TEST REPORT
INSTRUMENT
EN 60998-1:2004

Report Reference No. ..... :	94497-1TRFINS	
Tested by..... :	Fabio Mauri	
Verified by ..... :	Alessio Pelizzoni	
Date of issue ..... :	2007-10-19	
Testing Laboratory..... :	**Nemko Spa**	
Address ..... :	Via del Carroccio 4, I-20046 Biassono MI (Italy)	
Testing location/ procedure..... :	Full application of Harmonised standards ☒ Partial application of Harmonised standards ☐ Other standard testing methods ☐ Non-standard testing methods ☐ SINAL accredited test report ☐	
Testing location/ address ..... :	Nemko Spa via del Carroccio snc, I-20046 Biassono MI (Italy)	
Applicant's name..... :	**Techno srl**	
Address ..... :	via Bancora e Rimoldi , 27- 22070 Guanzate (CO) Italy	
Test specification		
Standard..... :	EN 60998-1:2004	
Test procedure ..... :	Nemko WM L0177	
Non-standard test method……..:	N/A	
Test Report Form No. ..... :	TRF EN60998-1	
TRF Originator ..... :	Nemko Spa	
Master TRF ..... :	2005-04	

Test item description ..... :	Connector box system
Trade Mark..... :	Techno
Manufacturer ..... :	Techno S.r.l.
Model.....:	TH 200
Ratings ..... :	T=85°C, 16A, 1.5°

Test Report No. : 94497-1TRFINS	2007-10-19 Date of issue

Type / Model : TH200

Equipment : Connector box system

Applicant : **Techno srl**

Address : via Bancora e Rimoldi , 27- 22070 Guanzate (CO) Italy

Manufacturer : **Techno srl**

Address : via Bancora e Rimoldi , 27- 22070 Guanzate (CO) Italy

Test Result (according to the standards on page 4)	**POSITIVE**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

1 TEST STANDARDS

The tests were performed according to following standards:

EN/IEC 60998-1:04	Connecting devices for low-voltage circuits for household and similar purposes -- Part 1: General requirements (Only §15 and 16)
Nemko WM L0177	Nemko S.p.A. Technical Procedure Use of measuring equipment to perform standards tests
Nemko WM L1002	Measurement Uncertainty - Policy and Statement

2 SUMMARY

GENERAL REMARKS:

The Temperature rise test was performed in a oven in accordance with clauses 15 of standard EN 60998-1.
The Resistance to heat was performed in a oven in accordance with clauses 16 of standard EN 60998-1.

FINAL ASSESSMENT:

The equipment under test

P - Pass, Comply with the request of the standard

F - Fail, Not compdoes not fulfil the protection requirements cited on page 4.

N - Not applicable

Date of receipt of test sample	:	2007-10-02
Testing commenced on	:	2007-10-09
Testing concluded on	:	2007-10-19

2.1 Power supply system utilised

Power supply voltage : ■ 230V/50 Hz / 1ϕ o 115V/60Hz / 1ϕ
o 400V/50 Hz 3PE o 400V/50 Hz 3NPE
o 12 V DC o Not relevant

2.2 Short description of the Equipment under Test (EuT)

The E.U.T. is a Connector box system.

Number of tested samples: 3

Serial number:

2.3 EuT operation mode:

The E.U.T. during the test work on normal use with max current load and with one ambient at the max temperature.

2.4 EuT configuration:

EUT was equipped with its specific cable during the tests.

1.5mm^2

2.5 Performance level

The EUT complies with all the tests described on paragraph 15 and 16

3 TEST ENVIRONMENT

3.1 Address of the test laboratory

Nemko Spa
Via Del Carroccio snc
I – 20046 Biassono MI – ITALY

3.2 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	17-28°C
Humidity:	30 ÷ 60%
Atmospheric pressure:	860-1060 hPa

3.3 Definitions of symbols used in this test report

P = Pass, **F** = Fail, **N** = Not applicable. Placed in the column to the right (Verdict)

3.4 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report according to Nemko SpA Technical Procedure VML1002 and is documented in the quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.
Hereafter the best measurement capability for Nemko Spa laboratory is reported:

6.2 IP Grade Protection

6.2.1 Water Flow

The measurement uncertainty is the same defined by calibration certificates, giving the table.

Range	Measurement Uncertainty
Water flow defined in EN 60529	± 2 %

6.2.2 Probe Dimension

The measurement uncertainty is the same defined by calibration certificates, giving the table.

Range	Measurement Uncertainty
Probe dimensions defined in EN 60529	$\pm 2 \cdot 10^{-2} \cdot L_m/m$

This table has been extracted from the relevant Technical Procedure VML1002

4 TEST CONDITIONS AND RESULTS

15	TEMPERATURE RISE		P
	Terminal ..... :	Multiway	X
	T marking (°C)..... :	☐ Yes 85(°C):	P
	Largest cross-sectional area (mm²) ..... :	***1.5mm²***	X
	Conductors..... :	***1m***	P
	Torque (Nm); table number ..... :		X
	Rated connecting capacity (mm²)..... :	***1.5mm²***	X
	Test current (A) ..... :	***17,5A***	X
	Temperature rise does not exceed 45 K (1)..... :	***7℃***	P
	Temperature rise does not exceed 45 K (2)..... :		-
	Temperature rise does not exceed 45 K (3)..... :		-

16	RESISTANCE TO HEAT		P
16.2	Heating cabinet: no damage, after the test, markings still legible; test temperature (°C)	☐ T + 45 °C = 130℃	P
16.3	Ball-pressure test (125 °C) for parts necessary to retain current-carrying parts in position	**Connector**	P
	Ball-pressure test for parts not necessary to retain current-carrying parts in position; test temperature (°C) ..... :	☐ 70 °C **(Enclosure)**	P
	Diameter of impression not exceeding 2 mm ..... :		P

5 USED TEST EQUIPMENT

Equipment used for testing are recorded and saved into the company archive as instruments 94497-INS.doc

It will be made available if requested.

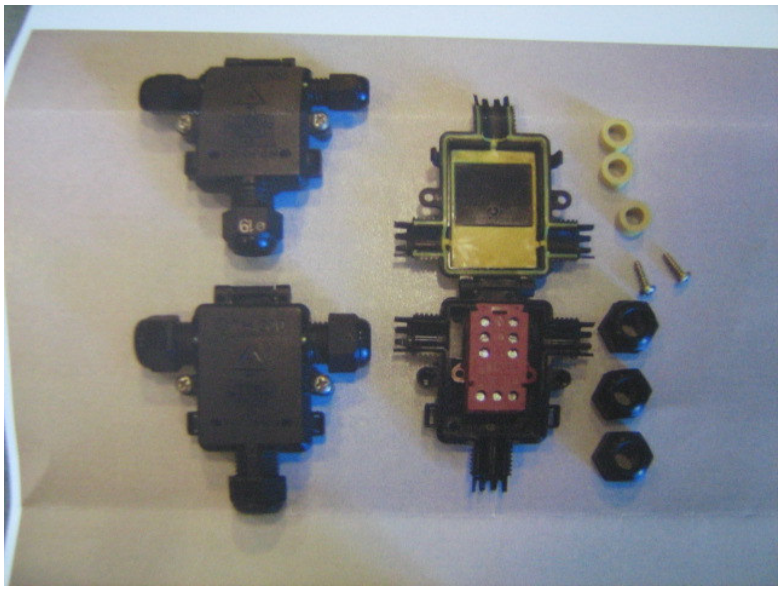
6 Finals Results:

After the test according §15 the Δt measured doesn't exed the 45K

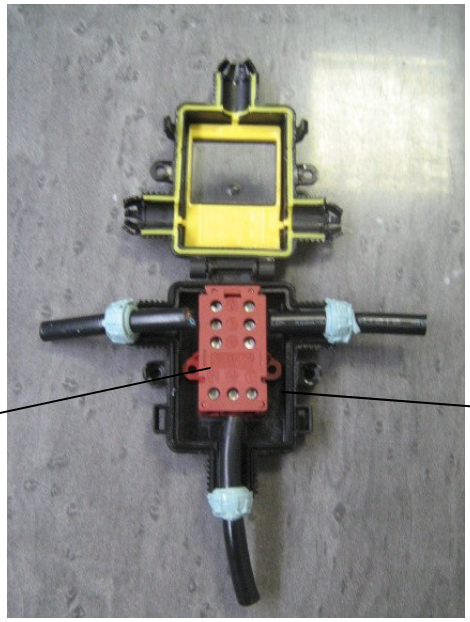
After the heat test according §16.2 there is not acces to live part even if the standard test finger is applied with a force of 5N.

The connector models TH200 are considered comply with § 15 and 16 of EN60998-1:2004.

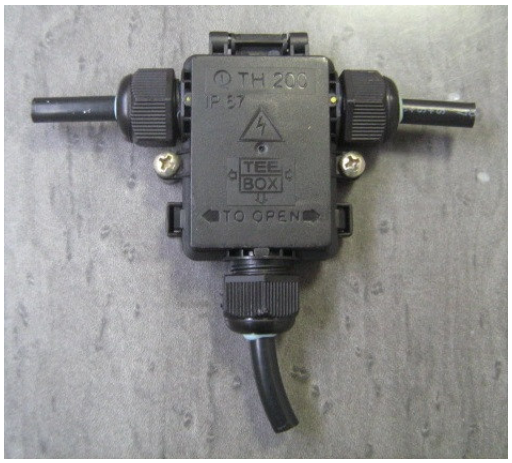
4 PHOTOS

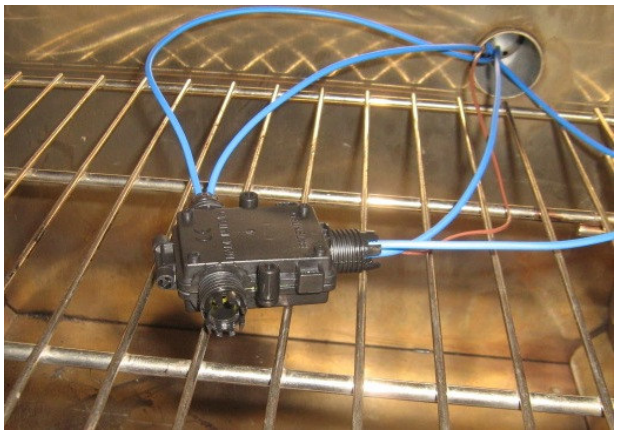


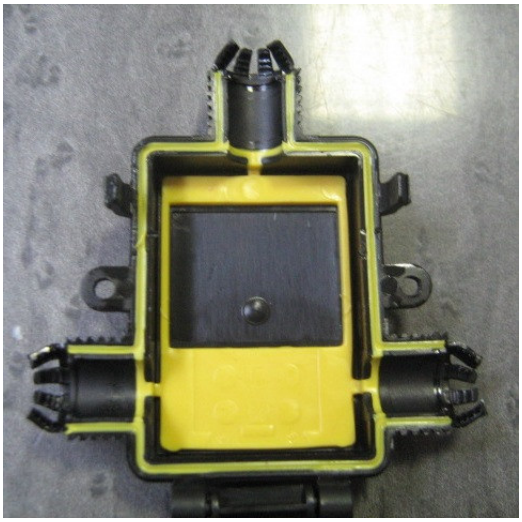
Connector models TH200 comply with § 15 and 16 of EN60998-1:2004. (T=85°C, 16A, 1.5°)

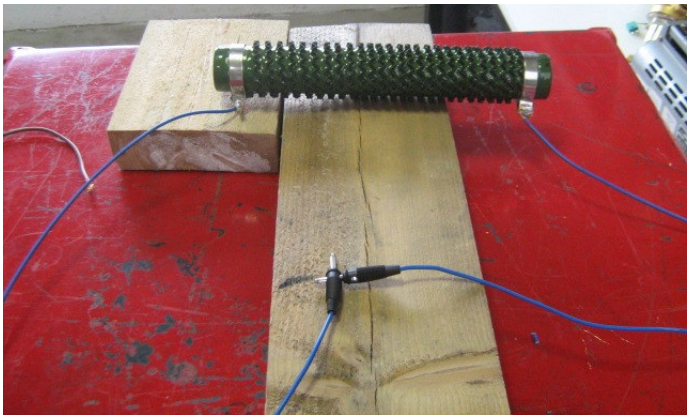


E.u.t. general view,









Load used for Temperature rise test