V. The list of used basis

- Order ev. Number LVD117466 at TESTROOF on 2017-07-09
- Contract Number LVD117466 dated 2017-07-09
- Particular protocol No. 17-0269/06/T1
- Particular protocol No. 17-0269/06/T2
- Particular protocol No. 17-0269/06/T3
- Particular protocol No. 17-0269/06/T4
- Particular protocol No. 17-0269/06/T5
- Particular protocol No. 17-0269/06/T6
- Particular protocol No. 17-0269/06/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 KOÇAŞ
Manager of Testing Department

Particular protocol No:	17-0269/06/T1	Page1/1
Inspection according to :	EN 61984:2009 Visual Examination Tests	
Product / Type :	WPI-0302M16	
Examination Engineer:	Ergün CENGİZ	
Date of Inspection	2017-09-26	

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 ..... :	IP68	*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. Ergün Cengiz
Signature :

Approved by
Name : Eng. M. Kocas
Signature:

Particular protocol No:	17-0269/06/T2	Page1/1
Inspection according to :	EN 61984:2009 Art. 6.4.1	
Product / Type :	WPI-0302M16	
Examination Engineer:	Ergün CENGİZ	
Date of Inspection	2017-09-26	
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 toll

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**

Examination Engineer
Name : Eng. Ergün Cengiz
Signature :

Approved by
Name : Eng. M. Kocas
Signature:

Particular protocol No:	17-0269/06/T3	Page1/1
Inspection according to :	EN 61984:2009 Art. 6.4.2.2	
Product / Type :	WPI-0302M16	
Examination Engineer:	Ergün CENGİZ	
Date of Inspection	2017-09-26	
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- acoording 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**

Status : No live parts accessible

Examination Engineer
Name : Eng. Ergün Cengiz
Signature :

Approved by
Name : Eng. M. Kocas
Signature:

Particular protocol No:	17-0269/06/T4	Page1/1
Inspection according to :	EN 61984:2009 Art. 6.4.2.3	
Product / Type :	WPI-0302M16	
Examination Engineer:	Ergün CENGİZ	
Date of Inspection	2017-09-26	
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 acoording 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**

Status : No live parts accessible

Examination Engineer
Name : Eng. Ergün Cengiz
Signature :

Approved by
Name : Eng. M. Kocas
Signature:

Particular protocol No:	17-0269/06/T5	Page1/1
Inspection according to :	EN 61984:2009 Art. 6.5.3	
Product / Type :	WPI-0302M16	
Examination Engineer:	Ergün CENGİZ	
Date of Inspection	2017-09-26	
Measuring instruments:		

Designation	Evidentiary Number	Number of calibration protocol	Period of validity	Comment
CE Multitester MI 2094	NFS1428001	A-17001184	08/2018	

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:

Particular protocol No:	17-0269/06/T6	Page1/1
Inspection according to :	EN 61984:2009 Art. 6.5.4.1	
Product / Type :	WPI-0302M16	
Examination Engineer:	Ergün CENGİZ	
Date of Inspection	2017-09-26	
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 mm²	Min. Cross sectional area for the protective conductor and accesible metal parts or covers used as protective conductors mm²	Min. Cross sectional area for the connections between the protective conductor and accesible metal parts or covers not used as protective conductors mm²
Up to 1,5	Correspondling to the nominal cross sectional area of the current	
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**

Examination Engineer
Name : Eng. Ergün Cengiz
Signature :

Approved by
Name : Eng. M. Kocas
Signature:

Particular protocol No:	17-0269/06/T7	Page1/1
Inspection according to :	EN 61984:2009 Art. 6.13	
Product / Type :	WPI-0302M16	
Examination Engineer:	Ergün CENGİZ	
Date of Inspection	2017-09-26	

Measuring instruments:

Designation	Evidentiary Number	Number of calibration protocol	Period of validity	Comment
CE Multitester MI 2094	NFS1428001	A-17001184	08/2018	

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 witstand the test voltage specified in Table 8 , in accordance with 7.3.12

Test Method:

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

Status: No breakdown or flashover occurred

Examination Engineer
Name : Eng. Ergün Cengiz
Signature :

Approved by
Name : Eng. M. Kocas
Signature:

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. 17-0269/06

Product: Connector

Models: WPI-0302M16 - IP68 3-poles Electrical Cable Joint (2 Way) 16A - 250 V
WPT-0303M16 - IP68 3-poles Electrical Cable Joint (3 Way) 16A - 250 V
WPA-0310M10 - IP68 3-poles Electrical Cable Splitter (1 to 9 Way) 10A -250 V DC/AC

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: 2017-09-26

Distribution list: 1xTESTROOF

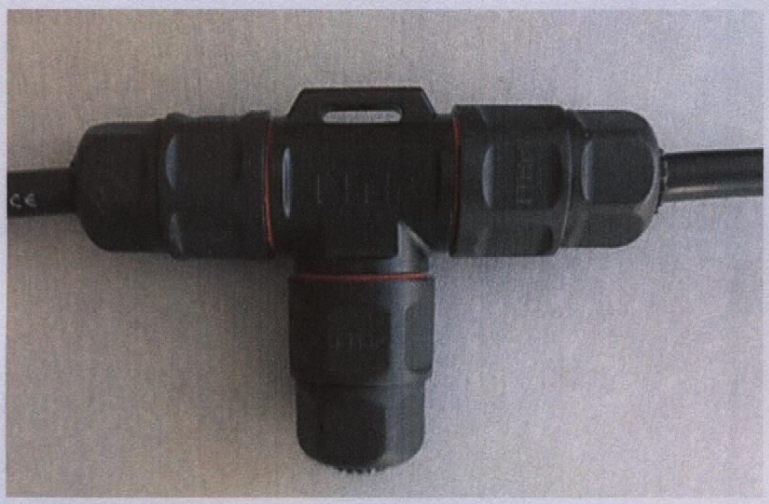
1x Producer

1x ECM

The tests have been carried out by virtue of the following documents:
- Order ev. Number LVD117466 at TESTROOF on 2017-07-09
- Contract Number LVD117466 dated 2017-07-09

I. Description of product

WPT-0303M16 - IP68 3-poles Electrical Cable Joint (3 Way) 16A - 250 V



WPI-0302M16 - IP68 3-poles Electrical Cable Joint (2 Way) 16A - 250 V

WPA-0310M10 - IP68 3-poles Electrical Cable Splitter (1 to 9 Way) 10A -250 V DC/AC

II. Technical Characteristics

WPI-0302M16 - IP68 3-poles Electrical Cable Joint (2 Way) 16A - 250 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 : IP68
Mold Material : PA6
Contact/Terminal Material : Nickel-Plated Brass
Seal Material : EPDM 70Sh A

WPT-0303M16 - IP68 3-poles Electrical Cable Joint (3 Way) 16A - 250 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 : IP68
Mold Material : PA6
Contact/Terminal Material : Nickel-Plated Brass
Seal Material : EPDM 70Sh A

WPA-0310M10 - IP68 3-poles Electrical Cable Splitter (1 to 9 Way) 10A -250 V DC/AC

*Cable Size : 3*1.5 mm²*
Min. Cable Outside Diameter: 5.5 mm
Max. Cable Outside Diameter: 8.5 mm
Contact Resistance : 10 mΩ
Insulation Structure : 500 MΩ at 500VDC
Temperature Rating : -40°C + 85°C
IP Rating : IP68
Mold Material : PA6
Contact/Terminal Material : Nickel-Plated Brass
Seal Material : EPDM 70Sh A

III. Tested sample

- number of samples: 1
- date of submission: 2017-09-26
- 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.

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. 17-0269/06/T1
- Particular protocol No. 17-0269/06/T2
- Particular protocol No. 17-0269/06/T3
- Particular protocol No. 17-0269/06/T4
- Particular protocol No. 17-0269/06/T5
- Particular protocol No. 17-0269/06/T6
- Particular protocol No. 17-0269/06/T7