the same components, internal construction and shape, except for the different model names.	
3. The degree of protection by enclosure of product is IP68, see the test report LCSB020323007S for details.	

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IEC 61984			
Clause	Requirement + Test	Result - Remark	Verdict
	MECHANICAL TEST GROUP A (TABLE 10)		P
A1	VISUAL EXAMINATION: IEC 60512 Test 1a		P
6.2.2	Marking indelible and easily legible		P
	Minimum marking on the connector a) trademark	See page 2	P
	Markings a) trademark and b) type identification on smallest unit of packaging		P
	All other markings (c – k) given in the technical documentation or catalogue of the manufacturer		P
	c) Rated current	20A	P
	c) Rated voltage	250V	P
	e) Over voltage category	III	P
	f) Pollution degree	2	P
	g) Protection degree	IP68	P
	h) Range of temperature	LLT: -45°C to ULT: +125°C	P
	i) Type of terminals		N/A
	j) Connectable conductors		N/A
	k) Reference to this standard or to the DS		P
6.2.3	Position for the contacts and protective earthing contacts clearly indicated. Marking of protective earthing contacts applies symbol \oplus or "PE". This requirement is not necessary for non rewirable connectors.		N/A
6.9.2	Fixing means not used to fix live parts.		P
6.9.3	Termination without damage possible.		P
6.10	CBC has adequate breaking capacity.		N/A
6.11	Free connector: Wires protected against shear and tensile stress at the termination and secured to prevent twisting.		N/A
	The above requirement does not apply to:		N/A
	a) free connectors for termination to cables in fixed mountings (plug connection in the sense of a detachable connection)	termination to cables in fixed mountings	N/A

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IEC 61984			
Clause	Requirement + Test	Result - Remark	Verdict
	b) free connectors in which the terminations are protected against pull and twisting by mounting provisions in the end-use product		N/A
	DIMENSIONAL EXAMINATION: IEC 60512		P
6.19	Clearances and creepage distances according to IEC 60664.	see table 0.2	P
	Connector dimensions comply with the DS or manufacturer's specification.		P
A2	DURABILITY OF MARKING		P
7.3.2	Test liquid: water Test piston size 1; force 5 N; 10 cycles IEC 60068-2-70 Test Xb „Abrasion of marking“		P
	VISUAL EXAMINATION: IEC 60512 Test 1a		P
	Visible with the naked eye		P

A3	POLARISATION AND CODING: IEC 60512 / Test [13e]		P
	- For unenclosed connectors (internal connections) 20 N		P
	- For enclosed connectors (external connections) 1,5 x mating force, but not higher than 80 N		N/A
6.3	Multipole connector: Contact between protective earthing contacts and live contacts is not possible by engagement.		N/A
6.9.1	Multipole connector: Polarisation prevents improper connection of mating parts.		P
	VISUAL EXAMINATION: IEC 60512 Test 1a		P
	No damage likely to impair function		P

A4	PROVISIONS FOR EARTHING		N/A
6.5.1	For a CBC the earthing contact is a "first make - last break" contact.		N/A
7.3.3	No electrical contact indication between earth contact and the other contacts.		N/A
6.5.4	CONNECTION OF THE PROTECTIVE EARTH CONNECTOR		N/A

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IEC 61984			
Clause	Requirement + Test	Result - Remark	Verdict
	VISUAL EXAMINATION: IEC 60512 Test 1a		N/A
	Remove any available covers if required.		N/A
6.5.4.1	The protective conductor terminal accepts a conductor with a minimum cross-section as specified in Table 1, Column 2:		N/A
	Minimum cross- section according to Table 1.....:		—
6.5.4.2	With regard to design and type of construction, the protective conductor terminations are at least equivalent to the other terminations according to clause 6.:		N/A

A5	INTERLOCK		N/A
7.3.4	The specimens are engaged by hand over their full engagement distance. All other contacts are wired in series. The interlock contacts “make last and break first”, before any other contact does.		N/A
6.7	The connector with an interlock cannot be engaged or disengaged as long as the contacts are live.		N/A

A6	TERMINATIONS		P
6.6	Range of connectable conductor(s)	0.32x4mm ²	—
6.6.1 a)	Test acc. to: IEC 60352-1 Wrapped connections		N/A
6.6.1 b)	Test acc. to: IEC 60352-2 Crimped connections		P
6.6.1 c)	Test acc. to: IEC 60352-3 or IEC 60998-2-3 Accessible insulation displacement connections		N/A
6.6.1 d)	Test acc. to: IEC 60352-4 or IEC 60998-2-3 Non-accessible insulation displacement connections		N/A
6.6.1 e)	Test acc. to: IEC 60352-5 Press-in connections		N/A
6.6.1 f)	Test acc. to: IEC 60352-6 or IEC 60998-2-3 Insulation piercing connections		N/A
6.6.1 g)	Test acc. to: IEC 60999-1 or IEC 60999-2 or IEC 60352-7 Screwless-type clamping units		N/A

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IEC 61984			
Clause	Requirement + Test	Result - Remark	Verdict
6.6.1 h)	Test acc. to: IEC 60999-1 or IEC 60999-2 Screw-type clamping units		N/A
6.6.1 i)	Test acc. to: IEC 60760 or IEC 61210 Flat, quick-connect terminations		N/A
	Test acc. to: IEC 60068-2-20 Solder terminations		N/A
	Other terminations, not mentioned above, acc. to IEC standard		N/A
A7	CONTACT RETENTION IN INSERT: IEC 60512 Test 15a		P
	Test load shall be three times the specified insertion force (mating) of one contact or the specified insertion force of one contact plus 50 N, whichever is less. Minimum test load 20 N.	>30N	—
	VISUAL EXAMINATION: IEC 60512 Test 1a		P
6.18.2	Contacts safety retained		P
	No axial displacement likely to impair normal operation		P
A8	CABLE CLAMP: IEC 60512		N/A
6.17	The cable clamp is made of insulating material or metal.		N/A
6.17	Metal cable clamps meet one of the following requirements:		N/A
	a) Provided with a covering of insulating material to prevent any accessible metal part becoming live in case of a fault.		N/A
	b) No contact possible with the IEC test finger according to IEC 60529.		N/A
	c) Be connected to protective earth.		N/A
	Cable clamping range (6.17 Table 6 or manufacturer's specification)		—
A8.1	CABLE CLAMP (PULL) IEC 60512 Test 17c		N/A
	VISUAL EXAMINATION: IEC 60512 Test 1a		N/A
	Covers mounted / contacts not connected	See appended table A8.1	N/A
A8.2	CABLE CLAMP (TORSION): IEC 60512 Test 17d		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	VISUAL EXAMINATION: IEC 60512 Test 1a		N/A
	Covers mounted	See appended table A8.2	N/A

A9	MECHANICAL STRENGTH IMPACT (Only free Connectors and CBC): IEC 60512 Test 7b		P
	Dropping cycles: 8 positions in 45° steps		—
	Dropping height	750mm	—
	VISUAL EXAMINATION: IEC 60512 Test 1a		P
6.18.1	No damage likely to impair safety		P
6.18.3	Internal insulations not damaged		P
	Parts against electric shock not damaged		P
	Clearances and creepage distances not reduced		P

	SERVICE LIFE TEST GROUP B (TABLE 11)		P
B1	INITIAL MEASUREMENTS (CONTACT RESISTANCE): IEC 60512 Test 2b		P
	Reference value for subsequent measurement:	See appended table B1	—
	Test current	20A	—

B2	BREAKING CAPACITY (ONLY FOR CBCs)		N/A
7.3.5	Operating cycles		—
	Speed of insertion/ withdrawal	0.8 m/s	—
	Test voltage	V	—
	Test current	A	—
	Power factor / cos(φ)	0.9 ± 0.05	—
	Time constant	1 ms ± 15%	—
	VISUAL EXAMINATION: IEC 60512 Test 1a		N/A
6.14.2	No damage occurred, which could impair normal use		N/A

B3	MECHANICAL OPERATIONS: IEC 60512 Test 9a		P
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IEC 61984			
Clause	Requirement + Test	Result - Remark	Verdict
7.3.9	Operating cycles		—
	Insertion speed	0.01 m/s	—
	Rest	30 s	—
	VISUAL EXAMINATION: IEC 60512 Test 1a		P
6.14.1	No damage occurred, which could impair normal use		P

B4	FINAL MEASUREMENTS (CONTACT RESISTANCE): IEC 60512 Test 2b		P
	Test current	20A	—
	$R2 \leq 1.5 R1$ or $R2 \leq 5 \text{ m}\Omega + R1$	See appended table B4.1	P
	DIELECTRIC STRENGTH: IEC 60512 Test 4a		P
	a) Impulse withstand voltage	2.5 kV	—
	b) r.m.s. withstand voltage	1.39 kV	—
6.13	No breakdown or flashover occurred	See appended table B4.2	P

B5	BENDING (FLEXING) TEST (To be performed on new specimen)		P
7.3.10	Only non-rewirable connectors		P
	Rated current	20A	—
	Rated voltage	250V	—
	Wire cross section	0.32x4mm ²	—
	Load: > 0,75 mm ² / 20 N ; ≤ 0,75 mm ² / 10 N	10N / 20N	—
	Numbers of bending	1000	—
	DURING THE TEST		P
	No interruption of the test current		P
	No short-circuit between the conductors		P
	AFTER THE TEST		P
	Cable support sleeve not loosened from the body		P
	Insulation shows no signs of abrasion or of wear and tear.		P

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IEC 61984			
Clause	Requirement + Test	Result - Remark	Verdict
	Broken strands do not pierce the insulation.		P
	VISUAL EXAMINATION: IEC 60512 Test 1a		P
6.14.3	No damage occurs, which could impair normal use.		P

THERMAL TEST GROUP C (TABLE 12)			P
C1	TEMPERATURE RISE TEST: IEC 60512 Test 5A		P
	Test conductor length according Table 7.....:	150 mm	—
	Test conductor cross-section.....:	0.32x4mm ²	—
7.3.8	Mated specimen.....:		—
	Test current.....:	20A	—
	Ambient temperature – components.....:	-25°C	—
	Upper limit temperature – components.....:	+85 °C	—
6.16	The upper limiting temperature specified for the specimen is not exceeded	See appended table C1	P

CLIMATIC TEST GROUP D (TABLE 13)			P
D1	INITIAL MEASUREMENTS (CONTACT RESISTANCE): IEC 60512 Test 2b		P
	Reference value for subsequent measurement...:	See appended table D1	—
	Test current.....:	20A	—

D2	COLD: IEC 60512 Test 11j		P
	Mated specimen.....:		—
	Test duration.....:	2 h	—
	Lower temperature limit.....:	-25°C	—
	VISUAL EXAMINATION: IEC 60512 Test 1a		P
6.6.3	Sufficient contact pressure through insulation		P
6.8 / 6.15	No visual damage, no cracks on insulations parts likely to impair safety		P
6.18.3	Internal insulation shows no damage likely to impair safety		P

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IEC 61984			
Clause	Requirement + Test	Result - Remark	Verdict

	No damage occurred, which could impair normal use		P
--	---	--	---

D3	DRY HEAT: IEC 60512 Test 11i		P
	Mated specimen		—
	Test duration	7 days	—
	Upper temperature limit	+85 °C	—
	VISUAL EXAMINATION: IEC 60512 Test 1a		P
6.6.3	Sufficient contact pressure through insulation		P
6.8 / 6.15	No visual damage, no cracks on insulations parts likely to impair safety		P
6.18.3	Internal insulation shows no damage likely to impair safety		P
	No damage occurred, which could impair normal use		P

D4	PROTECTION AGAINST CORROSION: IEC 60512 Test 11g		P
7.3.14 Test 1	Flowing mixed gas corrosion according to IEC 60512-11-7, test 11g Method 1 or alternatively Method 4 (Table 1 of IEC 60512-11-7)). Test duration is 4 days.		N/A
7.3.14 Test 2 alternative	Sulphur dioxide test with general condensation of moisture according to ISO 6988 . Test duration is 24h (1 test cycle)		P
	VISUAL EXAMINATION: IEC 60512 Test 1a		P
6.21	Function guaranteed		P
	No damage occurred, which could impair normal use		P

D5	FINAL MEASUREMENT (CONTACT RESISTANCE): IEC 60512 Test 2b		P
	Test current	20A	—
	$R2 \leq 1,5 R1$ or $R2 \leq 5 \text{ m}\Omega + R1$	See appended table D5	P

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IEC 61984			
Clause	Requirement + Test	Result - Remark	Verdict
D6	DIELECTRIC STRENGTH: IEC 60512 Test 4a		P
	Mated specimen		—
	Impulse withstand voltage	4.8 kV	—
	r.m.s. withstand voltage	2.21 kV	—
6.13	No breakdown or flashover occurred	See appended table D6	P

DEGREE OF PROTECTION TEST GROUP E (TABLE 14)			P
E1	PROTECTION AGAINST ELECTRIC SHOCK		P
	Unenclosed connectors (for use inside an enclosure):		P
	5.4 c1) COC classified as IP0X, no test required		P
6.4.2.2	5.4 c2) COC Hand back safety (IP1X or IPXXA) 50 mm sphere pressed with 20 N against mated specimen. No live parts accessible.		P
6.4.2.3	5.4 c3) COC Finger safety (IP2X or IPXXB) Jointed test finger pressed with 20 N against mated specimen. No live parts accessible.		P
6.4.2.3	5.4 d) CBC finger safety (IP2X or IPXXB) Jointed test finger pressed with 20 N against mated and unmated specimen. No live parts accessible.		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
	Enclosed connectors (COCs and CBCs)		N/A
6.4.1	Test at mated and unmated specimen. Jointed IEC test finger pressed with 20 N against the surface except the mating face of the male part of the connector. Creepages and clearances ensured between live parts and test finger.		P
	All parts necessary to ensure protection against electric shock only removable with a tool.		P
6.4.3	For a CBC, protection against electric shock is ensured also during insertion and withdrawal. This is proved by use of the jointed IEC test with a test force of 20 N. Creepages and clearances ensured between live parts and test finger.		N/A

E2	PROVISION FOR EARTHING		N/A
7.3.13 6.5.3	Resistance between accessible metal parts and the earthing contact $\leq 100 \text{ m}\Omega$:		N/A

E3	DEGREE OF PROTECTION IP CODE: IEC 60529		P
7.3.6.3	Tests for IP Codes higher than IP2X or IPXXB		N/A
6.12 7.3.7.1	IP code according to IEC 60529 in mated condition or according manufacturers conditions	IP20	—
	Maximum and minimum cross-section wiring or cable diameter connected	mm ² / \varnothing mm mm ² / \varnothing mm	—
7.3.7.2	Protection against ingress of foreign solid objects, tested according to IEC 60529		N/A
7.3.7.3	Protection against harmful ingress of water, tested according to IEC 60529		N/A

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IEC 61984					
Clause	Requirement + Test			Result - Remark	Verdict

A8.1	TABLE: Covers mounted / contacts not connected				N/A
Nominal size (mm):	∅ [mm]	Tensile force [N]	Displacement [mm]	—	
--	Min. --	--	≤ 3	--	
	Max. --				

A8.2	TABLE: Covers mounted				N/A
Nominal size (mm):	∅ [mm]	Torque [Nm]	Twist [°]	—	
--	Min. --	--	≤ ±30	--	
	Max. --				

B1	TABLE: Initial measurements (Contact resistance)					P
Test current : 20A					—	
Test sample	Contact	1	2	3	PE	—
1	ΔU1 [mV]	0.94	1.00	--	--	P
	R1 [mΩ]	0.94	1.00	--	--	
2	Contact	1	2	3	PE	P
	ΔU1 [mV]	0.63	0.68	--	--	
3	R1 [mΩ]	0.63	0.68	--	--	P
	Contact	1	2	3	PE	
3	ΔU1 [mV]	0.86	0.88	--	--	P
	R1 [mΩ]	0.86	0.88	--	--	
supplementary information:						

TRF No. IEC61984C



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IEC 61984						
Clause	Requirement + Test	Result - Remark				Verdict
B4.1	TABLE: Final measurements (Contact resistance)					P
Test current..... :		20A				—
Number of cycles..... :		100				—
Condition..... :		R2max ≤ 1.5R1 or R2max ≤ 5 mΩ + R1				—
Test sample	Contact	1	2	3	PE	—
1	R2max [mΩ]	5.80	5.92	--	--	P
	ΔU2 [mV]	1.50	1.40	--	--	
	R2 [mΩ]	1.50	1.40	--	--	
	Contact	1	2	3	PE	—
2	R2max [mΩ]	5.45	5.53	--	--	P
	ΔU2 [mV]	0.76	0.89	--	--	
	R2 [mΩ]	0.76	0.89	--	--	
	Contact	1	2	3	PE	—
3	R2max [mΩ]	5.70	5.78	--	--	P
	ΔU2 [mV]	0.86	0.88	--	--	
	R2 [mΩ]	0.86	0.88	--	--	
supplementary information:						

B4.2	TABLE: Dielectric strength (mated specimen)			P
Test voltage applied between:	a) Impulse withstand voltage applied	b) r.m.s withstand voltage applied	Breakdown / flashover (Yes/No)	
Contact - Contact	2.5 kV	1.39 kV	No	
Contact - Surface	2.5 kV	1.39 kV	No	
supplementary information:				

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IEC 61984					
Clause	Requirement + Test			Result - Remark	Verdict
C1	TABLE: Temperature rise test				P
	Ambient temperature (°C)			25	—
Thermocouple Locations		Test current (A)	Upper temperature limit (ULT) (°C)	Temperature measured (°C)	—
Contact		20A	125	Max. 61.2	P
--		--	--	--	--
supplementary information:					

D1	TABLE: Initial measurements (Contact resistance)					P
Test current.....					20A	—
Test sample	Contact	1	2	3	PE	—
1	$\Delta U1$ [mV]	0.91	0.88	--	--	P
	R1 [m Ω]	0.91	0.88	--	--	
supplementary information:						

D5	TABLE: Final measurements (Contact resistance)					P
Test current.....					20A	—
Condition.....					R2max \leq 1.5R1 or R2max \leq 5 m Ω + R1	—
Test sample	Contact	1	2	3	PE	—
1	R2max [m Ω]	5.83	5.82	--	--	P
	$\Delta U2$ [mV]	0.84	0.95	--	--	
	R2 [m Ω]	0.84	0.95	--	--	
supplementary information:						

D6	TABLE: Dielectric strength (mated specimen)			P
Test voltage applied between:		a) Impulse withstand voltage applied	b) r.m.s withstand voltage applied	Breakdown / flashover (Yes/No)
Contact - Contact		2.5 kV	1.39 kV	No
Contact - Surface		2.5 kV	1.39 kV	No
supplementary information:				

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IEC 61984			
Clause	Requirement + Test	Result - Remark	Verdict

0.1	TABLE: Characteristic features		
Example	X	Please mark relevant line with "X"	
Kind of equipment	X	Connector without breaking capacity (COC)	
		Connector with breaking capacity (CBC)	
Existence of an enclosure	X	Unenclosed connector	
	X	Enclosed connector	
Design of the connector	X	Fixed connector	
	X	Free connector	
Additional characteristics		Connector with protective earthing contact	
	X	Connector without protective earthing contact	
		Connector with cable clamp	
	X	Connector without cable clamp	
	X	Connectors (COC) with protection against electric shock for hand back safety, when mated	
	X	Connectors (COC) with protection against electric shock for finger safety	
		CBC with protection against electric shock for finger safety, both in mated and unmated condition	
	X	Degree of protection of a connector	
		Connector for class II equipment	
		Connector with interlock	
	X	Connector without interlock	
	X	Non-rewirable connector	
	Rewirable connector		
Pollution degree		1	
	X	2	
		3	
		4	
Over voltage category		I	
	X	II	
		III	
		IV	

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IEC 61984			
Clause	Requirement + Test	Result - Remark	Verdict

0.1	TABLE: Characteristic features		
Operating cycles		10	
		50	
	X	100	
		500	
		1000	
		2000	
		5000	
		According manufacturer's	
Bendings		10	
		50	
		100	
		500	
	X	1000	
		2000	
		5000	
		According manufacturer's:	
Upper temperature limit		70°C	
		85°C	
		100°C	
	X	125°C	
		According manufacturer's: 105°C	
Lower temperature limit		-10°C	
		-25°C	
		-40°C	
		-55°C	
		0°C	
	X	According manufacturer's: -45°C	



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IEC 61984			
Clause	Requirement + Test	Result - Remark	Verdict
0.1	TABLE: Characteristic features		
Type of conductor		Solid	
	X	Flexible	
Termination and connection		Wrapped connection	
	X	Crimped connection	
		IDC Accessible	
		IDC Non-accessible	
		Press in connections	
		Insulation piercing connections	
		Solder termination	
		Screwless-type clamping units	
		Screw-type clamping units	
		Flat, quick-connect terminations	
		According manufacturer's:	
Values for cable clamp		[4-9 mm]	
		[9-12 mm]	
		[12-20 mm]	
		[20-32 mm]	
		[33-42 mm]	
		[≥ 42 mm]	
		According manufacturer's:	
Rated voltage(s)	:	250V	
Rated current	:	20A	
Rated impulse voltage(s)	:	2500V	
Rated insulation voltage(s)	:	250V	
Number of poles	:	2P	
Protection degree (IP-Code)	:	IP68	
Mounting	:	Special design	
Wire cross section area or cross section range	:	0.32x4mm ²	
Material and coating of female contact	:	Copper alloy	
Material and coating of male contact:		Copper alloy	

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IEC 61984			
Clause	Requirement + Test	Result - Remark	Verdict

0.2	TABLE: Clearance and creepage distance measurements				
Type / Shell-size / etc. :	Male connector	--	--	--	--
Rated voltage [V]	250	--	--	--	--
Pollution degree	II	--	--	--	--
Isolation material group	2	--	--	--	--
Impulse withstand voltage [kV] :	2500V	--	--	--	--
Test voltage [kV]	250V	--	--	--	--
Clearances required	2.5	--	--	--	--
Clearances measured	>3.0	--	--	--	--
Creepage distances required .. :	2.8	--	--	--	--
Creepage distances measured :	>4.0	--	--	--	--
Supplementary information:					

0.3.1	TABLE: IEC 60112 / Tracking test						
Specimen				Erosion depth [mm]			
Part	Material	Material-thickness [mm]	Colour	PTI Test solution [A]	CTI	PTI Test solution [B]	Result
Plastic enclosure	See the component	>0.4	Black	600	600	--	P
Supplementary information:							

0.3.2	TABLE: IEC 60695-2-11 / Glow-wire-test [60 s]								
Specimen				Flame					
Part	Material	Material-thickness [mm]	Colour	[°C]	Start [s]	End [s]	Height [mm]	Ignition of tissue paper	Result
Plastic enclosure	See the component	>0.4	Black	960	1	60	<10	No	P
Supplementary information:									

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IEC 61984			
Clause	Requirement + Test	Result - Remark	Verdict

0.3.3		TABLE: IEC 89/336/CD / Ball-pressure test					
Specimen				Ball-pressure test			
Part	Material	Material-thickness [mm]	Colour	[°C]	Measured [mm]	Required [mm]	Result
Plastic enclosure	See the component	>0.4	Black	125	1.2	<2	P
Supplementary information:							

0.3.4		TABLE: IEC 60695-2-2 / Needle-flame test					
Specimen				Flame			
Part	Material	Material-thickness [mm]	Colour	Burning duration [s]	Start [s]	End [s]	Result
Plastic enclosure	See the component	>0.4	Black	10	--	--	P
Supplementary information:							

APPENDED TABLE

Critical components

OBJECT/PART NO.	MANUFACTURER/TRADEMARK	TYPE/MODEL	TECHNICAL DATA	STANDARD	MARK (S) OF CONFORMITY
Plastic enclosure (Fixed adapter ring and socket)	Shenzhen Yilian Connection Technology Co., Ltd.	PBT+20%GF	PBT+20%GF, black	IEC/EN 61984	Tested in appliance
Gold-plated terminals (With signal cable)	Shenzhen Yilian Connection Technology Co., Ltd.	--	Phosphor bronze with gold plating	--	--
Tin-plated terminal (With power cord)	Shenzhen Yilian Connection Technology Co., Ltd.	--	Phosphor Copper Tin Plating	--	--
wire	DONGGUAN TRIUMPHCABLE CO LTD	2464	22AWG 80°C 300V	UL 758	UL E249743

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Attachment No.1

Photo Documentation



Figure 1 External View



Figure 2 External View

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Attachment No.1

Photo Documentation



Figure 3 External View

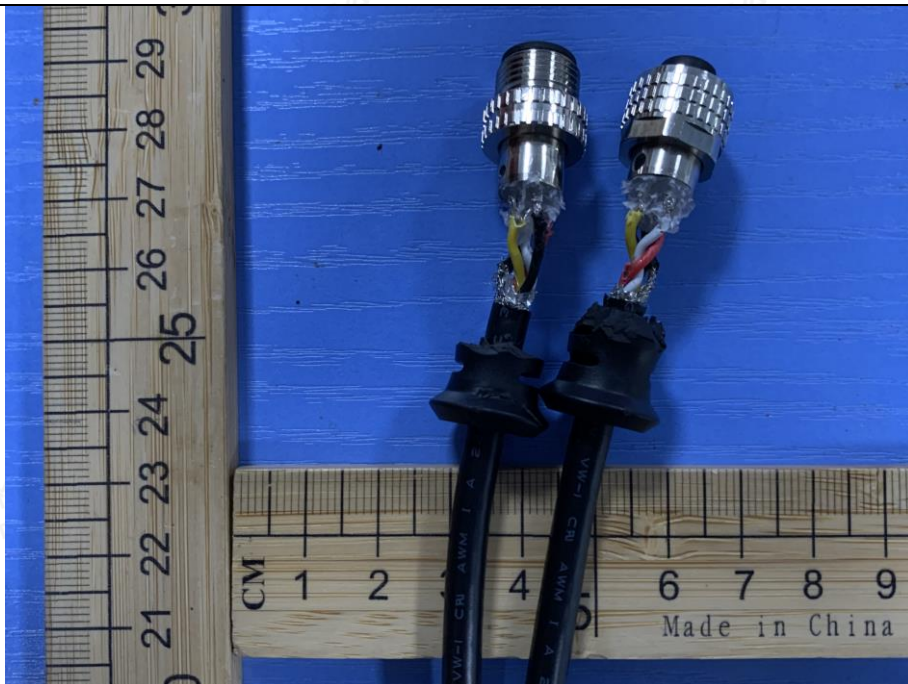


Figure 4 External View

--- END OF TEST REPORT ---

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