

(1) EU-TYPE EXAMINATION CERTIFICATE



(2) Equipment and Protective Systems intended for use in Potentially Explosive Atmosphere - **Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number

TÜV 19 ATEX 8460 X

Issue: 00

(4) Equipment: **RockMonitor XR System**

(5) Manufacturer: **Trox Limited**

(6) Address: **Unit 10a, Newby Road, Hazel Grove
Stockport, SK7 5DY
United Kingdom**

(7) This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The TÜV Rheinland Zertifizierungsstelle für Explosionsschutz of TÜV Rheinland Industrie Service GmbH, Notified Body No. 0035 in accordance with Article 21 of the Council Directive 2014/34/EU of 26th February 2014, certifies this product which has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmosphere, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report 557/Ex 8460.00/19

(9) Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of this certificate, has been assessed by reference to:

EN 60079-25:2010

EN 50303:2000

EN 50628:2016

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and specification for construction of the equipment or protective system. It does not cover the process for actual manufacture or supply of the equipment or protective system, for which further requirements of the directive are applicable.

(12) The marking of the equipment shall include the following:



I M 1 Ex ia I Ma -20°C ≤ Tamb ≤ 50°C

TÜV Rheinland Zertifizierungsstelle für Explosionsschutz

Cologne, 2020-02-12

Dipl.-Ing. Klauspeter Graffi

This EU-Type Examination Certificate without signature and stamp shall not be valid.
This EU-Type Examination Certificate may be circulated only without alteration. Extracts or alterations are subject to approval by the TÜV Rheinland Industrie Service GmbH TÜV Rheinland Group Am Grauen Stein 51105 Köln
Tel. +49 (0) 221 806-0 Fax. + 49 (0) 221 806 114

(13) Annex

(14) **EU Type Examination Certificate**
TÜV 19 ATEX 8460 X Issue: 00

(15) Description of equipment

15.1 Equipment and type:

RockMonitor XR System

15.2 Description / Details of Change

General product information

The RockMonitor XR System comprises a TX5002 RockMonitor XR Controller or a TX5003 RockMonitor XR Reader and up to 300 TX5001 RockMonitor XR Telltale units - the TX5002 or TX5003 powers and communicates with the TX5001 telltales in the system.

The system measures displacement of the strata at anchor points in the roof or rib in an underground mine using the TX5001 Telltales. The TX5001 communicates the data back to the TX5002 controller or TX5003 Reader.

The TX5002 controller is powered from a separately certified IS associated equipment and provides communication to surface monitoring equipment using Ethernet and/or RS485 signals and also contains two solid state relays that provide voltage free contacts.

The TX5003 Reader is portable and powered by an integral battery pack.

The TX5002 and TX5003 each provide user interface via keypad and LCD screen.

Technical Data

Ambient temperature

$T_{amb} -20^{\circ}\text{C} \leq \text{to} \leq +50^{\circ}\text{C}$

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(16) Test-Report No. 557/Ex 8460.00 / 19

(17) Special Conditions for safe use

- (1) The parameters listed below are for external connection to the TX5002 RockMonitor XR Controller for the connection of associated apparatus not specifically covered in the system block diagram (drawing P5625.129.ATEX) and must be considered in conjunction with the requirements shown in this drawing:

	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
Terminal no.	1 wrt 2	4, 5, 6, 7, 8, 9	12, 13, 14, 15 wrt 11	
Ui	16 V or 14.4 V (as marked on the equipment)	30 V	8.4 V	17.64 V
Ii	3.33 A	0.32 A		
Pi		530 mW		
Ci	4 µF	0 µF	0 µF	0.48 µF
Li	0 µH	0 µH	0 µH	0 µH
Uo		0 V	5.88 V	0 V dc
Io		0 A	66 mA	0 A dc
Po			97 mW	0 W dc
Co			1000 µF	1000 µF
Lo			26 mH	97 µH
Lo/Ro				145 µH/Ω

Refer below for example terminal number identification. The connector “Telltale” shown in the example below may only be connected to the TX5001 RockMonitor XR Telltale units:



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- (2) Conditions of use and user manuals applicable to each separately certified equipment comprising the system shall be observed.
- (3) Only charge the TX5003 or download data from the TX5003 in a non hazardous area. Charger voltage not to exceed Um 26.6V and the Data Reader not to exceed Um 8V
- (4) The Controller Outer chassis shall be connected to Earth when installed.

(18) Basic Safety and Health Requirements

Covered by afore mentioned standard

TÜV Rheinland Zertifizierungsstelle für Explosionsschutz

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