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

Certificate No.:	**IECEx ExTC 18.0030X**	Page 1 of 4
Status:	**Current**	Issue No: 1

Certificate history:
Issue 0 (2019-03-27)

Date of Issue: 2019-10-16

Applicant: **Trolex Nome Limited**
Unit 10a Newby Road
Hazel Grove Stockport SK75DY
United Kingdom

Equipment: **TX5002 RockMonitor XR Controller**

Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: Ex ia I Ma

-20°C ≤ Tamb ≤ +50°C

Approved for issue on behalf of the IECEx
Certification Body:

Justin Gavranich

Position:

Certification Authority

Signature:
(for printed version)

Date:

2019-10-16

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 or use of this QR Code.

Certificate issued by:

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

Certificate No.:	**IECEx ExTC 18.0030X**	Page 2 of 4
Date of issue:	2019-10-16	Issue No: 1

Manufacturer:	**Trolex Limited** Unit 10a Newby Road Hazel Grove Stockport SK7 5DY **United Kingdom**
Additional manufacturing locations:	

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 60079-0:2017
Edition:7.0
Explosive atmospheres - Part 0: Equipment - General requirements

IEC 60079-11:2011
Edition:6.0
Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

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 Reports:

AU/EXTC/ExTR18.0038/00   AU/ExTC/ExTR19.0034/00

Quality Assessment Report:

GB/SIR/QAR07.0017/07

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The TX5002 RockMonitor XR Controller powers and receives signals from up to 300 TX5001 RockMonitor XR Telltale units connected, and provides communication to surface monitoring equipment using Ethernet and/or RS485 signals. It also contains two solid state relays that provide voltage free contacts. It provides user interface via keypad and LCD screen. It is powered from an associated equipment.

The electronics is contained in a painted steel box approx. 300 mm x 300 mm x 150 mm and provided with a set of terminals and connectors to facilitate external connections.

SPECIFIC CONDITIONS OF USE: YES as shown below:
Refer to Annexe for details

Certificate No.:   **IECEx ExTC 18.0030X**

Date of issue: 2019-10-16

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Minor trackwork modifications and revision of paramaters.

Annex:

IECEx ExTC 18.0030X-1 Certificate Annex Final.pdf

IECEx Certificate of Conformity

Annexe

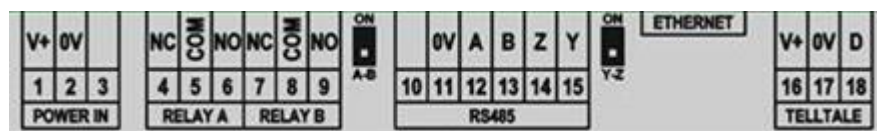| Annexe for Certificate No.:	IECEx ExTC 18.0030X	Issue No.:	1

Description:

Refer to certificate for equipment description.

Specific Conditions of Use pertaining to Issue 0 of this Certificate:

The following parameters shall be observed when connecting to separately certified intrinsically safe equipment:

	Conn. P4 (Supply to TX5002)	Conn. P8 (Relay contacts – Relay A and Relay B)	Conn. P7 (RS485) - parameters for individual lines	Conn. J1 (Ethernet) – all lines combined	Conn. P5 (Telltale)
Terminal no.	1 wrt 2	4, 5, 6, 7, 8, 9	12, 13, 14, 15 wrt 11		16, 18 wrt 17
Ui	16 V or 14.4 V (as marked on the equipment)	30 V	8.4 V	17.64 V	17.64 V
Ii	2.37 A	0.32 A			
Pi		530 mW	3.15 W		
Ci	4 µF	0 µF	0 µF	0.48 µF	Negligible
Li	0 µH	0 µH	0 µH	0 µH	0 µH
Uo		0 V	5.88 V	0 V dc	17.64 V
Io		0 A	66 mA	0 A dc	2.03 A
Po			97 mW	0 W dc	4.16 W
Co			1000 µF	1000 µF	10.53 µF
Lo			26 mH	97 µH	83 µH
Lo/Ro				145 µH/Ω	48 µH/Ω

Refer below for example terminal number identification:

Drawing list pertaining to Issue 0 of this Certificate:

Manufacturer's Documents				
Title:	Drawing No.:	Pages	Rev. Level:	Date:
MCU Schematic (Various Titles)	P5625.05.IECEx	6	A	2019-03-19
MCU PCB Layout	P5625.06.IECEx	9	A	2019-02-20
Telltale Driver Schematic (Various Titles)	P5625.09.IECEx	7	A	2019-03-19
Telltale Driver PCB Layout	P5625.10.IECEx	8	A	2019-02-20
Memory Module (Schematics) (Various Titles)	P5625.13.IECEx	3	A	2018-12-17
Memory Module PCB Layout	P5625.14.IECEx	7	A	2018-12-17
LCD Schematic (Various Titles)	P5625.17.IECEx	3	A	2018-12-17
LCD IECEx PCB Layout	P5625.18.IECEx	7	A	2019-02-27
Interface Schematic (Various Titles)	P5625.21.IECEx	6	B	2019-03-21
Controller Interface IECEx PCB Layout	P5625.22.IECEx	6	B	2019-03-19
RockMonitor XR Controller General Arrangement	TX5002.IECEx	1	A	2019-03-22
RockMonitor XR Controller IECEx (Aus) certification label, 14.4V	P5625.2015	1	A	2019-03-19
RockMonitor XR Controller IECEx (Aus) certification label, 16V	P5625.2017	1	A	2019-03-19
Certification Information for User Manual	P5625.1801	3	A	2019-03-19

Variations permitted by Issue 1 of this certificate:

Minor trackwork changes to MCU and Memory Boards, component changes in MCU and Interface Boards and revision of parameters with an increase in the supply I_i, removal of the RS485 P_i parameter and revision of the L_i parameter for the Telltale connector.

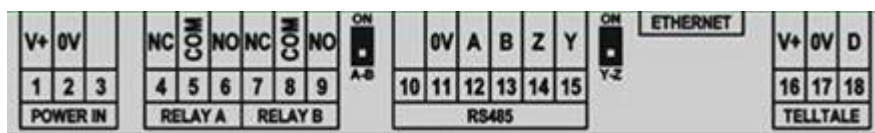Also, change in marking labels to accommodate the change in the intrinsically safe parameters.

Specific Conditions of Use pertaining to Issue 1 of this certificate:

The parameter table has been revised as follows and shall be observed when connecting to separately certified intrinsically safe equipment:

	Conn. P4 (Supply to TX5002)	Conn. P8 (Relay contacts – Relay A and Relay B)	Conn. P7 (RS485) - parameters for individual lines	Conn. J1 (Ethernet) – all lines combined	Conn. P5 (Telltale)
Terminal no.	1 wrt 2	4, 5, 6, 7, 8, 9	12, 13, 14, 15 wrt 11		16, 18 wrt 17
Ui	16 V or 14.4 V (as marked on the equipment)	30 V	8.4 V	17.64 V	17.64 V
Ii	3.33 A	0.32 A			
Pi		530 mW			
Ci	4 µF	0 µF	0 µF	0.48 µF	Negligible
Li	0 µH	0 µH	0 µH	0 µH	30 µH
Uo		0 V	5.88 V	0 V dc	17.64 V
Io		0 A	66 mA	0 A dc	2.03 A
Po			97 mW	0 W dc	4.16 W
Co			1000 µF	1000 µF	10.53 µF
Lo			26 mH	97 µH	83 µH
Lo/Ro				145 µH/Ω	48 µH/Ω

Refer below for example terminal number identification:

Drawings Associated with the Issue 1 of this Certificate:

Manufacturer's Documents

Title:	Drawing No.:	Pages	Rev. Level:	Date:
*MCU Schematic (Various Titles)	P5625.05.IECEx	6	B	2019-09-25
*MCU PCB Layout	P5625.06.IECEx	9	B	2019-09-25
Telltale Driver Schematic (Various Titles)	P5625.09.IECEx	7	A	2019-03-19
Telltale Driver PCB Layout	P5625.10.IECEx	8	A	2019-02-20
*Memory Module (Schematics) (Various Titles)	P5625.13.IECEx	3	D	2019-09-23
*Memory Module PCB Layout	P5625.14.IECEx	7	D	2019-09-23
LCD Schematic (Various Titles)	P5625.17.IECEx	3	A	2018-12-17
LCD IECEx PCB Layout	P5625.18.IECEx	7	A	2019-02-27
*Interface Schematic (Various Titles)	P5625.21.IECEx	6	C	2019-09-25
Controller Interface IECEx PCB Layout	P5625.22.IECEx	6	B	2019-03-19
RockMonitor XR Controller General Arrangement	TX5002.IECEx	1	A	2019-03-22
*RockMonitor XR Controller IECEx (Aus) certification label, 14.4V	P5625.2015	1	B	2019-10-09
*RockMonitor XR Controller IECEx (Aus) certification label, 16V	P5625.2017	1	B	2019-10-09
*Certification Information for User Manual	P5625.1801	3	B	2019-10-09

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