



Report No. 158448R1TRFSAF

**PARTIAL TEST REPORT**  
**EN 60998-1:2004**  
**Connecting devices for low-voltage circuits**  
**for household and similar purposes**

Reference number: 158448R1TRFSAF

E.U.T.: Connector box system  
 Mod. TH631

Applicant's name: **Techno S.r.l.**

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

Compiled by (+ signature): Cristian Simone



Approved by (+ signature): Fabio Mauri



Date of issue: 2010-10-28

**Testing Laboratory:** Nemko S.p.a.

Address: Via del Carroccio ,4 – I 20046 Biassono

Applied Standard Only clauses 15 and 16 of EN 60 998-1:2004 as required by manufacturer

Listed under Directive 2006/95/EC

Non-standard test method.....: N/A

**Test Results:** See page 2**Test Report Form No:** TAS\_01\_2008-04-09

TRF Originator: Nemko S.p.a.

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

This document is a test report to be included in the Technical Documentation File the manufacturer or his representative in the EU shall prepare and maintain available to the national authorities to give them the possibility to evaluate conformity of the product to the LVD 2006/95/EC

*Il presente documento costituisce una relazione di prova da includere nella documentazione tecnica che il fabbricante o il suo mandatario stabilito nella Comunità deve preparare e mantenere a disposizione delle autorità nazionali ai fini ispettivi per consentire di valutare la conformità del prodotto ai requisiti della direttiva Bassa Tensione 2006/95/CE.*



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## Safety -- TEST REPORT

Test Report No. : 158448R1TRFSAF	2010-10-28
	Date of issue

Test item description:	Connector box system
Trade Mark .....	Techno
Manufacturer.....	Techno S.r.l.
Model/Type reference.....	TH631
Ratings.....	Max 24 A, T 35, 2,5 mm <sup>2</sup> , IP65

Test Results according to the standards of page 1:	<b>Positive</b>
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### General Comments

The CE marked component has been declared by its manufacturer in conformity with the applicable national legislation and it is given the presumption to satisfy the standard listed in table on page 9. It is responsibility of product manufacturer to verify conformity of the component with a.m. standard. Certificates/CE conformity declarations/manufacturers declarations of listed components shall be included in the TCF of the product.

*Il componente marcato CE è stato dichiarato dal suo costruttore conforme alla legislazione nazionale vigente; pertanto si presume soddisfare i requisiti della norma di riferimento indicata nella tabella a pagina 9. La verifica di questa conformità è responsabilità del fabbricante del prodotto.*

*I certificati/dichiarazioni di conformità/dichiarazioni del costruttore dei componenti indicati devono essere inserite nella documentazione tecnica del prodotto.*

### Additional Comments relevant to Test Results:

According to the directive 2006/95/EC, certificates or CE conformity declarations of components with asterisk of table on page 9 shall be included in the TCF.

*La documentazione tecnica ai sensi della direttiva 2006/95/CE deve essere integrata con il certificato e/o la dichiarazione di conformità dei componenti indicati con asterisco nella tabella a pagina 7.*



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**Copy of marking plate:**

Model: TH631

Max 24 A T 35,

2,5 mm<sup>2</sup> IP65**General product information:**

The equipment is a connector box system. A silicone cable of 2,5 mm<sup>2</sup> is used to perform electrical connections. Internal wirings were not considered under test.

According to the customer request test has been performed with 6 poles and an current of 24A.

**Possible test case verdicts:**

- test case does not apply to the test object..... : N (Not Applicable)
- test object does meet the requirement..... : P (Pass)
- test object does not meet the requirement ..... : F (Fail)

**Testing** .....

Date of receipt of test item..... : 2010-10-18

Date(s) of performance of tests ..... : 2010-10-20 to 2010-10-22



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**Statement of the measurement uncertainty:**

**Note:** The following Nemko technical procedures were also applied during testing:

- WML0177 General routines for using instruments at Nemko.
- WML1002: Measurement Uncertainty – Policy and Statement.



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Cl.	Requirement – Test	Result – Remark	Verdict
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15	<b>TEMPERATURE RISE AND ELECTRICAL PERFORMANCES</b>		P
15.1 to 15.4	Terminal .....	Multiway	—
	T marking (°C) .....	35	P
	Largest cross-sectional area (mm <sup>2</sup> ) .....	2,5	—
	Conductors .....	1 m	P
	Torque (Nm); table number .....		—
	Rated connecting capacity (mm <sup>2</sup> ) .....	2,5	—
	Test current (A) .....	24A	—
	Temperature rise does not exceed 20 K (1) .....	See appended table 15A	P
	Temperature rise does not exceed 20 K (2) .....		N
	Temperature rise does not exceed 20 K (3) .....		N

16	<b>RESISTANCE TO HEAT</b>		P
16.1	Connecting devices are sufficiently resistant to heat		P
16.2	Heating cabinet test	See appended table 16.2	P
	After the test: no changes impairing further use and markings still legible		P
16.3	Ball-pressure test (IEC 60695-10-2) for parts necessary to retain current-carrying parts and parts of the earthing circuit in position	See appended table 16.3A	P
	Impression diameter not exceed 2 mm		P
	Ball-pressure test (IEC 60695-10-2) for parts not necessary to retain current-carrying parts and parts of the earthing circuit in position		N
	Impression diameter not exceed 2 mm		N



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Cl.	Requirement – Test	Result – Remark	Verdict
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15A	<b>TABLE: Temperature rise test</b>			P
	Model/type reference.....	: <b>TH631</b>		—
	Conductor length (m).....	: 1		—
	Measurement made at temperature (°C).....	: 35 (according to the customer request)		—
	Largest cross-sectional area (mm <sup>2</sup> ).....	: 2,5		—
	Test current (A).....	: 24		—
	Temperature rise dT of part/at:	Measured dT (K)		
		Sample 1	Sample 2	Sample 3
	Current carrying part of Output connector	13	—	—
	Insulating material of Output connector	11	—	—
	Current carrying part of Input connector	12	—	—
	Insulating material of Input connector	12	—	—
	Internal enclosure	6	—	—
	External enclosure	5	—	—
	* according to standard EN 60998-1 § 15.4			

16.2	<b>TABLE: Heating cabinet test</b>			P
	Test temperature (°C).....	: T + 45 = 35 + 45 = 80		
	Model/type reference	Sample 1	Sample 2	Sample 3
	<b>TH631</b>	80°C	—	—

16.3A	P
	—
Test temperature (°C)	T + 45 = 80
Part under test	Impression diameter (mm)
Current carrying part of input/output connector (brown)	0.9
Current carrying part of input connector (black)	0,8



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Cl.	Requirement – Test	Result – Remark	Verdict
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<b>TABLE: Components</b>	P
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Object / part No.	Manufacturer/ trademark	Type / model	Serial number
Enclosure (black)	Techno S.r.l.	PA66, V2, GWT 850°C, 125°C	Not provided

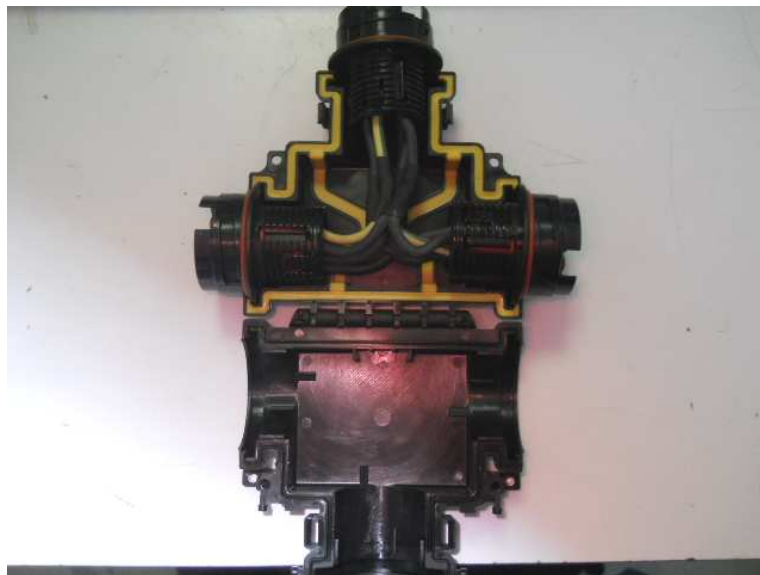
<b>TABLEa: Components used for the test</b>	P
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Object / part No.	Manufacturer/ trademark	Type / model	Serial number
Climatic chamber	Tabai Espec	PSL 4F	5102130
Internal wiring	Siltek S.p.a.	2,5 mm <sup>2</sup> , 180°C	Not provided

ANNEX1: PHOTOS	-
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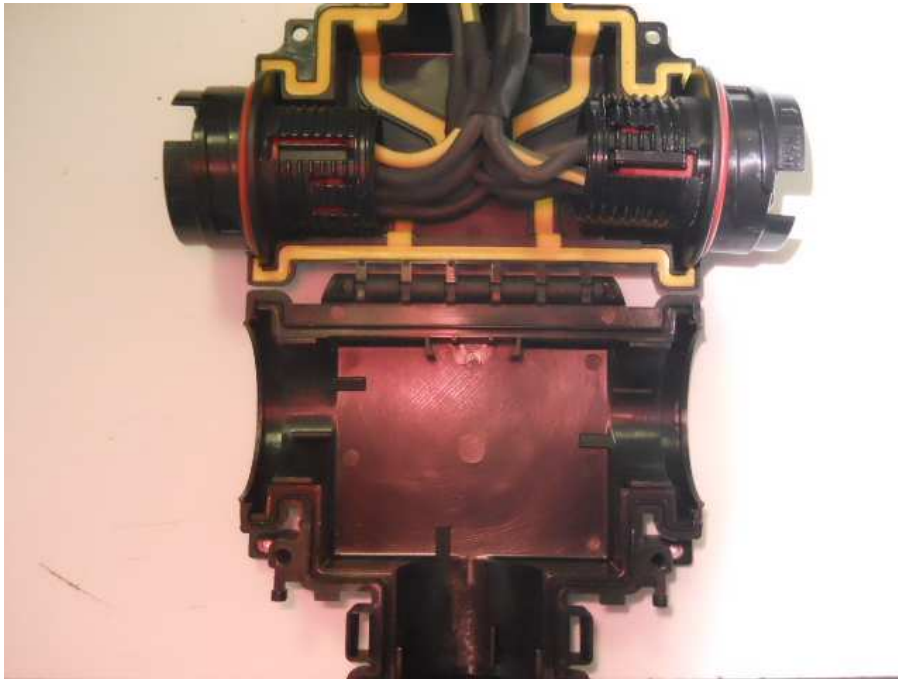


Connector model TH631 with 6 poles comply with § 15 and 16 of EN 60998-1:2004. (T=35°C, 24A, 2.5)



E.u.t. internal view





E.u.t. internal view



E.u.T inside climatic chamber