

TESTROOF ENGINEERING AND CERTIFICATION CO.LTD  
İnönü Mah. Kayışdağı Cad. No:150/3 Ataşehir , İstanbul,Turkey

## TEST REPORT

### No. 15-0248/01

**Product:** Connectors

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

**Verification to:** 2104/35/EU EN 60309-1:1999/A1:2007/AC:2014

**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:** 2015-09-04

**Distribution list:** 1x TESTROOF  
1x Producer



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

- Order ev. Number LVD115372 at TESTROOF on 2015-08-21
- Contract Number LVD115372 dated 2015-08-21

## **I. Description of product**

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

Cable Size : 3\*1.5 mm<sup>2</sup>

Min. Cable Outside Diameter : 6 mm

Max. Cable Outside Diameter :10 mm



## **II. Tested sample**

- number of samples: 1
- date of submission: 2015-04-09
- Model No.: WPI-0302M15

Inspection, tests and evaluations were performed in TESTROOF ENGINEERING AND CERTIFICATION CO.LTD., İnönü Mah. Kayışdağı Cad. No:150/3 Ataşehir, İstanbul,Turkey by testing engineer Elec. Eng. Ergün Cengiz

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

## **III. 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. 15-0248/01/T1
- Particular protocol No. 15-0248/01/T2
- Particular protocol No. 15-0248/01/T3
- Particular protocol No. 15-0248/01/T4

#### IV. The list of used basis

- Order ev. Number LVD115372 at TESTROOF on 2015-08-21
- Contract Number LVD115372 dated 2015-08-21
- Particular protocol No. 15-0248/01/T1
- Particular protocol No. 15-0248/01/T2
- Particular protocol No. 15-0248/01/T3
- Particular protocol No. 15-0248/01/T4
- EN 60309-1:1999/A1:2007/AC:2014 Plugs, socket-outlets and couplers for industrial purposes - Part 1: General requirements

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





# TESTROOF ENGINEERING AND CERTIFICATION CO.LTD

İnönü Mah. Kayışdağı Cad. No:150/3 Ataşehir, İstanbul,Turkey

Particular protocol No:	15-0248/01/T1	Page1/1		
Inspection according to :	EN 60309-1:1999/A1:2007/AC:2014 art 19.2			
Product / Type / Serial Number :	WPI-0302M15			
Examination Engineer:	Ergün Cengiz			
Date of Inspection	2015-09-04			
Measuring instruments:				
Designation	Evidentiary Number	Number of calibration protocol	Period of validity	Comment
CE Multitester MI 2094	NFS1428001	14C01184	08.2016	

**Requirement (\*):** EN 60309-1:1999/A1:2007/AC:2014 art 19.2 Insulation resistance test

The insulation resistance is measured with a d.c. voltage of approximately 500 V applied, the measurement being made 1 min after application of the voltage.

– The insulation resistance shall be not less than 5 MΩ.

### Method:

For socket-outlets and connectors, the insulation resistance is measured consecutively:

- between all poles connected together and the body, the measurement being made with and also without a plug-in engagement;
- between each pole in turn and all others, these being connected to the body, with a plug-in engagement
- between any metal enclosure and metal foil in contact with the inner surface of its insulating lining, if any, a gap of approximately 4 mm being left between the metal foil and the edge of the lining

### Test Results

Used On (500V DC)	Insulation Resistance		
	1	2	3
L-N	999.9	999.9	999.9
L-PE	999.9	999.9	999.9
N-PE	999.9	999.9	999.9

**Status:** The measured resistance between the PE terminal and the points of test not to exceed the values given in standard.

**Uncertainty of measure:** It was not required.

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



Control:  
Murat Koças



TESTROOF ENGINEERING AND CERTIFICATION CO.LTD

İnönü Mah. Kayışdağı Cad. No:150/3 Ataşehir, İstanbul,Turkey

Particular protocol No:	15-0248/01/T2	Page1/1		
Inspection according to :	EN 60309-1:1999/A1:2007/AC:2014 art 19.3			
Product / Type / Serial Number :	WPI-0302M15			
Examination Engineer:	Ergün Cengiz			
Date of Inspection	2015-09-04			
Measuring instruments:				
Designation	Evidentiary Number	Number of calibration protocol	Period of validity	Comment
CE Multitester MI 2094	NFS1428001	14C01184	08.2016	

**Requirement (\*):** EN 60309-1:1999/A1:2007/AC:2014 art 19.3 Voltage Test

**Method:**

A voltage of substantially sine-wave form, having a frequency of 50 Hz/60 Hz and the value shown in table 5, is applied for 1 min between the parts indicated in 19.2.1 and 19.2.2.

Insulation voltage of the accessory <sub>1</sub> (V)	Test Voltage (V)
Up to and including 50	500
over 50 up to and including 415	2 000 <sub>2</sub>
over 415 up to and including 500	2 500
over 500	3 000

1) The insulation voltage is at least equal to the highest rated operating voltage.  
2) This value is increased to 2 500 V for metal enclosures lined with insulating material


**Test Results :**

Used On (2000V) R.I	Current in test circuit(mA) / Number of Measure					
	1	2	3	4	5	6
Plastic –Live	0.0	0.0	0.0	0.0	0.0	0.0
Plastic –Live	0.0	0.0	0.0	0.0	0.0	0.0

**Status:** No flashover or breakdown shall occur during the test

**Uncertainty of measure:** It was not required.

Examination Engineer:  
Name : Elec. Eng. Ergün-Cengiz  
Signature:



Control:  
Murat Koçaş





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İnönü Mah. Kayışdağı Cad. No:150/3 Ataşehir, İstanbul,Turkey

Particular protocol No:	15-0248/01/T3	Page1/2		
Inspection according to :	EN 60309-1:1999/A1:2007/AC:2014 art 22			
Product / Type / Serial Number :	WPI-0302M15			
Examination Engineer:	Ergün Cengiz			
Date of Inspection	2015-09-04			
Measuring instruments:				
Designation	Evidentiary Number	Number of calibration protocol	Period of validity	Comm ent
CE Multitester MI 2094	NFS1428001	14C01184	08.2016	
Testo Thermometer 905-T2	NFS1428003	E 6102085	08.2016	

**Requirement (\*)**:EN 60309-1:1999/A1:2007/AC:2014 art 22

The temperature rise of terminals shall not exceed 50 K

**Method:**

The duration of the test is:

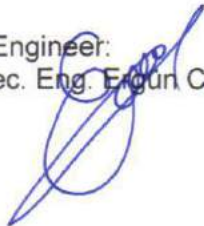
- 1 h for accessories having a rated current not exceeding 32 A;
- 2 h for accessories having a rated current exceeding 32 A but not exceeding 125 A;
- 3 h for accessories having a rated current exceeding 125 A.

The temperature is determined by means of melting particles, colour-changing indicators, or thermocouples which are so chosen and positioned that they have negligible effect on the temperature being determined.

Preferred rated current A		Test current A	Cross-sectional area(s) of the conductors A	
Series I	Series II		Plugs, appliance inlets Connectors mm <sup>2</sup>	Socket-outlets mm <sup>2</sup>
16	20	22	2,5 <sup>1)</sup>	4 <sup>1)</sup>
32	30	42	6 <sup>1)</sup>	10
63	60	rated current	16	25
125	100	rated current	50	70
250	200	rated current	150	185 <sup>2)</sup>

1) For accessories having a rated operating voltage not exceeding 50 V, the values are increased to 10.  
2) 150 mm<sup>2</sup> for 200 A accessorie of series II.

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




Control:  
Murat Koçaş



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İnönü Mah. Kayışdağı Cad. No:150/3 Ataşehir, İstanbul,Turkey

Particular protocol No:	15-0248/01/T3	Page2/2		
Inspection according to :	EN 60309-1:1999/A1:2007/AC:2014 art 22			
Product / Type / Serial Number :	WPI-0302M15			
Examination Engineer:	Ergün Cengiz			
Date of Inspection	2015-09-04			
Measuring instruments:				
Designation	Evidentiary Number	Number of calibration protocol	Period of validity	Comm ent
CE Multitester MI 2094	NFS1428001	14C01184	08.2016	
Testo Thermometer 905-T2	NFS1428003	E 6102085	08.2016	

**Test Results :**

Used On	Before Operation Temperature (C)	After Operation Temperature (C)	Measured Temperature Rise (K)	Maximum Temperature Rise (K)
Thermoplastic Body	24.0	35.0	11.0	50

**Status :** The measured values was not exceed maximum temperature rise values.

**Uncertainty of measure:** It was not required

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



Control  
Murat Koçuş



TESTROOF ENGINEERING AND CERTIFICATION CO.LTD

İnönü Mah. Kayışdağı Cad. No:150/3 Ataşehir, İstanbul,Turkey

Particular protocol No:	15-0248/01/T4	Page1/1		
Inspection according to :	EN 60309-1:1999/A1:2007/AC:2014 art 24.3			
Product / Type / Serial Number :	WPI-0302M15			
Examination Engineer:	Ergün Cengiz			
Date of Inspection	2015-09-04			
Measuring instruments:				
Designation	Evidentiary Number	Number of calibration protocol	Period of validity	Comm ent
Tape Measure	NFS0153002	15M150147	2016/07	

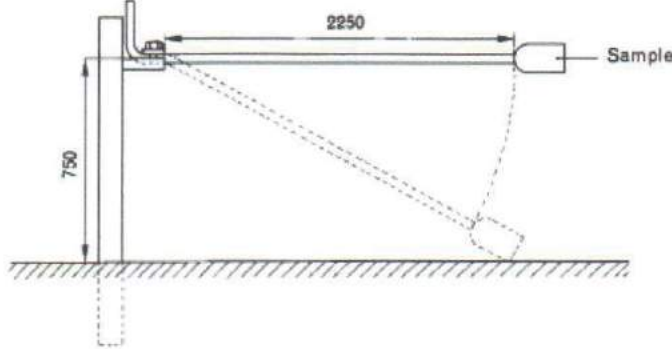
**Requirement (\*)**:EN 60309-1:1999/A1:2007/AC:2014 art 24.3  
Arrangement for mechanical strength test for plugs and connectors

**Method:**

The free end of the cable, which is about 2,25 m long, is fixed to a wall at a height of 75 cm above the floor, as shown in figure 8.

The sample is held so that the cable is horizontal and then it is allowed to fall on to a concrete floor. This is done eight times, the cable being rotated through 45° at its fixing each time.

After the test, the samples shall show no damage within the meaning of this standard; in particular, no part shall have become detached or loosened



**Test Results :** No Damage

**Status:** No part shall have become detached or loosened

**Uncertainty of test:** It was not required

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



Control:  
Murat Koçaş