



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 MSC 14.0017X

Issue No: 1

Certificate history:

Issue No. 1 (2017-06-21)

Issue No. 0 (2014-10-28)

Status: **Current**

Page 1 of 5

Date of Issue: **2017-06-21**

Applicant: **Nautitech Mining Systems Pty Limited**
Unit 3/9 Packard Ave
Castle Hills NSW 2154
Australia

Equipment: **Start Panel Module Type 12021**

Optional accessory:

Type of Protection: **Intrinsic safety "ia"**

Marking:

Ex ia I Ma

Approved for issue on behalf of the IECEx
Certification Body:


Geoff Slater

Position:

Manager

Signature:
(for printed version)

Date:


21/7/2017

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:

MSTC Mine Safety Technology Centre
8 Hartley Drive
Thornton NSW 2322
PO Box 343
Australia



**Planning &
Environment**
Resources Regulator



IECEx Certificate of Conformity

Certificate No: IECEx MSC 14.0017X

Issue No: 1

Date of Issue: 2017-06-21

Page 2 of 5

Manufacturer: **Nautitech Mining Systems Pty Limited**
Unit 3/9 Packard Ave
Castle Hills NSW 2154
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 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "I"
Edition:6.0

*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/MSC/ExTR14.0012/00](#)

Quality Assessment Report:

[AU/ITA/QAR08.0004/09](#)

[AU/MSC/QAR14.0003/00](#)



IECEx Certificate of Conformity

Certificate No: IECEx MSC 14.0017X

Issue No: 1

Date of Issue: 2017-06-21

Page 3 of 5

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Start Panel Module (SPM) Type 12021 is an intrinsically safe graphical user interface (GUI) designed for instrumented systems in a Group I hazardous area. It connects to other intrinsically safe devices through its integral cable and 8-way field bus connector which powers both the SPM and its isolated communication circuits. The SPM also contains RFID authentication circuits.

The electronic circuits except for the keypad are fully encapsulated and housed inside a stainless steel enclosure.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer to the attached Annex



IECEx Certificate of Conformity

Certificate No: IECEx MSC 14.0017X

Issue No: 1

Date of Issue: 2017-06-21

Page 4 of 5

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

The Change of Address of the applicant (certificate holder) from Connexa Pty Ltd of 56 Bailey Crescent Southport QLD 4215 Australia to Nautitech Mining Systems Pty Limited of Unit 3/9 Packard Ave Castle Hills NSW 2154 Australia.



IECEx Certificate of Conformity

Certificate No: IECEx MSC 14.0017X

Issue No: 1

Date of Issue: 2017-06-21

Page 5 of 5

Additional information:

Refer to the attached Annex

Annex:

[Annex of IECEx MSC14.0017X-01.pdf](#)



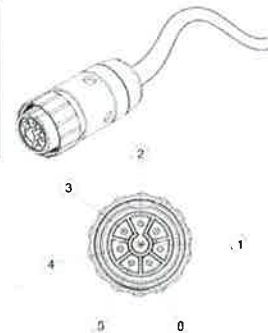
IECEX Certificate of Conformity Annex

Annex for Certificate No.: IECEx MSC 14.0017X **Issue No:** 1

Conditions of certification pertaining to Issue 1 of this Certificate:

It is a condition of safe use that the following parameters are taken into account during any installation:

P1 Terminals (Pin 2 not connected)	4 to 3	5, 6, 7 to 8
Maximum Input Voltage U_i	9 V	9 V
Maximum Input Power P_i		3.15 W
Maximum Input Capacitance C_i	5.5 μ F	8.75 μ F
Maximum Input Inductance L_i	Negligible	Negligible



Drawing list pertaining to Issue 1 of this Certificate:

Manufacturer's Documents				
Drawing/Document Number:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
ZUQPTY4FSNWN-191-385	1 of 12	Part # 12021-1.0 Start Panel Module (SPM) SCHEMATIC	1	2014-07-07
ZUQPTY4FSNWN-191-385	2 of 12	Part # 7543-1.0 SPM-PCB2-Daughter SCHEMATIC	1	2014-08-05
ZUQPTY4FSNWN-191-385	3 of 12	Part # 7541-1.0 SPM-PCB1-Main SCHEMATIC	1	2013-08-05
ZUQPTY4FSNWN-191-385	4 of 12	Part # 7541-1.0 Power_SPM SCHEMATIC	1	2014-02-04
ZUQPTY4FSNWN-191-385	5 of 12	Part # 7541-1.0 Voltage Monitor Direct SCHEMATIC	1	2012-12-05
ZUQPTY4FSNWN-191-385	6 of 12	Part # DS_BR-1.0 SAFETY μ P SCHEMATIC	1	2013-05-29
ZUQPTY4FSNWN-191-385	7 of 12	Part # DS_BS-1.0 Sensor - Temperature - Analog SCHEMATIC	1	2013-06-25
ZUQPTY4FSNWN-191-385	8 of 12	Part # DS_BQ-1.0 BQ_SENSOR-RTC-I2C-0x68-No Coin Cell SCHEMATIC	1	2013-06-25
ZUQPTY4FSNWN-191-385	9 of 12	Part # DS_BT-1.0 MEMORY_SPI_FLASH_4MB SCHEMATIC	1	2013-06-25
ZUQPTY4FSNWN-191-385	10 of 12	Part # DS_AV-1.0 IS BARRIER U_i 9v C_i 5.5 μ F P_o <3.15W SCHEMATIC	1	2013-08-12
ZUQPTY4FSNWN-191-385	11 of 12	Part # DS_EC-1.0 CAN TRANSCEIVER SCHEMATIC	2	2013-10-08
ZUQPTY4FSNWN-191-385	12 of 12	Part # DS_FE-1.0 ISOLATED CAN OPTO SCHEMATIC	2	2013-10-08

Certificate issued by:

 NSW GOVERNMENT	Planning & Environment Resources Regulator	Mine Safety Technology Centre
------------------------------	--	--------------------------------------



IECEx Certificate of Conformity Annex

Annex for Certificate No.: IECEx MSC 14.0017X Issue No:1

Manufacturer's Documents				
Drawing/Document Number:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
ZUQPTY4FSNWN-191-275	1 of 7	Part # 7523-0.2 CUBEx UI Faceplate SCHEMATIC	1	2013-03-06
ZUQPTY4FSNWN-191-275	2 of 7	Part # 7521-0.2 UIFP Main PCB SCHEMATIC	1	2014-03-05
ZUQPTY4FSNWN-191-275	3 of 7	Part # 7521-0.2 UIFP Load SCHEMATIC	1	2014-03-05
ZUQPTY4FSNWN-191-275	4 of 7	Part # 7521-0.2 UIFP LCD SCHEMATIC	1	2014-03-05
ZUQPTY4FSNWN-191-275	5 of 7	Part # 7525-0.2 UIFP FLEX Keypad SCHEMATIC	1	2014-02-11
ZUQPTY4FSNWN-191-275	6 of 7	Part # DS_BZ-1 IS BARRIER Keypad SCHEMATIC	1	2014-01-08
ZUQPTY4FSNWN-191-275	7 of 7	Part # DS_EJ-1 Bluetooth 4.0 BLE SCHEMATIC	1	2014-03-06
ZUQPTY4FSNWN-191-386	1	PART 12021-1 SPM CERTIFICATION DETAIL	1	2014-06-16
ZUQPTY4FSNWN-191-290	1	PART 2181-936-1 UIFP CERTIFICATION DETAIL	1	2014-04-04
12021-1	1	SPM DATASHEET	2	2017-05-17
ZUQPTY4FSNWN-191-279	1 of 10	Part #7521 UIFP Main PCB TOP LAYER PCB ARTWORK	1	2014-04-04
ZUQPTY4FSNWN-191-279	2 of 10	Part #7521 UIFP Main PCB Mid-Layer 1 PCB ARTWORK	1	2014-04-04
ZUQPTY4FSNWN-191-279	3 of 10	Part #7521 UIFP Main PCB Mid-Layer 2 PCB ARTWORK	1	2014-04-04
ZUQPTY4FSNWN-191-279	4 of 10	Part #7521 UIFP Main PCB Mid-Layer 3 PCB ARTWORK	1	2014-04-04
ZUQPTY4FSNWN-191-279	5 of 10	Part #7521 UIFP Main PCB Mid-Layer 4 PCB ARTWORK	1	2014-04-04
ZUQPTY4FSNWN-191-279	6 of 10	Part #7521 UIFP Main PCB Bottom Layer PCB ARTWORK	1	2014-04-04
ZUQPTY4FSNWN-191-279	7 of 10	Part #7521 UIFP Main PCB Top Silkscreen Overlay PCB ARTWORK	1	2014-04-04
ZUQPTY4FSNWN-191-279	8 of 10	Part #7521 UIFP Main PCB Bottom Silkscreen Overlay PCB ARTWORK	1	2014-04-04
ZUQPTY4FSNWN-191-279	9 of 10	Part #7521 UIFP Main PCB Top Solder Mask Print PCB ARTWORK	1	2014-04-04
ZUQPTY4FSNWN-191-279	10 of 10	Part #7521 UIFP Main PCB Bottom Solder Mask Print PCB ARTWORK	1	2014-04-04
ZUQPTY4FSNWN-191-278	1 of 6	Part #7525 UIFP FLEX Keypad TOP LAYER PCB ARTWORK	1	2014-04-04
ZUQPTY4FSNWN-191-278	2 of 6	Part #7525 UIFP FLEX Keypad Bottom Layer PCB ARTWORK	1	2014-04-04
ZUQPTY4FSNWN-191-278	3 of 6	Part #7525 UIFP FLEX Keypad Top Silkscreen Overlay PCB ARTWORK	1	2014-04-04
ZUQPTY4FSNWN-191-278	4 of 6	Part #7525 UIFP FLEX Keypad Bottom Silkscreen Overlay PCB ARTWORK	1	2014-04-04

Certificate issued by:



Planning & Environment
Resources Regulator

Mine Safety Technology Centre



IECEX Certificate of Conformity Annex

Annex for Certificate No.: IECEx MSC 14.0017X Issue No:1

Manufacturer's Documents				
Drawing/Document Number:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
ZUQPTY4FSNWN-191-278	5 of 6	Part #7525 UIFP FLEX Keypad Top Solder Mask Print PCB ARTWORK	1	2014-04-04
ZUQPTY4FSNWN-191-278	6 of 6	Part #7525 UIFP FLEX Keypad Bottom Solder Mask Print PCB ARTWORK	1	2014-04-04
ZUQPTY4FSNWN-191-383	1 of 9	Part #7540 PCB1-Main TOP LAYER PCB ARTWORK	1	2014-07-07
ZUQPTY4FSNWN-191-383	2 of 9	Part #7540 PCB1-Main Mid Layer 1 PCB ARTWORK	1	2014-07-07
ZUQPTY4FSNWN-191-383	3 of 9	Part #7540 PCB1-Main Mid Layer 2 PCB ARTWORK	1	2014-07-07
ZUQPTY4FSNWN-191-383	4 of 9	Part #7540 PCB1-Main Bottom Layer PCB ARTWORK	1	2014-07-07
ZUQPTY4FSNWN-191-383	5 of 9	Part #7540 PCB1-Main Top Overlay PCB ARTWORK	1	2014-07-07
ZUQPTY4FSNWN-191-383	6 of 9	Part #7540 PCB1-Main Bottom Overlay PCB ARTWORK	1	2014-07-07
ZUQPTY4FSNWN-191-383	7 of 9	Part #7540 PCB1-Main Top Paste PCB ARTWORK	1	2014-07-07
ZUQPTY4FSNWN-191-383	8 of 9	Part #7540 PCB1-Main Bottom Paste PCB ARTWORK	1	2014-07-07
ZUQPTY4FSNWN-191-383	9 of 9	Part #7540 PCB1-Main Board Outline PCB ARTWORK	1	2014-07-07
ZUQPTY4FSNWN-191-384	1 of 9	Part #7542 PCB2-Daughter TOP LAYER PCB ARTWORK	1	2014-07-07
ZUQPTY4FSNWN-191-384	2 of 9	Part #7542 PCB2-Daughter Mid Layer 1 PCB ARTWORK	1	2014-07-07
ZUQPTY4FSNWN-191-384	3 of 9	Part #7542 PCB2-Daughter Mid Layer 2 PCB ARTWORK	1	2014-07-07
ZUQPTY4FSNWN-191-384	4 of 9	Part #7542 PCB2-Daughter Bottom Layer PCB ARTWORK	1	2014-07-07
ZUQPTY4FSNWN-191-384	5 of 9	Part #7542 PCB2-Daughter Top Overlay PCB ARTWORK	1	2014-07-07
ZUQPTY4FSNWN-191-384	6 of 9	Part #7542 PCB2-Daughter Bottom Overlay PCB ARTWORK	1	2014-07-07
ZUQPTY4FSNWN-191-384	7 of 9	Part #7542 PCB2-Daughter Top Paste PCB ARTWORK	1	2014-07-07
ZUQPTY4FSNWN-191-384	8 of 9	Part #7542 PCB2-Daughter Bottom Paste PCB ARTWORK	1	2014-07-07
ZUQPTY4FSNWN-191-384	9 of 9	Part #7542 PCB2-Daughter Board Outline PCB ARTWORK	1	2014-07-07

Certificate issued by:

