LVD TEST REPORT

On Behalf of

Prepared For :	**ZHEJIANG JINGHONG ELECTRIC CO., LTD.** No.221.Wei shijiu Road,Yueqing economic&development Zone,325600,Zhejiang,China
Trade Mark :	**N/A**
Product Name :	**Waterproof Connector**
Model(s) :	**CNP275**, CNP20, CNP25, CNP25T, CNP25Y, CNP273, CNP373, CNP374, CNP293X, CNP295X, CNP293, CNP295, CNP263, CNP265
Prepared By:	**Shenzhen ZTS Testing Service Co., Ltd.** 808, Building 1, 7th Industrial Zone, Yulv Community, Yutang Street, Guangming District, Shenzhen, Guangdong, China Tel: 400-8788-298 Tel:0755-23245950 Web: www.zts-test.com Email: zts@zts-test.com
Test Date:	**Sep. 14, 2021- Sep. 22, 2021**
Date of Report:	**Sep. 22, 2021**
Report No. :	**ZTS21091408WRS**

Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior written consent of Shenzhen CCT Testing Technology Co., Ltd.

TEST REPORT
EN 61984:2009
Connectors - Safety requirements and tests

Report Number. ..... :	ZTS21091408WRS
Date of issue ..... :	Sep. 22, 2021
Testing laboratory	
Name ..... :	Shenzhen ZTS Testing Service Co., Ltd.
Address……..……...:	808, Building 1, 7th Industrial Zone, Yulv Community, Yutang Street, Guangming District, Shenzhen, Guangdong, China
Testing location ..... :	Same as above
Applicant's name ..... :	ZHEJIANG JINGHONG ELECTRIC CO., LTD.
Address ..... :	No.221.Wei shijiu Road,Yueqing economic&development Zone,325600,Zhejiang,China
Test specification:	
Standard ..... :	EN 61984:2009
Test procedure ..... :	Test report
Non-standard test method ..... :	N/A
Test item description ..... :	Waterproof Connector
Trade Mark ..... :	N/A
Manufacturer ..... :	ZHEJIANG JINGHONG ELECTRIC CO., LTD.
Address ..... :	No.221.Wei shijiu Road,Yueqing economic&development Zone,325600,Zhejiang,China
Model/Type reference ..... :	CNP275
Ratings ..... :	AC 250V. 50/60Hz, , 4000Wmax.

Testing procedure and testing location

Laboratory name……	:	Shenzhen ZTS Testing Service Co., Ltd.
Testing location/address:	:	808, Building 1, 7th Industrial Zone, Yulv Community, Yutang Street, Guangming District, Shenzhen, Guangdong, China
Testing lprocedure	:	TL ☒ RMT ☐ SMT ☐ WMT ☐ TMP ☐
Tested By (Test Engineer)	:	Jeffrey Wang
Reviewed By (Supervisor)	:	Tony Mo

artwork of marking plate (representative)

Waterproof Connector

Model: CNP275

Rating: AC 250V, 50/60Hz, 4000Wmax.



ZHEJIANG JINGHONG ELECTRIC CO., LTD.

Made in China

Note: Due to similarity of the rating labels, only above label is listed.

Possible test case verdicts:	
- test case does not apply to the test object ..... :	N/A (Not Applicable)
- test object does meet the requirement ..... :	P (Pass)
- test object does not meet the requirement ..... :	F (Fail)
Testing:	
Date of receipt of test item..... :	Sep. 14, 2021
Date (s) of performance of tests..... :	Sep. 14, 2021- Sep. 22, 2021

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.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

Name and address of factory (ies)..... :	Same as Manufacturer

General product information:

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict
	MECHANICAL TEST GROUP A (TABLE 10)		—
A1	VISUAL EXAMINATION: EN 60512 Test 1a		—
6.2.2	Marking indelible and easily legible		P
	Minimum marking on the connector a) trademark		N/A
	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 ..... :	16 A	P
	c) Rated voltage ..... :	250 V	P
	e) Over voltage category ..... :	III	P
	f) Pollution degree ..... :	3	P
	g) Protection degree ..... :	IP 68	P
	h) Range of temperature ..... :	-35 °C / + 85 °C	P
	i) Type of terminals ..... :	Screwless	P
	j) Connectable conductors ..... :	0,25 -4,0 mm² e/f	P
	k) Reference to this standard or to the DS		N/A
6.2.3	Position for the contacts and protective earthing contacts clearly indicated. Marking of protective earthing contacts applies symbol ⏚ or "PE". This requirement is not necessary for non rewirable connectors.		N/A
6.9.2	Fixing means not used to fix live parts.		N/A
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.	Special design	P
	The above requirement does not apply to:		—
	a) free connectors for termination to cables in fixed mountings (plug connection in the sense of a detachable connection)		P
	b) free connectors in which the terminations are protected against pull and twisting by mounting provisions in the end-use product		P
	DIMENSIONAL EXAMINATION: EN 60512		
6.19	Clearances and creepage distances according to EN 60664.	see table 0.2	P
	Connector dimensions comply with the DS or		P

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict
	manufacturer's specification.		
A2	DURABILITY OF MARKING		—
7.3.2	Test liquid: water Test piston size 1; force 5 N; 10 cycles EN 60068-2-70 Test Xb „Abrasion of marking“	In the moulding	P
	VISUAL EXAMINATION: EN 60512 Test 1a		—
	Visible with the naked eye		P
A3	POLARISATION AND CODING: EN 60512 / Test [13e]		—
	- For unenclosed connectors (internal connections) 20 N		N/A
	- 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.		N/A
	VISUAL EXAMINATION: EN 60512 Test 1a		—
	No damage likely to impair function		N/A
A4	PROVISIONS FOR EARTHING		—
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		—
	VISUAL EXAMINATION: EN 60512 Test 1a		—
	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 .... :	mm^2	—
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		—
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

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict
A6	TERMINATIONS		—
6.6	Range of connectable conductor(s) .....:	from: 0,25 mm² to: 4,0 mm² e/f	
6.6.1 a)	Test acc. to: EN 60352-1 Wrapped connections		N/A
6.6.1 b)	Test acc. to: EN 60352-2 Crimped connections		N/A
6.6.1 c)	Test acc. to: EN 60352-3 or EN 60998-2-3 Accessible insulation displacement connections		N/A
6.6.1 d)	Test acc. to: EN 60352-4 or EN 60998-2-3 Non-accessible insulation displacement connections		N/A
6.6.1 e)	Test acc. to: EN 60352-5 Press-in connections		N/A
6.6.1 f)	Test acc. to: EN 60352-6 or EN 60998-2-3 Insulation piercing connections		N/A
6.6.1 g)	Test acc. to: EN 60999-1 or EN 60999-2 or EN 60352-7 Screwless-type clamping units		N/A
6.6.1 h)	Test acc. to: EN 60999-1 or EN 60999-2 Screw-type clamping units		P
6.6.1 i)	Test acc. to: EN 60760 or EN 61210 Flat, quick-connect terminations		N/A
	Test acc. to: EN 60068-2-20 Solder terminations		N/A
	Other terminations, not mentioned above, acc. to IEC standard ..... :		N/A
A7	CONTACT RETENTION IN INSERT: EN 60512 Test 15a		—
	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.		—
	VISUAL EXAMINATION: EN 60512 Test 1a		—
6.18.2	Contacts safety retained		P
	No axial displacement likely to impair normal operation		P
A8	CABLE CLAMP: EN 60512		—
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:		—
	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 EN 60529.		N/A
	c) Be connected to protective earth.		N/A
	Cable clamping range (6.17 Table 6 or	from: mmto: mm	—

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict
	manufacturer's specification) .....:		
A8.1	CABLE CLAMP (PULL) EN 60512 Test 17c		—
	VISUAL EXAMINATION: EN 60512 Test 1a		—
	Covers mounted / contacts not connected	See appended table A8.1	N/A
A8.2	CABLE CLAMP (TORSION): EN 60512 Test 17d		—
	VISUAL EXAMINATION: EN 60512 Test 1a		—
	Covers mounted	See appended table A8.2	N/A
A9	MECHANICAL STRENGTH IMPACT (Only free Connectors and CBC): EN 60512 Test 7b		—
	Dropping cycles: 8 positions in 45° steps		—
	Dropping height .....:	mm	—
	VISUAL EXAMINATION: EN 60512 Test 1a		—
6.18.1	No damage likely to impair safety		N/A
6.18.3	Internal insulations not damaged		N/A
	Parts against electric shock not damaged		N/A
	Clearances and creepage distances not reduced		N/A

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict
	SERVICE LIFE TEST GROUP B (TABLE 11)		—
B1	INITIAL MEASUREMENTS (CONTACT RESISTANCE): EN 60512 Test 2b		—
	Reference value for subsequent measurement:	See appended table B1	□
	Test current..... :	A	□
B2	BREAKING CAPACITY (ONLY FOR CBCs)		—
7.3.5	Operating cycles ..... :		—
	Speed of insertion/ withdrawal ..... :	0,8 m/s	□
	Test voltage ..... :	V	□
	Test current ..... :	A	□
	Power factor / cos(□) ..... :	0,9 □□0,05	□
	Time constant	1 ms □□15%	□
	VISUAL EXAMINATION: EN 60512 Test 1a		—
6.14.2	No damage occurred, which could impair normal use		N/A
B3	MECHANICAL OPERATIONS: EN 60512 Test 9a		—
7.3.9	Operating cycles ..... :	200	□
	Insertion speed ..... :	0,01 m/s	□
	Rest ..... :	30 s	□
	VISUAL EXAMINATION: EN 60512 Test 1a		—
6.14.1	No damage occurred, which could impair normal use		P
B4	FINAL MEASUREMENTS (CONTACT RESISTANCE): EN 60512 Test 2b		—
	Test current ..... :	1 A	□
	R2 □□1,5 R1 or R2 □□5 m□ □+ R1..... :	See appended table B4.1	—
	DIELECTRIC STRENGTH: EN 60512 Test 4a		—
	a) Impulse withstand voltage ..... :	7,3 kV for 2002-0501, without additional cover 2,95 kV for 2002-0501/0541 with additional cover	□
	b) r.m.s. withstand voltage ..... :	kV	□
6.13	No breakdown or flashover occurred	See appended table B4.2	P
B5	BENDING (FLEXING) TEST (To be performed on new specimen)		—
7.3.10	Only non-rewirable connectors		—
	Rated current ..... :	A	□
	Rated voltage ..... :	V	□
	Wire cross section ..... :	mm²	□

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict
	Load: □0,75 mm² / 20 N ; □0,75 mm² / 10 N	N	□
	Numbers of bending ..... :		□
	DURING THE TEST		—
	No interruption of the test current		N/A
	No short-circuit between the conductors		N/A
	AFTER THE TEST		—
	Cable support sleeve not loosened from the body		N/A
	Insulation shows no signs of abrasion or of wear and tear.		N/A
	Broken strands do not pierce the insulation.		N/A
	VISUAL EXAMINATION: EN 60512 Test 1a		—
6.14.3	No damage occurs, which could impair normal use.		N/A

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict

	THERMAL TEST GROUP C (TABLE 12)		—
C1	TEMPERATURE RISE TEST: EN 60512 Test 5A		—
	Test conductor length according Table 7 .....:	250 ± 25 mm	□
	Test conductor cross-section..... :	2,5 mm² "f"	□
7.3.7	Mated specimen .....:		□
	Test current ..... :	16A	□
	Ambient temperature – components ..... :	23 °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

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict
	CLIMATIC TEST GROUP D (TABLE 13)		—
D1	INITIAL MEASUREMENTS (CONTACT RESISTANCE): EN 60512 Test 2b		—
	Reference value for subsequent measurement.. :	See appended table D1	
	Test current ..... :	1 A	
D2	COLD: EN 60512 Test 11j		—
	Mated specimen ..... :		
	Test duration ..... :	2 h	
	Lower temperature limit ..... :	- 35 °C	
	VISUAL EXAMINATION: EN 60512 Test 1a		—
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
D3	DRY HEAT: EN 60512 Test 11i		—
	Mated specimen..... :		—
	Test duration ..... :	7 days	—
	Upper temperature limit ..... :	+ 85 °C	—
	VISUAL EXAMINATION: EN 60512 Test 1a		—
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: EN 60512 Test 11g		—
7.3.14 Test 1	Flowing mixed gas corrosion according to EN 60512-11-7, test 11g Method 1 or alternatively Method 4 (Table 1 of EN 60512-11-7)). Test duration is 4 days.		N/A
7.3.14 Test 2 alternative	Sulfur dioxide test with general condensation of moisture according to ISO 6988 . Test duration is 24h (1 test cycle)		P
	VISUAL EXAMINATION: EN 60512 Test 1a		—
6.21	Function guaranteed		P
	No damage occurred, which could impair normal use		P

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict
D5	FINAL MEASUREMENT (CONTACT RESISTANCE): EN 60512 Test 2b		—
	Test current ..... :	1 A	
	R2 1,5 R1 or R2 5 m + R1 ..... :	See appended table D5	P
D6	DIELECTRIC STRENGTH: EN 60512 Test 4a		—
	Mated specimen ..... :		
	Impulse withstand voltage ..... :	7,3 kV for 2002-0501, without additional vover 2,95 kV for 2002-0501/0541 with additional cover	
	r.m.s. withstand voltage ..... :	kV	
6.13	No breakdown or flashover occurred	See appended table D6	P

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict
	DEGREE OF PROTECTION TEST GROUP E (TABLE 14)		—
E1	PROTECTION AGAINST ELECTRIC SHOCK		—
	Unenclosed connectors (for use inside an enclosure):		—
	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
	Enclosed connectors (COCs and CBCs)		—
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		—
7.3.13 6.5.3	Resistance between accessible metal parts and the earthing contact ≤ 100 m□ □..... :	m□	N/A
E3	DEGREE OF PROTECTION IP CODE: EN 60529		—
7.3.6.3	Tests for IP Codes higher than IP2X or IPXXB		—
6.12 7.3.7.1	IP code according to EN 60529 in mated condition or according manufacturers conditions .....:	IP 68	P
	Maximum and minimum cross-section wiring or cable diameter connected ..... :	mm² / □ □mm mm² / □ □mm	—
7.3.7.2	Protection against ingress of foreign solid objects, tested according to EN 60529		N/A
7.3.7.3	Protection against harmful ingress of water, tested according to EN 60529		N/A

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict

A8.1	**TABLE: Covers mounted / contacts not connected**				N/A
Nominal size (mm):	□ □[mm]		Tensible force [N]	Displacement [mm]	□
	Min.			≤	N/A
	Max.				
	Min.			≤	N/A
	Max.				
	Min.			≤	N/A
	Max.				

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

B1	**TABLE: Initial measurements (Contact resistance)**						P
Test current .....:		1 A					—
Test sample	Contact	1	2	3	PE		□
1	□U1 [mV]	0,48	0,50	0,58	N/A		P
	R1 [m□]	0,48	0,50	0,58	N/A		
	Contact	1	2	3	PE		—
2	□U1 [mV]	0,51	0,52	0,54	N/A		P
	R1 [m□]	0,51	0,52	0,54	N/A		
	Contact	1	2	3	PE		—
3	□U1 [mV]	0,49	0,55	0,47	N/A		P
	R1 [m□]	0,49	0,55	0,47	N/A		
supplementary information:							

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict

B4.1	**TABLE: Final measurements (Contact resistance)**						P
Test current ..... :			1 A				□
Number of cycles ..... :			200				□
Condition ..... :			R2max □1,5R1 or R2max □5 m□ + R1				□
Test sample	Contact	1	2	3	PE		□
1	R2max [m□]	5,67	5,70	5,73	N/A		P
	□U2 [mV]	0,67	0,70	0,73	N/A		
	R2 [m□]	0,67	0,70	0,73	N/A		
	Contact	1	2	3	PE		—
2	R2max [m□]	5,74	5,67	5,65	N/A		P
	□U2 [mV]	0,74	0,67	0,65	N/A		
	R2 [m□]	0,84	0,67	0,65	N/A		
	Contact	1	2	3	PE		—
3	R2max [m□]	5,67	5,70	5,65	N/A		P
	□U2 [mV]	0,67	0,70	0,65	N/A		
	R2 [m□]	0,67	0,70	0,65	N/A		
supplementary information:							

B4.2	**TABLE: Dielectric strength (mated specimen)**			N/A
Test voltage applied between:		a) Impulse withstand voltage applied	b) r.m.s withstand voltage applied	Breakdown / flashover (Yes/No)
Contact - Contact		7,3 kV	N/A	No
Contact - Earth		N/A	N/A	N/A
Contact - Surface		N/A	N/A	N/A
supplementary information:				

C1	**TABLE: Temperature rise test**				P
	Ambient temperature (°C)..... :		23,5		□
Thermocouple Locations		Test current (A)	Upper temperature limit (ULT) (°C)	Temperature measured (°C)	—
Attached to current bar		16	85 °C	68,5 °C	P
supplementary information:					

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict

D1	**TABLE: Initial measurements (Contact resistance)**						P
Test current .....:			1 A				—
Test sample	Contact	1	2	3	PE		□
1	□U1 [mV]	0,54	0,54	0,53	N/A		P
	R1 [m□]	0,54	0,54	0,53	N/A		
supplementary information:							

D5	**TABLE: Final measurements (Contact resistance)**						P
Test current .....:			1 A				□
Condition .....:			R2max □1,5R1 or R2max □5 m□ + R1				□
Test sample	Contact	1	2	3	PE		□
1	R2max [m□]	5,54	5,54	5,53	N/A		P
	□U2 [mV]	0,56	0,55	0,54	N/A		
	R2 [m□]	0,56	0,55	0,54	N/A		
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	7,3 kV	N/A	No	
Contact - Earth	N/A	N/A	N/A	
Contact - Surface	N/A	N/A	N/A	
supplementary information:				

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
		Enclosed connector
Design of the connector	X	Fixed connector
		Free connector

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict

0.1	**TABLE: Characteristic features**	
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
		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
		Non-rewirable connector
	X	Rewirable connector
Pollution degree		1
		2
	X	3
		4
Over voltage category		I
		II
	X	III
		IV
Operating cycles		10
		50
	X	200
		500
		1000
		2000
		5000
		According manufacturer's:

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict

0.1	**TABLE: Characteristic features**	
Bendings		10
		50
		100
		500
		1000
		2000
		5000
		20000
		According manufacturer's:
Upper temperature limit		70°C
	X	85°C
		100°C
		125°C
		According manufacturer's:
Lower temperature limit		-10°C
		-25°C
		-40°C
		-55°C
		0°C
	X	According manufacturer's: - 35 °C
Type of conductor	X	Solid
	X	Flexible
Termination and connection		Wrapped connection
		Crimped connection
		IDC Accessible
		IDC Non-accessible
		Press in connections
		Insulation piercing connections
		Solder termination
	X	Screwless-type clamping units
		Screw-type clamping units
		Flat, quick-connect terminations
		According manufacturer's:

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict

0.1	**TABLE: Characteristic features**	
Values for cable clamp		[4–9 mm]
		[9-12 mm]
		[12-20 mm]
		[20-32 mm]
		[33-42 mm]
		[42 mm]
	X	According manufacturer's:
Rated voltage(s) ..... :	500 V	
Rated current ..... :	16A	
Rated impulse voltage(s) ..... :	6 kV	
Rated insulation voltage(s) ..... :	6 kV	
Number of poles ..... :	1, however modular	
Protection degree (IP-Code) ... :	IP 68	
Mounting ..... :		
Wire cross section area or cross section range ..... :	0,25 – 4 mm² e/f	
Material and coating of female contact ..... :	tinned copper	
Material and coating of male contact:	tinned copper	

0.2			
Type / Shell-size / etc. ..... :	2002-0501	2002-0501/0541	2002-0501/0541
Rated voltage [V] ..... :	500	125	250
Pollution degree ..... :	3	3	3
Isolation material group ..... :	2	2	2
Impulse withstand voltage [kV] :	7,3	2,95	2,95
Test voltage [kV] ..... :	7,8	3,5	3,5
Clearances required ..... :	≧ 7,1	≧ 2,1	≧ 1,8
Clearances measured ..... :	> 9,5	> 2,1	> 2,1
Creepage distances required .. :	≧ 5,5	≧ 2,1	≧ 1,8
Creepage distances measured :	> 9,5	> 2,1	> 2,1

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict

0.3.1	**TABLE: EN 60112 / Tracking test**						
Specimen				Erosion depth [mm]			
Part	Material	Material-thickness [mm]	Colour	PTI Test solution [A]	CTI	PTI Test solution [B]	Result
	PA 6.6 VO	*	All	600	600		P
Supplementary information: * samples from production have been tested							

0.3.2	**TABLE: EN 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
2002-0501 (1)	PA 6.6 VO	*	all	960	-	-	-	-	P
2002-0501 (2)		*			-	-	-	-	P
2002-0501 (3)		*			-	-	-	-	P
2002-0541 (1)		*			-	-	-	-	P
2002-0541 (2)		*			-	-	-	-	P
2002-0541 (3)		*			-	-	-	-	P
Supplementary information: * samples from production have been tested									

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
2002-0501	PA 6.6 VO	*	all	125	1,34	2	P
2002-0541	PA 6.6 VO	*	all	125	1,24	2	P
Supplementary information: * samples from production have been tested							

EN 61984:2009			
Clause	Requirement – Test	Result - Remark	Verdict

0.3.4	**TABLE: EN 60695-2-2 / Needle-flame test**						
Specimen				Flame			
Part	Material	Material-thickness [mm]	Colour	Burning duration [s]	Start[s]	End [s]	Result
2002-0501 (1)	PA 6.6 VO	*	all	-	-	-	P
2002-0501 (2)		*		-	-	-	P
2002-0501 (3)		*		-	-	-	P
2002-0541 (1)		*		-	-	-	P
2002-0541 (2)		*		-	-	-	P
2002-0541 (3)		*		-	-	-	P
Supplementary information: * samples from production have been tested							

ATTACHMENT A - EUT PHOTOS



Photo 1

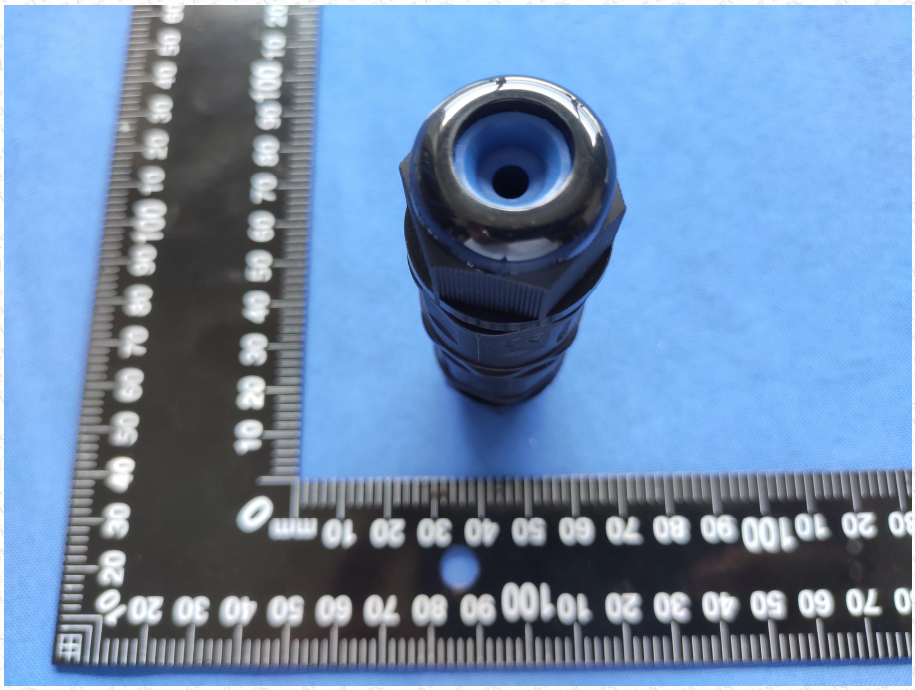


Photo 2



Photo 3

※※※※※※※※※※ **END OF THE REPORT** ※※※※※※※※※※