TROLEX



AIR XS SILICA MONITOR

General Purpose

DATA SHEET

trolex.com/air-xs

LEADING SAFETY TECHNOLOGY

MAIN FEATURES

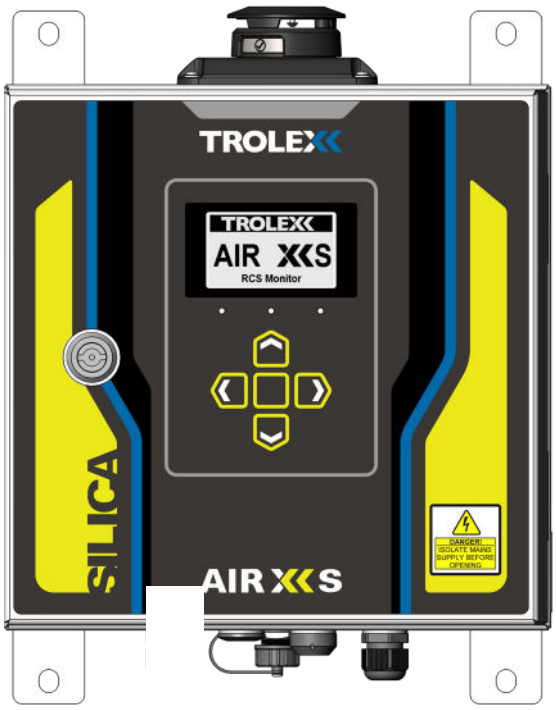
- Real time, continuous measurement of atmospheric RCS concentration
- High-reliability and low-maintenance
- On-device display readout
- High visibility alarm warning indicators
- ‘Plug and play’ installation

PRODUCT OVERVIEW

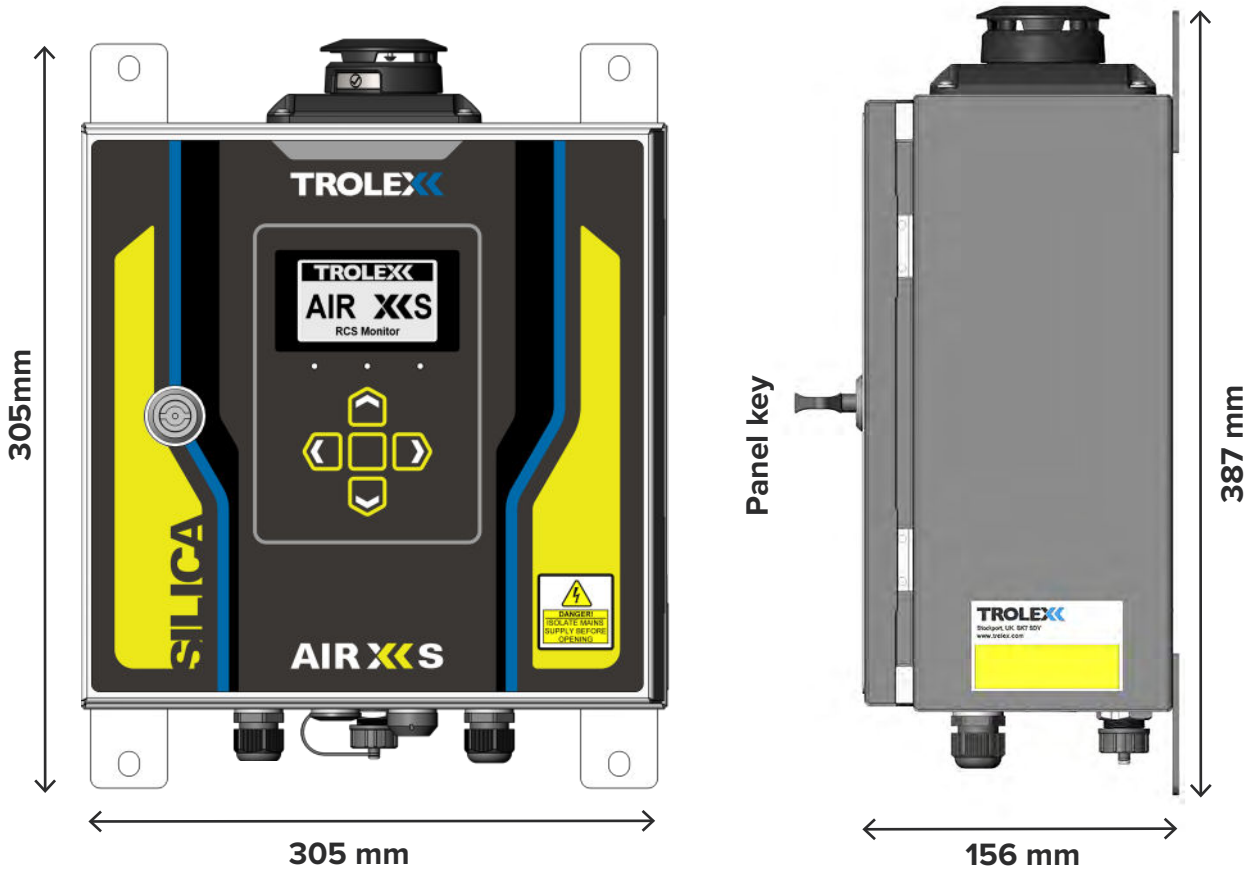
The TX8100 AIR XS Silica Monitor is designed to provide detailed, accurate and real-time data on airborne respirable crystalline silica (RCS) content.

Using innovative optical refraction technology (ORT), the AIR XS combines a consistent particle flow rate with advanced sensing technology to provide information on RCS.

As the AIR XS processes and analyses particulate data, an adaptive algorithm is used to calculate and identify the average level of RCS from the overall particle count. Measurement information can be viewed via the instrument display or as historical readings using the accompanying Trolex BreatheXS application software, which can be viewed live via RS485/Ethernet or Environet software.

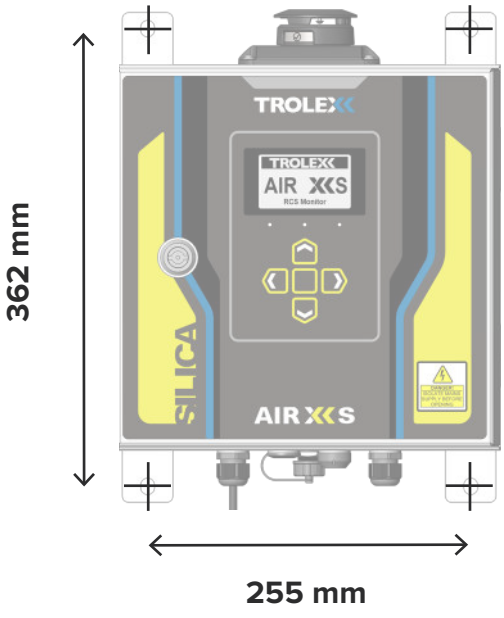


PRODUCT DIMENSIONS



PRODUCT MOUNTING

Note: Ensure the AIR XS is mounted vertically during installation.



4 x M10

PARTICULATE SENSING PARAMETERS

Sensing technology	Optical refraction technology (ORT) Optical Particle Counter (OPC)
Particulate measurement	Target RCS identification range
Max. typical dust loading*	150 mg/m^3
Continuous range	25 mg/m^3
Displayed data	RCS mg/m^3
Resolution	1 µg/m^3 (0.001 mg/m^3)

*The instrument can define particulate measurement peak trends up to the quantity specified.

Note: Sustained exposure to dust quantities above 25 mg/m^3 will be logged; however, it may affect the operating life of the AIR XS sensor.

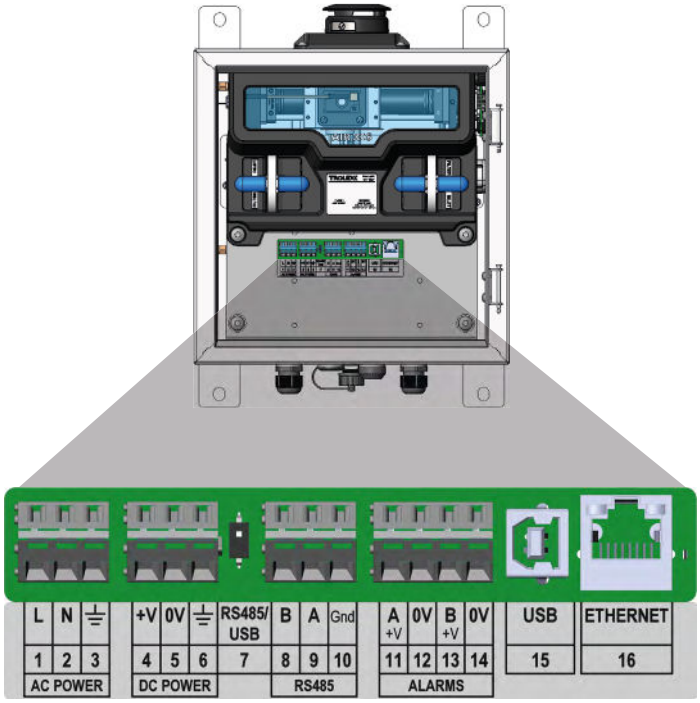
As applications of use are outside our control, the information provided is given without legal responsibility. Customers should test under their own conditions to ensure that the unit is suitable for their own requirements.

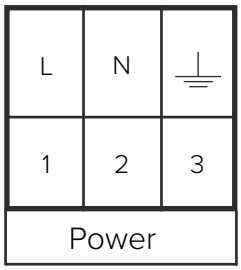
TECHNICAL SPECIFICATION

Operating temperature	-10 °C to +45 °C
Humidity	0 to 95% RH (non-condensing)
Housing material	PC/ABS – stainless steel
Ingress protection	• Main enclosure: IP66 • Particle flow path (cap open): IP22 • Particulate flow path (cap closed): IPX6
Weight	8.2 kg
Cabel entries	• 3 x M20 with removable blanks • 1 x M20 breather gland • 1 x M20 USB connector
Nominal power supply	• 100 V ac to 240 V ac 50/60 Hz • 9 V dc to 18 V dc
Power consumption	15 W
Communications	• RS485 data output with MODBUS RTU protocol • Ethernet (MODBUS TCP/IP)
External power output	1 x 15 V dc 1 A output (for powering external devices)
Connectivity	Trolex BreatheXS software
Data download	External USB interface
Instrument data storage	32 GB
User interface	• 128 x 64 dot matrix display with RGB backlight • Navigation keypad (membrane)
Visual alarms	• Custom alarm setpoints • Latching/non-latching
Self-test routine	Sensor hardware, circuitry and communications on power on manual self-test during use
Certification	CE compliant

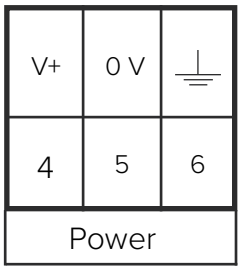
ELECTRICAL CONNECTIONS

The figure and tables below detail the connections available internally in the AIR XS.
The connections can be accessed by opening the front housing of the instrument using the supplied key.





ac power



dc power

ac power in		dc power in		Outputs			
1	Live	4	Supply voltage	7	RS485/USB switch	11	Supply voltage
2	Neutral	5	0 V	8	RS485 B	12	0 V
3	Earth	6	Earth	9	RS485 A	13	Supply voltage
				10	RS485 0 V	14	0 V
						15	USB
						16	Ethernet

Table 1: Power, RS485, external power, USB and ethernet terminal connections.

ORDER REFERENCE

Free BreatheXS software application: download from **trolex.com/air-x-software**

Option	Description
TX8100.00.00	General Purpose
P5628.5000	Transportable Pack (Tripod, Mounting Plate + TX6650 Battery Pack)
P5628.5001	Tripod Kit (Tripod + Mounting Plate)
P5633.4000	Compliance Pack S (12 x Dust Samples, 12 x Applicators, 24 x Filters + 1 x Hood)
P5633.4001	High Frequency Compliance Pack S (12 x Dust Samples, 12 x Applicators, 48 x Filters + 1 x Hood)
P5675.100	Kallipr S2 Recharge Kit (Includes 1 year Kallipr Kloud software subscription per Kallipr device)
P5675.200	Kallipr Kloud License (1 year software subscription per Kallipr device)
TX6650.	Portable Battery Pack (Single/Dual battery; 2 m/5 m cable length; External dc/Internal ac power)
P5642.5000	Spare Battery for Transportable Pack
P5625.19.01	Replacement display

DISPOSAL

Waste of Electrical and Electronic Equipment (WEEE) Directive (2012/19/EU)

The AIR XS operates a protective thermal cut-out sequence when the temperature inside the instrument exceeds the maximum operating temperature specification, detailed in section 7. This protective measure is in place to maintain the lifespan and operating functionality of the optical sensor assembly when the AIR XS is installed in environments with high ambient temperatures.



This symbol, if marked on the product or its packaging, indicates that this product must not be disposed of with general household waste.

In the European Union and many other countries, separate collection systems have been set up to handle the recycling of electrical and electronic waste.

At the end of the product's life, do not dispose of any electronic sensor, component or instrument in the domestic waste. Contact Trolex or the distributor for disposal instructions.

DISCLAIMER

The information provided in this document contains general descriptions and technical characteristics of the performance of the product. It is not intended as a substitute for and is not to be used for determining suitability or reliability of this product for specific user applications. It is the duty of any user or installer to perform the appropriate and complete risk assessment, evaluation and testing of the products with respect to the specific application or use. Trolex shall not be responsible or liable for misuse of the information contained herein. When instruments are used for applications with technical safety requirements, the relevant instructions must be followed.

All pertinent state, regional, and local safety regulations must be observed when installing and using this instrument. For reasons of safety and to help ensure compliance with documented system data, only Trolex or its affiliates should perform repairs to components.

Trolex Ltd. reserves the right to revise and update this documentation from time to time without obligation to provide notification of such revision or change. Revised documentation may be obtainable from Trolex.

Trolex Ltd. reserves the right, without notice, to make changes in equipment design or performance as progress in engineering, manufacturing or technology may warrant.

Please see product user manual (TX8100-UM-EM · P5633.1601) for testing and product specificities which should be considered relevant to application.

TRADEMARK

© 2026 Trolex® Ltd.

No part of this document may be reproduced in any form or by any means, electronic or mechanical, including photocopying, without express written permission of Trolex.

Trolex is a registered trademark of Trolex Ltd. The use of all trademarks in this document is acknowledged.

At Trolex, we save lives.

We believe that no person should risk their life to earn a living.

Our aim is to become the world's leading name in health and safety technology, through pioneering products that provide real-world benefits to our customers, whenever workers operate in hazardous environments.

For more information about Trolex, please contact us at:

Website
trolex.com

Enquiries
sales@trolex.com

Telephone
+44 (0) 161 483 1435

Trolex Ltd
Newby Road, Hazel Grove
Stockport, Cheshire
SK7 5DY, United Kingdom

@TrolexUK