

## FINAL REPORT

### No. 15-0248/001

**Product:** Connectors

**Type designation:** WPT-0303M15  
IP68 3-poles Electrical T Cable Joint (3 Way) 15A - 240 V  
WPI-0302M15  
IP68 3-poles Electrical Cable Joint (2 Way) 15A - 240 V  
WPA-0310M10  
IP68 3-poles Electrical Cable Splitter (1 to 9 Way) 10A -250 V DC/AC

**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

Connectors



Models:	Description:
WPT-0303M15	IP68 3-poles Electrical T Cable Joint (3 Way) 15A - 240 V
WPI-0302M15	IP68 3-poles Electrical Cable Joint (2 Way) 15A - 240 V
WPA-0310M10	IP68 3-poles Electrical Cable Splitter (1 to 9 Way) 10A -250 V DC/AC

## II. Assessment of the submitted technical documentation

See Table 2

The submitted technical documentation is sufficient and appropriate for assessment of conformity with the technical requirements of Council Directive, 2014/35/EU (EX-2006/95/EC) of 26 February 2014 ( Electrical Equipment Used Certain Voltage Limits)



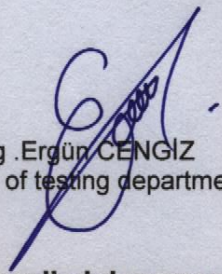
### III. Assessment of product conformity

See Table 1

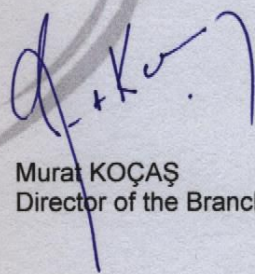
### IV. Conclusion

It results from the Inspection of the submitted technical documentation and carried out verifications and examinations that the said product and it's variants have been designed and manufactured in line with technical requirements of Council Directive 2014/35/EU (EX-2006/95/EC) (Low Voltage Directive).

Responsible for correctness:

  
Elec. Eng. Ergün CENGİZ  
Manager of testing department



  
Murat KOÇAŞ  
Director of the Branch

#### List of applied documentation:

- Order ev. Number LVD115372 at TESTROOF on 2015-08-21
- Contract Number LVD115372 dated 2015-08-21
- Test report No. 15-0248/01
- Test report No. 15-0248/02
- Test report No. 15-0248/03
- EN 60309-1:1999/A1:2007/AC:2014 Plugs, socket-outlets and couplers for industrial purposes – Part 1: - General requirements
- User Manual
- Material Sheets for all models
- Electrical diagram all models
- Technical drawing all models
- Certificates and EC Declarations of conformity of all electric and mechanical components



TESTROOF ENGINEERING AND CERTIFICATION CO.LTD

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

Particular protocol No:	15-0248/02/T1	Page1/1		
Inspection according to :	EN 60309-1:1999/A1:2007/AC:2014 art 19.2			
Product / Type / Serial Number :	WPT-0303M15			
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 Koçaş

<b>Principal elements of the safety objectives for electrical equipment designed for use within certain voltage limits</b>				Table 1
Pursuant Annex I to Directive 2014/35/EU (EX-2006/95/EC) of 26 February 2014 on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits.				
<b>Technical requirements:</b>		<b>Applied standart, technical provision:</b>	<b>Documents:</b>	<b>Evaluation:</b>
<b>1. General conditions:</b>				
a)	The essential characteristics, the recognition and observance of which will ensure that electrical equipment will be used safely and in applications for which it was made, shall be marked on the equipment, or, if it is not possible, on an accompanying notice.	EN 60309-1:1999/A1:2007/AC:2014	Technical requirements assessment report no. 15-0248/01, 15-0248/02, 15-0248/03	+
b)	The manufacturers or brand name or trade mark should be clearly printed on the electrical equipment or, where that is not possible, on the packaging.	EN 60309-1:1999/A1:2007/AC:2014	Technical requirements assessment report no. 15-0248/01, 15-0248/02, 15-0248/03	+
c)	The electrical equipment, together with its component parts should be made in such a way as to ensure that it can be safely and properly assembled and connected.	EN 60309-1:1999/A1:2007/AC:2014	Technical requirements assessment report no. 15-0248/01, 15-0248/02, 15-0248/03	+
d)	The electrical equipment should be so designed and manufactured as to ensure that protection against the hazards set out in points 2 and 3 of this annex is assured providing that the equipment is used in applications for which it was made and is adequately maintained.	EN 60309-1:1999/A1:2007/AC:2014	Technical requirements assessment report no. 15-0248/01, 15-0248/02, 15-0248/03	+
<b>2. Protection against hazards arising from the electrical equipment</b>				
Measures of a technical nature should be prescribed in accordance with point 1, in order to ensure:				
a)	The persons and domestic animals are adequately protected against danger of physical injury or other harm which might be caused by electrical contact direct or indirect,	EN 60309-1:1999/A1:2007/AC:2014	Technical requirements assessment report no. 15-0248/01	+
b)	That temperatures, arcs or radiation which cause a danger, are not produced	EN 60309-1:1999/A1:2007/AC:2014	report no. 15-0248/01	



Evaluation  
+ documentation is complete and satisfactory  
- documentation is incomplete or unsatisfactory  
x documentation is not needed for the ordered activities

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

Particular protocol No:	15-0248/02/T2	Page1/1		
Inspection according to :	EN 60309-1:1999/A1:2007/AC:2014 art 19.3			
Product / Type / Serial Number :	WPT-0303M15			
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	0.1	0.0	0.0	0.1	0.0	0.0
Plastic –Live	0.0	0.0	0.0	0.1	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 Koças

Principal elements of the safety objectives for electrical equipment designed for use within certain voltage limits Pursuant Annex I to Directive 2014/35/EU (EX-2006/95/EC) of 26 February on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits. (codified version)		Table 1
Technical requirements:	Applied standard, technical provision:	Documents:
c) That persons, domestic animals and property are adequately protected against nonelectrical dangers caused by the electrical equipment which are revealed by experience	EN 60309-1:1999/A1:2007/AC:2014	Technical requirements assessment report no. 15-0248/01, 15-0248/02, 15-0248/03
d) That the insulation must be suitable for foreseeable conditions.	EN 60309-1:1999/A1:2007/AC:2014	Technical requirements assessment report no. 15-0248/01, 15-0248/02, 15-0248/03
<b>3. Protection against hazards which may be caused by external influences on the electrical equipment</b> Technical measures are be laid down in accordance with point 1, in order to ensure:		
a) That the electrical equipment meet the expected mechanical requirements in such a way that persons, domestic animals and property are not endangered.	EN 60309-1:1999/A1:2007/AC:2014	Technical requirements assessment report no. 15-0248/01, 15-0248/02, 15-0248/03
b) That the electrical equipment shall be resistant to non-mechanical influences in expected environmental conditions in such a way that persons, domestic animals and property are not endangered.	EN 60309-1:1999/A1:2007/AC:2014	Technical requirements assessment report no. 15-0248/01, 15-0248/02, 15-0248/03
c) That the electrical equipment shall not endanger persons, domestic animals and property in foreseeable conditions of overload.	EN 60309-1:1999/A1:2007/AC:2014	Technical requirements assessment report no. 15-0248/01, 15-0248/02, 15-0248/03



Evaluation  
+ documentation is complete and satisfactory  
- documentation is incomplete or unsatisfactory  
x documentation is not needed for the ordered activities

Technical documentation		Table 2	
Pursuant to Article 3 of Annex IV to Directive 2014/35/EU (EX-2006/95/EC) of 26 February on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits. (codified version)			
	Documents:	Evaluation :	
a)	A general description of electrical equipment	<ul style="list-style-type: none"> <li>- Instruction manuals</li> <li>- Overall drawing</li> <li>- Drawing No.</li> <li>- Parts List.</li> <li>- Electrical Scheme</li> </ul>	+
b)	Conceptual design and manufacturing drawings, schemes of components , sub-assemblies, circuits, etc.,	<ul style="list-style-type: none"> <li>- Overall drawing</li> <li>- Drawing No.</li> <li>- Parts List.</li> <li>- Electrical Scheme</li> </ul>	+
c)	Descriptions and explanations necessary for the understanding of said drawings and schemes and the operation of the electrical equipment.	Instruction Manual	+
d)	A list of the standarts applied in full or in part, and descriptions of the solutions adopted to satisfy the safety aspects of this directive where standarts have not been applied	List of Standarts	+
e)	Results of Design calculations made, examinations carried out, etc.,	EC declerations of conformity for selected parts	+
f)	Test reports.	Test Report 15-0248/01 Test Report 15-0248/02 Test Report 15-0248/03	+



Evaluation  
 + documentation is complete and satisfactory  
 - documentation is incomplete or unsatisfactory  
 x documentation is not needed for the ordered activities



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

Particular protocol No:	15-0248/02/T3	Page1/2		
Inspection according to :	EN 60309-1:1999/A1:2007/AC:2014 art 22			
Product / Type / Serial Number :	WPT-0303M15			
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	
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.

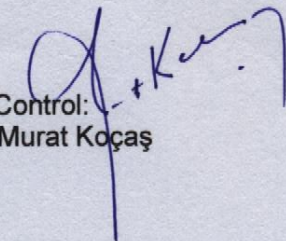
The temperature is determined by means of melting particles, colour-changing indicators, or thermocouples which are so chosen and positioned that they have negligible effect on the temperature being determined.

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 accessory of series II.

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



Control:   
Murat Koç

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Particular protocol No:	15-0248/02/T3	Page2/2		
Inspection according to :	EN 60309-1:1999/A1:2007/AC:2014 art 22			
Product / Type / Serial Number :	WPT-0303M15			
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	
Testo Thermometer 905-T2	NFS1428003	E 6102085	08.2016	

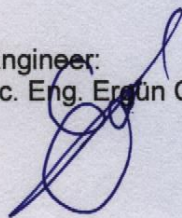
**Test Results :**

Used On	Before Operation Temperature (C)	After Operation Temperature (C)	Measured Temperature Rise (K)	Maximum Temperature Rise (K)
Thermoplastic Body	24.0	36.0	12.0	50

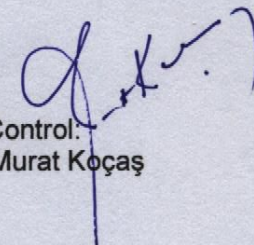
**Status :** The measured values was not exceed maximum temperature rise values.

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

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



Control:  
Murat Koçuş



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Particular protocol No:	15-0248/02/T4	Page1/1		
Inspection according to :	EN 60309-1:1999/A1:2007/AC:2014 art 24.3			
Product / Type / Serial Number :	WPT-0303M15			
Examination Engineer:	Ergün Cengiz			
Date of Inspection	2015-09-04			
Measuring instruments:				
Designation	Evidentiary Number	Number of calibration protocol	Period of validity	Comment
Tape Measure	NFS0153002	15M150147	2016/07	

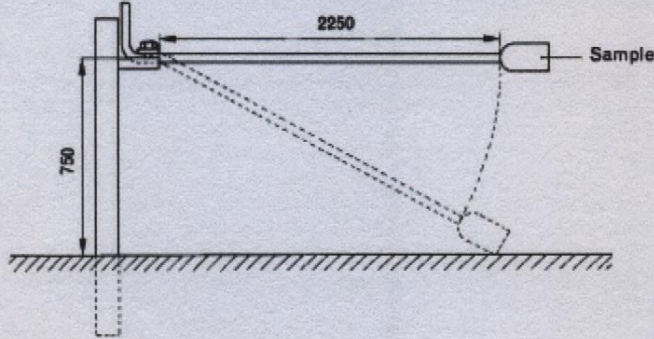
**Requirement (\*)**:EN 60309-1:1999/A1:2007/AC:2014 art 24.3  
Arrangement for mechanical strength test for plugs and connectors

**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 Koçuş