



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: **IECEX MSC 17.0004X** Page 1 of 5 [Certificate history:](#)  
Status: **Current** Issue No: 1 [Issue 0 \(2017-07-27\)](#)  
Date of Issue: 2023-11-16  
Applicant: **Nautitech Mining Systems Pty Ltd**  
3/9 Packard Avenue  
Castle Hill NSW 2154  
**Australia**  
Equipment: **Ex ia RTC**  
Optional accessory:  
Type of Protection: **Intrinsic Safety "ia"**  
Marking: **Ex ia I Ma (U<sub>m</sub> Withdrawn)**  
**-20 °C ≤ T<sub>amb</sub> ≤ +60 °C**

Approved for issue on behalf of the IECEx  
Certification Body:

**Ujen Singh**

Position:

**Quality and Certification Manager**

Signature:  
(for printed version)

Date:  
(for printed version)

16 November 2023

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 [www.iecex.com](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**TestSafe Australia**  
919 Londonderry Road  
Londonderry, NSW 2753  
**Australia**

**Test Safe**  
A U S T R A L I A



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Certificate No.: **IECEX MSC 17.0004X**

Page 2 of 5

Date of issue: 2023-11-16

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

Manufacturing locations: **Nautitech Mining Systems Pty Ltd**  
3/9 Packard Avenue  
Castle Hill NSW 2154  
**Australia**

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 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

[IEC 60079-0:2011](#) Explosive atmospheres - Part 0: General requirements  
Edition:6.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

This Certificate **does not** indicate compliance with 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/MSC/ExTR17.0001/00](#)

Quality Assessment Report:

[AU/MSC/QAR21.0001/01](#)



# IECEX Certificate of Conformity

Certificate No.: **IECEX MSC 17.0004X**

Page 3 of 5

Date of issue: 2023-11-16

Issue No: 1

## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Ex ia RTC ME5610-2-99-317 is encapsulated inside a metallic enclosure. The metallic enclosure covers five sides and the top side is exposed encapsulation. The electrical connections are made to either four pin connector or to the four wires that are coming out of encapsulation. The four wires (JA-2) are in parallel with four pins of the connector (JA-1).

A  $U_m$  of 24 VDC is applied to the electrical connector or to the four wires. The equipment is intrinsically safe only when  $U_m$  is not present.

## SPECIFIC CONDITIONS OF USE: YES as shown below:

The following input/output parameters are to be taken into account during the installation:

The Ex ia RTC consists of a four pin connector and four wires which are directly connected to those for pins. Either the four pin connector or the four wires can be used as an Input or Output.

Connection	Input Parameters When in safe area $U_m$ applied	Input Parameters When in hazardous area. ( $U_m$ Removed)
Pin Nos 1,2,3,4 (JA-1) and All four wires (JA-2) which are in parallel with four pins	$U_m = 24 \text{ Vdc}$ $I_{max} = 300 \text{ A}$	$U_i = 16 \text{ Vdc}$ $I_i = 3.33 \text{ A}$ $C_i = 4.84 \mu\text{F}$ $L_i \leq 1 \mu\text{H}$ $P_i = 2.8 \text{ W}$



# IECEX Certificate of Conformity

Certificate No.: **IECEX MSC 17.0004X**

Page 4 of 5

Date of issue: 2023-11-16

Issue No: 1

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

Variations permitted by Issue 1:

The auditing body was changed to TestSafe Australia.



# IECEX Certificate of Conformity

Certificate No.: **IECEX MSC 17.0004X**

Page 5 of 5

Date of issue: 2023-11-16

Issue No: 1

## **Additional information:**

### Conditions of Certification

1. The equipment has not been evaluated for use in oxygen enriched atmospheres.
2. The equipment has not been evaluated for use in pressures exceeding 1.1 bar.
3. It is a condition of use that when the apparatus is installed in a hazardous location the enclosure ingress protection rating must be not less than IP20.
4. The equipment covered by this Certificate does not include an assessment of the equipment providing It is conditions of safe use that the Ex ia RTC shall only be connected to a power source whose output voltage does not exceed  $Um= 24VDC$ , having a maximum short circuit current of 300ADC, and it shall be installed in accordance with one of the following:
  - a. in a SELV or PELV system, or
  - b. via a safety isolating transformer complying with the requirements of IEC 61558-2- 6, or technically equivalent standard, or
  - c. directly connected to apparatus complying with the IEC 60950 series, IEC 61010- 1, or a technically equivalent standard, or
  - d. fed directly from cells or batteries.

## **Annex:**

[IECEX MSC 17.0004X-1\\_Annexe.pdf](#)



# IECEX Certificate of Conformity Annexe

<b>Annexe for Certificate No.:</b>	IECEX MSC 17.0004X	<b>Issue No.:</b>	1
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## Drawing list pertaining to Issue 1 of this Certificate:

Document / Drawing No.:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
ME5610-2-12-100	2 pages	Exia RTC (Schematic)	1.1	2016-11-29
ME5610-0-12-100	1 of 9	Exia RTC PCB Artwork Top Layer	1.1	2017-01-11
ME5610-0-12-100	2 of 9	Exia RTC PCB Artwork Mid Layer 1	1.1	2017-01-11
ME5610-0-12-100	3 of 9	Exia RTC PCB Artwork Mid Layer 2	1.1	2017-01-11
ME5610-0-12-100	4 of 9	Exia RTC PCB Artwork Bottom Layer	1.1	2017-01-11
ME5610-0-12-100	5 of 9	Exia RTC PCB Artwork Top Overlay	1.1	2017-01-11
ME5610-0-12-100	6 of 9	Exia RTC PCB Artwork Bottom Overlay	1.1	2017-01-11
ME5610-0-12-100	7 of 9	Exia RTC PCB Artwork Top Paste	1.1	2017-01-11
ME5610-0-12-100	8 of 9	Exia RTC PCB Artwork Bottom Paste	1.1	2017-01-11
ME5610-0-12-100	9 of 9	Exia RTC PCB Artwork Board Outline	1.1	2017-01-11
ME5610-2-99-317-A	1 of 1	Ex ia Real Time Clock (Assembly)	1	2017-02-02
ME5610-0-25-103-A	1 of 1	Label - Ex ia Real Time Clock	1	2017-02-07
ME5610-0-25-119-A	1 of 1	Label 2 - Ex ia Real Time Clock	1	2017-07-03

Note: An "\*" is added before the title of documents that are new or revised.

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	<b>TestSafe Australia</b> 919 Londonderry Road Londonderry NSW 2753 Australia
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