



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 13.0013X Issue No: 1 Certificate history:
Status: **Current** Page 1 of 5 Issue No. 1 (2015-06-12)
Date of Issue: **2015-06-12** Issue No. 0 (2013-12-16)

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

Electrical Apparatus: **TWIH range of Flameproof Heating Assemblies**
Optional accessory:

Type of Protection: **Flameproof Ex d**

Marking:
Ex d IIB+H2 T* Gb IP66
-20 °C ≤ Ta ≤ +60 °C
* T rating T6, T5, T4 or T3 dependant on maximum setting on thermal protection

Ex d IIB T* Gb IP66
-20 °C ≤ Ta ≤ +60 °C
* T rating T6, T5, T4 or T3 dependant on maximum setting on thermal protection

Ex d I Mb IP66
-20 °C ≤ Ta ≤ +60 °C

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 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

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/ExTR13.0015/00](#)

[AU/SIM/ExTR13.0015/01](#)

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 TWIH Range of Flameproof immersion heaters are constructed from 316 stainless steel and consist of a single cylindrical main housing with a bolt on cover. The main housing is 300 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 slip on flange. The cover is fastened to the rim of the slip on 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 number and size of threaded entries in the main housing can vary to suit customer requirements. The main housing has one internal and one external earthing point. The heater element bundles are fitted within 50NB pipe thermowell tubes welded into the base plate of the main housing. The TWIH range are manufactured in the non stand-off welded base configuration.

CONDITIONS OF CERTIFICATION: YES as shown below:

The flamepath length of the flanged cover joint is greater than the minimum values specified in Table 1 and Table 2 for Group I, Group IIB and Group IIB+H2. Heaters are manufactured for Group IIB+H2 requirements and may also to be marked for Group IIB and Group I applications with an increased cover flange gap of ≤ 0.20 mm. Certificate to be marked with an X and condition of safe use required in accordance with clause 5.1 of IEC 60079-1:2007. Cover joint details shall be specified in the certificate in accordance with clause 5.1 of IEC 60079-1. Flamepaths also annotated in the operating and maintenance instructions.



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

Issue 1:

- 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



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Additional Information:

Refer Annex

Annex:

[IECEX SIM 13.0013X-1 Annex.pdf](#)