



Report No. 150496TRFSAF

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

Reference number: 150496TRFSAF

E.U.T.: TH370 connector
 Mod. TH370

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: 2010-09-16

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. : 150496TRFSAF | 2010-09-16 |
| | Date of issue |

| | |
|---------------------------|--|
| Test item description: | TH370 connector |
| Trade Mark | Techno |
| Manufacturer..... | Techno S.r.l. |
| Model/Type reference..... | TH370 |
| Part number | THB.370.X2X |
| Ratings..... | Max 16 A, 400V, T 85, 1,5 mm ² , IP65 |

| | |
|--|-----------------|
| Test Results according to the standards of page 1: | Positive |
|--|-----------------|

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.

Copy of marking plate:**General product information:**

The equipment is a TH370 connector. A silicone cable of 1,5 mm² is used to perform electrical connections. Internal wirings were not considered under test.

The equipment it allows to take current without disconnecting the power.

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..... : 2010-09-03

Date(s) of performance of tests : 2010-09-13 to 2010-09-15



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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 |
|-----|--------------------|-----------------|---------|
|-----|--------------------|-----------------|---------|

| 15 | TEMPERATURE RISE AND ELECTRICAL PERFORMANCES | | P |
|--------------|---|------------------------|---|
| 15.1 to 15.4 | Terminal | plug-socket | — |
| | T marking (°C) | 85 | P |
| | Largest cross-sectional area (mm ²) | 1,5 | — |
| | Conductors | 1 m | P |
| | Torque (Nm); table number | | — |
| | Rated connecting capacity (mm ²) | 1,5 | — |
| | Test current (A) | 16 | — |
| | Temperature rise does not exceed 45 K (1) | See appended table 15A | P |
| | Temperature rise does not exceed 45 K (2) | | N |
| | Temperature rise does not exceed 45 K (3) | | N |

| 16 | RESISTANCE TO HEAT | | 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 |
|-----|--------------------|-----------------|---------|
|-----|--------------------|-----------------|---------|

| 15A | TABLE: Temperature rise test | | | P |
|-----|--|-----------------|----------|----------------|
| | Model/type reference..... | : TH370 | | — |
| | Conductor length (m)..... | : 1 | | — |
| | Measurement made at temperature (°C)..... | : 85 | | — |
| | Largest cross-sectional area (mm ²)..... | : 2,5 | | — |
| | Test current (A)..... | : 16 | | — |
| | Temperature rise dT of part/at: | Measured dT (K) | | |
| | | Sample 1 | Sample 2 | Sample 3 |
| | Current carrying part of Output connector | 23 | — | — |
| | Insulating material of Output connector | 21 | — | — |
| | Current carrying part of Input connector | 22 | — | — |
| | Insulating material of Input connector | 22 | — | — |
| | Internal enclosure | 7 | — | — |
| | External enclosure | 5 | — | — |
| | | | | Allowed dT (K) |
| | | | | 45 |
| | | | | 45 |
| | | | | 45 |
| | | | | 45 |
| | | | | 45 |
| | | | | 45 |

| 16.2 | TABLE: Heating cabinet test | | | P |
|------|------------------------------------|--------------------------|----------|----------|
| | Test temperature (°C)..... | : T + 45 = 85 + 45 = 130 | | |
| | Model/type reference | Sample 1 | Sample 2 | Sample 3 |
| | TH370 | 130°C | — | — |
| | | | | P |

| 16.3A | P |
|---|--------------------------|
| | — |
| Test temperature (°C) | T + 45 = 130 |
| Part under test | Impression diameter (mm) |
| Current carrying part of input/output connector (brown) | 1,3 |
| Current carrying part of input connector (black) | 1,2 |



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| Cl. | Requirement – Test | Result – Remark | Verdict |
|-----|--------------------|-----------------|---------|
|-----|--------------------|-----------------|---------|

| TABLE: Components | | | | | P |
|-------------------|----------------------------|--------------|----------------------------------|------------|--------------------------|
| Object / part No. | Manufacturer/ trademark | Type / model | Technical data | Standard | Mark(s) of conformity |
| Enclosure (black) | Techno S.r.l. | --- | PA66, V2, GWT 850°C, 125°C | EN 60998-1 | Tested in appliance |

| TABLEa: Components used for the test | | | | P |
|--------------------------------------|----------------------------|--------------|---------------|---|
| Object / part No. | Manufacturer/ trademark | Type / model | Serial number | |
| Oven | TERSID S.r.L | NR60F | 21648 | |

| | | | | | |
|-----------------|---------------|------|--------------------------------|------------|------------------------|
| Internal wiring | Siltek S.p.a. | SIAF | 2,5 mm ² , 180°C | EN 60998-1 | Tested in appliance |
|-----------------|---------------|------|--------------------------------|------------|------------------------|

| | | |
|--|----------------|---|
| | ANNEX1: PHOTOS | - |
|--|----------------|---|



Foto No.1: E.u.T, general view



Foto No.2: E.u.T, general view



Foto No.3: E.u.T, general view



Foto No.4: E.u.T, general view



Foto No.5: Oven used for the test



Foto No.6: Oven used for the Ball pressure-test
