CSIRO Verification Services
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Certificate of Conformity

Certificate num.	Registration date	Version Number	Version Issue date	Valid until	Page 1 of 2
afp - 979	10-Apr-1996	18	24-Mar-2023	30-Apr-2024	

Product designation

Thermac, Models 1000, Type E heat detector

(Refer to the Schedule/enclosures for further specified details)

Agent/distributor

Thermac Pty Ltd
2 Panoramic Terrace, BERWICK, VIC, AUSTRALIA, 3806

Registrant

Thermac Pty Ltd
2 Panoramic Terrace, BERWICK, VIC, AUSTRALIA, 3806

Producer

Thermac Pty Ltd
2 Panoramic Terrace, BERWICK, VIC, AUSTRALIA, 3806

Conformance criteria and evaluation

The Thermac, Models 1000, Type E heat detector has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS 1603.1-1990, 'Automatic fire detection and alarm systems - Heat detectors' incl. Amdt 1 (April 1995).

Limitations/conditions of conformance

Limitations/conditions of conformance, where identified on this certificate, are derived from qualifications from evaluation(s) for conformity and/or other related technical documentation. All details with respect to design, assembly and installation instructions and restrictions should be checked against the producer's current technical manual/data sheets and the requirements of the Authority having Jurisdiction.

Specified limitations/conditions, determined from the evaluation for conformity, include the following.

i. Factory set at the sensitivity settings of 60°C, 100°C, 132°C, 180°C and 240°C.

ii. The heat detector is rated for use between 0 to 32 Vdc @ 0.25 A (max.) and 32 Vac 50 Hz @ 0.25 A (max.).

This certification is issued within the scope of CSIRO Verification Services – Rules governing ActivFire Scheme and is valid only for the product(s) as submitted for evaluation and verification of conformity, subject to the following conditions.

- Reference to details, limitations and requirements, where documented as a schedule/enclosure with this certificate.
- The Registrant is responsible for their attestation of conformity and ensuring that on-going production complies with the conformance criteria defined in this certificate.
- This certificate will not be valid if any changes or modifications are made to the product which have not been notified and validated by CSIRO Verification Services.
- This certificate is subject to periodical re-validation upon verification that all requirements, as determined by the conformity assessment body, continue to be satisfactorily met by the Registrant.
- This certificate may only be reproduced in its published form, without modification and inclusive of all schedules/enclosures.
- Any changes, errors or omissions, must be submitted in writing and if necessary or requested, substantiated with relevant evidence.
- Any representations, such as advertising or other marketing related activities or articles shall reflect the correct contents of this certificate and conform with all relevant trade practices .and consumer protection legislation and regulations.
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Issued by

Kai Loh
Executive Officer – ActivFire Scheme

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The validity and authenticity of this certificate can be verified by the certification register located at https://activfire.csiro.au

Schedule to
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Certificate num.	Registration date	Version		Valid until	Page **2** of **2**
		Number	Issue date		
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Producer's description

The Thermac, Models 1000, Type E heat detector is a heat sensitive electrical switch. It is a fixed temperature device with a factory pre-set temperature in the range 60 °C to 240 °C.

The detector comprises a pair of normally open electrical contacts mounted on a low expansion metal strut assembly and installed under compression in a high expansion metal shell or tube. A rise in temperature will cause reduced compression and the resulting movement in the strut assembly will allow the contacts to close at the set point temperature. With a drop in temperature the procedure reverses and the contacts re-open below the set point temperature. This principle offers the benefit of inherent rate of compensation or anticipation, whereby during a rapid temperature rise the detector shell will expand more rapidly and so operate sooner to provide a rapid fire warning.

The detector body or shell is a strong, one-piece unit, precision machined from AISI 316 stainless steel with high corrosion resistance.

Electrical contacts are gold plated and lead cables are nickel plated copper with PTFE/glass insulation.

The operating parts are factory calibrated and sealed against severe environmental conditions, further adjustment or calibration is not required.

Technical specification

The following details are a representative extract of the technical specification for the Thermac, Models 1000, Type E heat detector and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

Operating voltage @ 0.25A: 32 Vac max. to 32 Vdc max.
Operating current: 5 mA min. to 0.25 A max.
Operating temperature settings: 60°C to 240°C
Continuous ambient temperature: -40°C to 180°C
Relative humidity: 100%
Weight: 138 g
Sensitivity & accuracy: to Australian Standard AS 1603:Part 1-1990, Amendment No 1, 'Automatic Fire Detection & Alarm Systems, Heat Detectors'

Thread mounting:

Mounting	Model 1000
Conduit thread	M20 x 1.5
Mounting thread	1/2" NPT

Drawing Nos 1030, 1009, 1010 & data sheets for both materials.

Supplementary information

Schedule of relevant articles

The following schedule is an extract of articles significant and relevant as evidence of conformity.

Reference		Title / description	Date issued (or date validated)	Source
Ident. type	**Ident.**			
Report No.	XF1122	Compliance testing of Thermac Model 1000 Type E heat detector to AS 1603.1	Dec 1995	Scientific Services Laboratory, AU
Report No.	XF1122/R2	Addendum to SSL Report XF1122	Apr 1996	