



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEX SIM 11.0004X	Issue No: 3	<u>Certificate history:</u>
Status:	Current	Page 1 of 5	Issue No. 3 (2015-06-12)
Date of Issue:	2015-06-12		Issue No. 2 (2012-09-03)
Applicant:	Thermal Electric Elements Pty Ltd 7 Buckman Close TOORMINA NSW 2452 Australia		Issue No. 1 (2012-01-18)
Electrical Apparatus:	Range of Thermal Immersion Heaters Type TIHnn nnn nnnn EXD -s		Issue No. 0 (2011-10-19)
<i>Optional accessory:</i>			
Type of Protection:	d		
Marking:	Ex d IIB T* Gb IP66 Ex d IIB+H ₂ T* Gb IP66 Ex d I Mb IP66 -20 °C ≤ Ta ≤ +60 °C IECEX SIM 11.0004X * T rating T6, T5, T4 or T3 dependant on maximum setting on thermal protection		

Approved for issue on behalf of the IECEx
Certification Body:

Geoffrey Barnier

Position:

Principal Engineer - Certification

Signature:
(for printed version)

Date:

12 June 2015

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

Safety in Mines Testing and Research Station (Simtars)
2 Robert Smith Street
REDBANK QLD 4301
Australia





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Manufacturer: **Thermal Electric Elements Pty Ltd**
7 Buckman Close
TOORMINA NSW 2452
Australia

Additional Manufacturing
location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2007-10 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:5
IEC 60079-1 : 2007-04 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:6

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

[AU/SIM/ExTR11.0004/00](#)

[AU/SIM/ExTR11.0004/01](#)

[AU/SIM/ExTR11.0004/02](#)

Quality Assessment Report:

[AU/SIM/QAR11.0002/04](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Range of TEE Flameproof immersion heaters are constructed from 316 stainless steel and consist of a single cylindrical main housing with a bolt on cover. Figure 1 in the annex lists the models in the range. The main housing is 280 mm long for all models, with each model varying in diameter and wall thickness. The main housing consists of a cylindrical pipe section with welded base plate and flange. The cover is fastened to the rim of the flange via M6 high tensile socket head cap screws. Sealing of the lid is achieved via an O'ring fitted in an O'ring groove in the housing rim. Cable entry to the enclosure is via threaded couplings welded to the side wall of the main housing. The heater assembly has the option of being manufactured in either stand-off or non stand-off welded base configurations. The external surface temperature is controlled and limited by either a push button thermostat or RTD (with N322 digital controller) fitted within the heater enclosure. Table 2 in the annex lists the temperature classification and set points for the devices.

CONDITIONS OF CERTIFICATION: YES as shown below:

- The M6 fastener used in the apparatus must have minimum yield strength of 1200 MPa.
- Dimensions of flameproof joints are other than the values specified in Table 2 of IEC 60079-1:2007, and are listed in the manufacturer's document EXM001.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1:

- Model numbering system and related drawings amended to cover various flanges of stand-off configurations.

Issue 2:

- Increase in upper ambient temperature range from +40 °C to +60 °C.
- Inclusion of Hydrogen to gas group IIB for units fitted with welded ferrules.
- Removal of the reference to immersion within the description of the Thermal Heaters.
- Minor drawing amendments.

Issue 3:

- Amend the set points for each of the models to achieve required cable rating.
- Adjust set point values to allow for a maximum trip point value rather than a set point and tolerance.
- Inclusion of additional RTD and thermocouple types and removal of the specific controller type (N322) requirement.
- Removal the maximum kW rating and Max No. of Elements from Table 2 on drawing EXdCERT-TSPEC001.03.
- Removal of silicone O-ring material option from drawing EXdCERT-TSPEC001.03.



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Additional Information:

Refer to the Annex.

Annex:

[IECEX SIM 11.0004X-3 Annex.pdf](#)