



Ente Certificazione Macchine

Via Cà Bella, 243 40053 Valsamoggia Località Castello di Serravalle
(Bo) Italy
Turkish Branch: Testroof Engineering and Certification Co., Ltd.



TEST REPORT

No. 16-0070/05

Product: Connector

Models: WPI-0302M15 - IP68 3-poles Electrical Cable Joint (2 Way) 16A - 250 V
WPT-0303M15 - IP68 3-poles Electrical Cable Joint (3 Way) 16A - 250 V

Verification to: 2014/35/EU

EN 61984:2009

Manufacturer: **TTAF ELEKTRONİK SAN. VE TİC. LTD. ŞTİ.**
Kavaklı Mah. İstanbul Cad. No:21 Beylikdüzü/İstanbul/TURKEY

Person responsible: Elec Eng Ergün CENGİZ

Date of issue: 2016-03-10

Distribution list:
1x TESTROOF
1x Producer
1x ECM



The tests have been carried out by virtue of the following documents:

- Order ev. Number LVD116324 at TESTROOF on 2016-02-26
- Contract Number LVD116324 dated 2016-02-26

I. Description of product

WPT-0303M15 - IP68 3-poles Electrical Cable Joint (3 Way) 15A - 240 V



WPI-0302M15 - IP68 3-poles Electrical Cable Joint (2 Way) 15A - 240 V





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II. Technical Characteristics

WPI-0302M15 - IP68 3-poles Electrical Cable Joint (2 Way) 15A - 240 V

Cable Size : 3*1.5 mm²
Min. Cable Outside Diameter: 6 mm
Max. Cable Outside Diameter: 10 mm
Contact Resistance : 10 mΩ
Insulation Structure : 500 MΩ at 500VDC
Temperature Rating : -40°C + 105°C
IP Rating : IP67
Mold Material : PA6
Contact/Terminal Material : Nickel-Plated Brass
Seal Material : EPDM 70Sh A

WPT-0303M15 - IP68 3-poles Electrical Cable Joint (3 Way) 15A - 240 V

Cable Size : 3*1.5 mm²
Min. Cable Outside Diameter: 6 mm
Max. Cable Outside Diameter: 10 mm
Contact Resistance : 10 mΩ
Insulation Structure : 500 MΩ at 500VDC
Temperature Rating : -40°C + 105°C
IP Rating : IP67
Mold Material : PA6
Contact/Terminal Material : Nickel-Plated Brass
Seal Material : EPDM 70Sh A

III. Tested sample

- number of samples: 1
- date of submission: 2016-03-04
- Model No.: WPI-0302M15

Inspection, tests and evaluations were performed in **Testroof Mühendislik ve Belgelendirme Tic. Ltd. Şti.** İnönü Mah, Kayışdağı Cad. No:150-3, 34755 Ataşehir / İstanbul / TURKEY, by testing engineer Elec. Eng. Ergün Cengiz

Tests were carried out by means of the measuring equipment with the valid calibration.





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IV. Results of tests and examination

The results of tests and examination are given in the Particular protocols which is the part of this Test report:

- Particular protocol No. 16-0070/05/T1
- Particular protocol No. 16-0070/05/T2
- Particular protocol No. 16-0070/05/T3
- Particular protocol No. 16-0070/05/T4
- Particular protocol No. 16-0070/05/T5
- Particular protocol No. 16-0070/05/T6
- Particular protocol No. 16-0070/05/T7

V. The list of used basis

- Order ev. Number LVD116324 at TESTROOF on 2016-02-26
- Contract Number LVD116324 dated 2016-02-26
- Particular protocol No. 16-0070/05/T1
- Particular protocol No. 16-0070/05/T2
- Particular protocol No. 16-0070/05/T3
- Particular protocol No. 16-0070/05/T4
- Particular protocol No. 16-0070/05/T5
- Particular protocol No. 16-0070/05/T6
- Particular protocol No. 16-0070/05/T7
- EN 61984:2009 Connectors. Safety requirements and tests

The persons stated below are accountable for the accuracy of the above-specified data:

Elec. Eng. Ergün CENGİZ
Test Engineer



Murat KOÇAS
Manager of Testing Department





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Particular protocol No:	16-0070/05/T1	Page1/1		
Inspection according to :	EN 61984:2009 Visual Examination Tests			
Product / Type :	WPI-0302M15			
Examination Engineer:	Ergün CENGİZ			
Date of Inspection	2016-03-04			
Measuring instruments:				
Designation	Evidentiary Number	Number of calibration protocol	Period of validity	Comment
-	-	-	-	

Requirement (*): EN 61984:2009 Visual Examination Tests

Connectors shall be identified and characterised by the following markings

6.2.2	Marking indelible and easily legible		
	Minimum marking on the connector a) trademark	TTAF	Pass
	Markings a) trademark and b) type identification on smallest unit of packaging		Pass
	All other markings (c – k) given in the technical documentation or catalogue of the manufacturer		Pass
	c) Rated current	16 A	Pass
	d) Rated voltage	250	Pass
	e) Over voltage category	II	Pass
	f) Pollution degree	II	Pass
	g) Protection degree	IP67	Pass
	h) Range of temperature	-40°C #+105°C	Pass
	i) Type of terminals	Screw	Pass
	j) Connectable conductors		Pass
k) Reference to this standard or to the DS		Pass	
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.		Pass
6.9.2	Fixing means not used to fix live parts.		Pass
6.9.3	Termination without damage possible.		Pass
6.11	Free connector: Wires protected against shear and tensile stress at the termination and secured to prevent twisting.		Pass

Examination Engineer
Name : Eng. Ergun Cengiz
Signature:



Approved by
Name : Eng. M. Kocas
Signature:



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Particular protocol No:	16-0070/05/T2	Page1/1		
Inspection according to :	EN 61984:2009 Art. 6.4.1			
Product / Type :	WPI-0302M15			
Examination Engineer:	Ergün CENGİZ			
Date of Inspection	2016-03-04			
Measuring instruments:				
Designation	Evidentiary Number	Number of calibration protocol	Period of validity	Comment
-	-	-	-	

Requirement (*): EN 61984:2009 Art. 6.4.1

A connector shall be so designed that after mounting, its live parts are not accessible by the IEC test finger in accordance with Clause 5 of IEC 60529 using a test force of 20 N. All parts which are necessary to ensure protection against electric shock shall only be removable by the aid of a tool

All parts necessary to ensure protection against electric shock only removable with a tool.

Test Results :

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.	Pass
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Examination Engineer
Name : Eng. Ergün Cengiz
Signature :



Approved by
Name : Eng. M. Kocas
Signature:



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Particular protocol No:	16-0070/05/T3	Page1/1		
Inspection according to :	EN 61984:2009 Art. 6.4.2.2			
Product / Type :	WPI-0302M15			
Examination Engineer:	Ergün CENGİZ			
Date of Inspection	2016-03-04			
Measuring instruments:				
Designation	Evidentiary Number	Number of calibration protocol	Period of validity	Comment
-	-	-	-	

Requirement (*):EN 61984:2009 Art. 6.4.2.2

For a COC with protection against electric shock according to characteristic c2) of 5.4, protective provisions shall be tested by using the access probe -50 mm sphere- according to clause 5 of IEC 60529 with a test force of 20 N, without consideration of clearances and creepage distances.

Test Results :

5.4 c2) COC Hand back safety (IP1X or IPXXA) 50 mm sphere pressed with 20 N against mated specimen.	Pass
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Status : No live parts accessible

Examination Engineer
Name : Eng. Ergün Cengiz
Signature :



Approved by
Name : Eng. M. Kocas
Signature:



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Particular protocol No:	16-0070/05/T4	Page1/1		
Inspection according to :	EN 61984:2009 Art. 6.4.2.3			
Product / Type :	WPI-0302M15			
Examination Engineer:	Ergün CENGİZ			
Date of Inspection	2016-03-04			
Measuring instruments:				
Designation	Evidentiary Number	Number of calibration protocol	Period of validity	Comment
-	-	-	-	

Requirement (*): EN 61984:2009 Art. 6.4.2.3

For a COC and CBC with protection against electric shock respectively according to characteristic c3) and d) of 5.4, protective provisions shall be tested according to clause 5 of IEC 60529 by using the test finger with a test force of 20 N, without consideration of clearances and creepage distances.

Test Results :

5.4 c3) COC Finger safety (IP2X or IPXXB) Jointed test finger pressed with 20 N against mated specimen.	Pass
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Status : No live parts accessible

Examination Engineer
Name : Eng. Ergün Cengiz
Signature :



Approved by
Name : Eng. M. Kocas
Signature:



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Particular protocol No:	16-0070/05/T5	Page1/1		
Inspection according to :	EN 61984:2009 Art. 6.5.3			
Product / Type :	WPI-0302M15			
Examination Engineer:	Ergün CENGİZ			
Date of Inspection	2016-03-04			
Measuring instruments:				
Designation	Evidentiary Number	Number of calibration protocol	Period of validity	Comment
CE Multitester MI 2094	NFS1428001	14C01184	08.2016	

Requirement (*): EN 61984:2009 Art. 6.5.3

Accessible metal part of a connector with an earthing contact which may become live in the event of insulation fault shall be reliably connect to the earthing contact

In no case shall the resistance of this connection exceed 0,1 ohm

Test Results :

Contact Resistance (m ohm)		
1	2	3
0,90	0,96	0,91
0,91	0,95	0,89
0,91	0,95	0,88

Status : No live parts accessible Resistance between accessible metal parts and the earthing contact ≤ 100 m ohm

Examination Engineer
Name : Eng. Ergün Cengiz
Signature :



Approved by
Name : Eng. M. Kocas
Signature:



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Particular protocol No:	16-0070/05/T6	Page1/1		
Inspection according to :	EN 61984:2009 Art. 6.5.4.1			
Product / Type :	WPI-0302M15			
Examination Engineer:	Ergün CENGİZ			
Date of Inspection	2016-03-04			
Measuring instruments:				
Designation	Evidentiary Number	Number of calibration protocol	Period of validity	Comment
-	-	-	-	

Requirement (*): EN 61984:2009 Art. 6.5.4.1 The protective conductor terminal shall be able to accept a conductor with a min. Cross sectional area as specified in Table

1	2	3
Nominal Cross sectional area of the current carrying conductor mm ²	Min. Cross sectional area for the protective conductor and accesible metal parts or covers used as protective conductors mm ²	Min. Cross sectional area for the connections between the protective conductor and accesible metal parts or covers not used as protective conductors mm ²
Up to 1,5	Corresponding to the nominal cross sectional area of the current carrying conductor	
2,5	2,5	1,5
4	4	2,5
6	6	4
10	10	10
16, 25, 35	16	16
50	25	25
70	35	35
95	50	50
120, 150	70	50
185	95	50
240	120	50
300	150	50
400	185	50

Status:

The protective conductor terminal accepts a conductor with a minimum cross-section as specified in Table 1, Column 1:	Pass
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Examination Engineer
Name : Eng. Ergün Cengiz
Signature :



Approved by
Name : Eng. M. Kocas
Signature:



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Particular protocol No: 16-0070/05/T7 Page1/1
Inspection according to : EN 61984:2009 Art. 6.13
Product / Type : WPI-0302M15
Examination Engineer: Ergün CENGİZ
Date of Inspection 2016-03-04
Measuring instruments:

Designation	Evidentiary Number	Number of calibration protocol	Period of validity	Comment
CE Multitester MI 2094	NFS1428001	14C01184	08.2016	

Requirement (*):EN 61984:2009 Art. 6.13

A connector shall withstand the specified test voltage preferably the impulse withstand voltage or the r.m.s withstand voltage alternatively The connector shall withstand the test voltage specified in Table 8 , in accordance with 7.3.12

Test Method:

Voltage Applied	Impulse withstand voltage Applied	r.m.s withstand voltage applied
Contact- Contact	1,75 kv	0,84 kv
Contact - Earth	1,75 kv	0,84 Kv

Status: No breakdown or flashover occurred

Examination Engineer
Name : Eng. Ergün Cengiz
Signature :



Approved by
Name : Eng. M. Kocas
Signature: