



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 19.0014X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2019-11-18

Applicant: **Trox Limited**
10a Newby Road
Hazel Grove Stockport SK7 5DY
United Kingdom

Equipment: **TX8005 Air XD Particulate Monitor**

Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: TX8005 Air XD:
Ex ia op is I Ma
-20°C ≤ Tamb ≤ 50°C
TX8805 Air XD USB Drive:
Ex ia I Ma
-20°C ≤ Tamb ≤ 50°C

Approved for issue on behalf of the IECEx
Certification Body:

Ajay Maira

Position:

Certification Authority

Signature:
(for printed version)

Ajay Maira

Date:

2019-11-20

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



TESTING & CERTIFICATION



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Date of issue: 2019-11-18

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Manufacturer: **Trox Limited**
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 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

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

IEC 60079-28:2015 Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
Edition:2

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/EXTC/ExTR18.0040/00](#)

Quality Assessment Report:

[GB/SIR/QAR07.0017/07](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The TX8005 Air XD Particulate Monitor is a real-time dust particulates monitor based on optical sensing technology. The Air XD is powered by a separately certified intrinsically safe power supply with communication provided by RS485 and ethernet ports. User interface is provided via a keypad and LCD screen. Two 4-20mA circuits are provided along with two sets of N/O and N/C relay controlled dry contacts. A USB connector is also mounted on the equipment housing for connection of the Trolex TX8805 Air XD USB Drive for download of data in the hazardous area. The main housing is of sheet metal construction providing a degree of protection of at least IP54. The equipment has an integral particle sensor tube which draws external air by a fan mounted within the tube and passes it through the laser sensor and then exhausted back to the external environment.

This certificate also covers the use of the TX8805 Air XD USB Drive with the TX8005 Air XD.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer to Annexe for details.

Annex:

[Certificate Annex IECEx ExTC 19.0014X-0.pdf](#)

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Annexe



Annexe for Certificate No.:

IECEX ExTC 19.0014X

Issue No.:

0

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

- 1) The following parameters shall be observed for each of the equipment connectors:

| | Connector P1 Power In | Connector P7 Relay contacts – Relay A and Relay B | Connector P5 RS485 - All lines combined | Connector P4 Ethernet – All lines combined | Connector P9 4 to 20 mA – CH2, CH1 - Separate channels |
|--------------|--------------------------|--|--|---|--|
| Terminal no. | 1 wrt 2 | 4, 5, 6 and 7, 8, 9 | 11, 13 or 12, 14 wrt 10 and 15 | | 16, 17 and 18, 19 |
| Ui | 16 V | 16 V | 8.4 V | 17.64 V | 16 V |
| Ii | 3.28 A | | | | 132 mA |
| Pi | | | | | 273 mW |
| Ci | 0 µF | 0 µF | 0 µF | 0.48 µF | Negligible |
| Li | 0 µH | 0 µH | 0 µH | 0 µH | Negligible |
| Uo | | 0 V | 5.88 V | 0 V dc | 15.75 V |
| Io | | 0 A | 127 mA | 0 A dc | 510 mA |
| Po | | | 186 mW | 0 W dc | 2 W |
| Co | | | 1000 µF | 1000 µF | 15.8 µF |
| Lo | | | 28 mH | 97 µH | 1.7 mH |
| Lo/Ro | | | | 145 µH/Ω | 230 µH/Ω |

Refer below for example terminal number identification for external connection:



- The USB connector on the base of the equipment shall only be connected to the Trolex TX8805 Air XD USB Drive in the hazardous area. USB drives with no power source (eg standard USB stick) may be connected to the USB connector in the safe area for test purposes etc.
- The TX8005 must be earthed at pin 3 of the POWER IN connector (P1) to prevent excess static charge accumulation.

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Annexe



Annexe for Certificate No.:

IECEX ExTC 19.0014X

Issue No.:

0

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 | B | 2019-09-25 |
| MCU PCB Layout | P5625.06.IECEX | 9 | B | 2019-09-25 |
| Memory Module (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 |
| OPC Sensor PCB Schematic (Various Titles) | P5628.01.IECEX | 5 | A | 2019-11-07 |
| OPC Sensor Board IECEX Certification Layout | P5628.02.IECEX | 3 | A | 2019-09-12 |
| OPC Barrier Board IECEX Schematic (Various Titles) | P5628.04.IECEX | 8 | A | 2019-10-14 |
| OPC Barrier Board Layout | P5628.05.IECEX | 6 | A | 2019-09-30 |
| Interface Board Schematic (Various Titles) | P5628.16.IECEX | 8 | A | 2019-11-04 |
| Interface Board PCB Layout | P5628.18.IECEX | 8 | A | 2019-11-08 |
| OPC Top Cap Sensor Board (Various Titles) | P5628.67.IECEX | 2 | A | 2019-08-07 |
| OPC Top Cap Sensor Board Layout | P5628.68.IECEX | 1 | A | 2019-08-21 |
| Air XD USB Drive, General Arrangement | TX8805.IECEX | 2 | A | 2019-11-04 |
| Air XD General Arrangement | TX8005.IECEX | 2 | A | 2019-10-22 |

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Annexe



Annexe for Certificate No.:

IECEX ExTC 19.0014X

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| Title: | Drawing No.: | Pages | Rev. Level: | Date: |
|---|--------------|-------|-------------|------------|
| Air XD IECEX Certification Label | P5628.2005 | 1 | A | 2019-10-22 |
| Air XD USB Drive Certification label | P5628.2009 | 1 | A | 2019-10-22 |
| Certification Information for User Manual | P5628.1800 | 3 | A | 2019-11-16 |