

Certificate of Conformity

Ex EQUIPMENT

Certificate No.:	ANZEx 10.4091X	Current Issue:	2	Date of Issue:	2021-08-25
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Applicant: **Nautitech Mining Systems Pty Ltd**
Unit 3, 9 Packard Avenue,
Castle Hill NSW 2154,
Australia

Equipment: Control / Monitoring Enclosure

Type of Explosion Protection: Flameproof 'd'

Explosion Protection Marking: Ex d I IP55

*This certificate is granted subject to the requirements as set out in
Joint Accreditation System of Australia and New Zealand Publications
ANZEx System Rules 2020 & ANZEx Certified Equipment Scheme Rules 2021*

Signed for and on behalf of issuing body

Ajay Maira
.....

Name & Position

Ajay Maira - Certification Authority

This certificate is not transferable and remains the property of the issuing body.

The status of this certificate can be confirmed through the database located at www.anzex.com.au

Certificate issued by:

Ex Testing & Certification Pty Ltd
1/30 Kennington Drive, Tomago NSW 2322 Australia

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Manufacturer : **Nautitech Mining Systems Pty Ltd**
Unit 3, 9 Packard Avenue,
Castle Hill NSW 2154,
Australia

**Additional
Manufacturing
Location(s):** None

STANDARDS:

The equipment 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:

AS 2380.1 - 1989 Electrical equipment for explosive atmospheres-
Explosion-protection techniques Part 1: General requirements

AS 2380.2 - 1991 Electrical equipment for explosive atmospheres-
Explosion-protection techniques Part 2: Flameproof enclosure 'd'

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

(Certificate format based on template QMA-HAE-08-720 dated 2021-05-18)

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Current Issue: 2`

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Schedule

Equipment Description:

The Flameproof enclosure is manufactured from steel and consists of a main body with a bolt on cover forming a flanged flamepath. There is a series of threaded entries in the enclosure up to M40 x 1.5mm pitch.

There is also an optional polycarbonate window and operator(s), either rotary or push button which may be fitted to the enclosure cover.

An optional flametrap(s) (ANZEx 06.4082U) may be fitted to the threaded entries of the enclosure.

The enclosure is designed to house low power electrical/electronic equipment or an electrical contactor.

Electrical Ratings/Parameters

350 Volts / 350 Amps Max

Specific Conditions of Use:

- It is a condition of safe use that suitably certified glands and plugs be utilised on the installation. The IP rating must be at least IP55 to maintain the IP55 rating of the enclosure.

Conditions of Certification:

- It is a condition of manufacture that the service temp of any non-metallic materials must be considered, e.g. window, cementing, cable branching points (80°C) and cable entry points (70°C).
- It is a condition of manufacture that the operating temperatures for the non-metallic materials (including the window, cementing and cable / gland entries) be considered according to the limitations of AS2380.1 and AS 2380.2.
- It is a condition of manufacture that each enclosure must be pressure tested in accordance with clause 4.3 of AS2380.2 at a pressure of 615 kPa or if it is to be used as an enclosure for pressure switches, then at 1.5 times the expected line pressure. However, the airline pressure connected to the flametraps shall not exceed 1000 kPa.

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Register of Issues and Variations

includes the current issue

Issue 0 dated 19 July 2010

Standards relevant for this issue:

AS 2380.1 - 1989	Electrical equipment for explosive atmospheres- Explosion-protection techniques Part 1: General requirements
AS 2380.2 - 1991	Electrical equipment for explosive atmospheres- Explosion-protection techniques Part 2: Flameproof enclosure 'd'

Test & Assessment Reports relevant for this issue:

TR No. & Issuing CBs:	21780 by TestSafe TO 4488 by ITACs
QAR No. & Issuing CB:	AU/ITA/QAR08.0004/02 by Ex Testing and Certification
File Reference:	ANZ Ex 10.4091X of ITACS

Manufacturer's Documents/Drawings associated with this issue:

Document Number	Pages / Sheets	Document Title	Revision	Date
1116-001	1 of 1	Control / Monitoring enclosure Construction Details	N	2010/04/14
1116-002	1 of 1	WINDOW AND HINGE DETAILS	B	2001/08/02
1116-005	1 of 1	Flameproof Enclosure Options For Mounting Details	B	2001/07/29
1116-006	1 of 1	Control / Monitoring enclosure Construction Details and Notes.	J	2010/04/14
1116-014	1 of 1	Label Details	C	2010/06/10
1116-015	1 of 1	ROTARY SWITCH MOUNTING ARR'MENT	A	2001/08/14
1116-016	1 of 1	PUSH BUTTON MOUNTING ARR'MENT..	A	2001/08/14
1116-017	1 of 1	Warning Label Details	B	2010/03/25

Issue 1 dated 05 April 2019

Variations Permitted by this Issue

1. Change to applicant and manufacturer's address details.
2. Reduction in the thickness of the cover flange joint in drawing 1116-006 from 18mm to 17mm min.
3. Change to the equipment description to allow electrical contactors to be installed with a rating up to 350 Volts / 350 Amperes.
4. Change to drawing 1116-001 Note 11 & 12 to allow increased enclosure voltage rating up to 350Volts and Current rating up to 350 Amperes.
5. Change to drawing 1116-001 to allow reduction in the fastener head counter bore hole diameters.

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6. Change to drawing 1116-001 to allow M25 x 1.5 6H entries.
7. Change to drawing 1116-001 to reduce internal enclosure flange opening dimension from 150mm x 300mm to 144mm x 294mm. This change will not reduce the flange joint length.
8. Amended product description to have a maximum size M40 x 1.5 conduit entry as it was shown on the original certification drawings.
9. Amended errors in Issue 0 manufacturer's document table.
10. Change of ANZEx certificate to the latest format.

Standards relevant for this issue:

The test report REP19028-01 relevant for this issue was an addendum report for compliance with the specific clauses of the Standards listed below, with compliance to AS 2380.1 – 1989, AS 2380.2 – 1991 remaining valid

IEC 60079-0:2011	Explosive Atmospheres - Part 0: Equipment – General requirements
IEC 60079-1:2007	Explosive Atmospheres - Part 1: Equipment protection by flameproof enclosures "d"

Test & Assessment Reports relevant for this issue:

TR No. & Issuing CBs:	REP19028-01 by Ex Testing and Certification
QAR No. & Issuing CB:	AU/ITA/QAR08.0004/10 by Ex Testing and Certification
File Reference:	19028

Manufacturer's Documents/Drawings associated with this issue:

Document Number	Pages / Sheets	Document Title	Revision	Date
1116-001	Sheet 1 of 2	Control / Monitoring Enclosure Construction Details	O	2019-03-07
1116-006	Sheet 2 of 2	Control / Monitoring Enclosure Details and Notes	K	2019-03-11

Issue 2 dated 25 August 2021

Variations Permitted by this Issue

1. The manufacturer's Quality Assessment was changed from Ex Testing and Certification to another IECEx Certification Body, Mine Safety Technology Centre. QAR reference has been changed accordingly.
2. A drilled hole in the Rotary Switch Actuator and collar for use with a spring pin to provide retention of the Actuator was changed from dia 2.5mm to dia 3mm (document 1116-015 Rev B). This does not affect the flameproof critical dimensions and hence no test report was considered necessary.
3. A drilled hole in the Brass Push Button and collar for use with a spring pin to provide retention of the Push Button was changed from dia 2.5mm to dia 3mm (document 1116-016 Rev B). The alternative flat bar collar design was revised too. These do not affect the flameproof critical dimensions and hence no test report was considered necessary.

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Test & Assessment Reports relevant for this issue:

TR No. & Issuing CBs:	N/A
QAR No. & Issuing CB:	AU/MSC/QAR21.0001/00 by Mine Safety Technology Centre
File Reference:	21105

Manufacturer's Documents/Drawings associated with this issue:

Document Number	Pages / Sheets	Document Title	Revision	Date
1116-015	Sheet 1 of 1	Rotary Switch Mounting Arrangement	B	2021-08-11
1116-016	Sheet 1 of 1	Push Button Mounting Arrangement	B	2021-07-15