

**ONE LIFE.
PROTECT IT.**



AIR XKS

DATA SHEET

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.

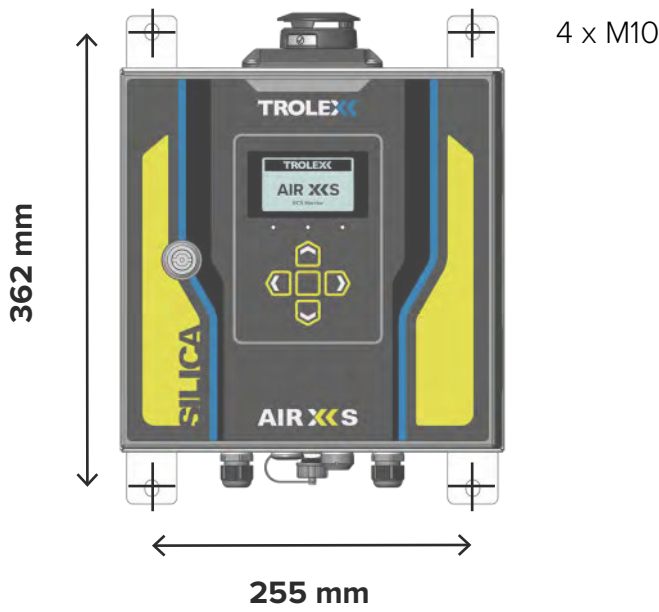


PRODUCT DIMENSIONS



PRODUCT MOUNTING

Ensure the **AIR XS** is mounted vertically during installation.



PARTICULATE SENSING PARAMETERS

Sensing technology	Optical refraction technology (ORT) Optical Particle Counter (OPC)
Particulate measurement	Target RCS identification range (1 μm to 28 μm)
Max. typical dust loading*	150 mg/m^3
Continuous range	25 mg/m^3
Displayed data	RCS mg/m^3
Resolution	1 $\mu\text{g}/\text{m}^3$ (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.

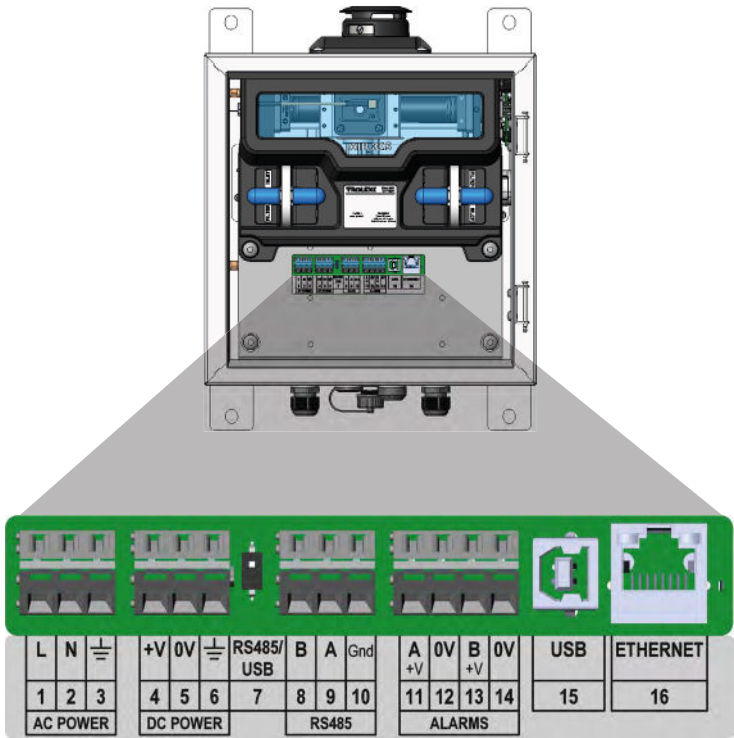
As applications of use are outside our control, the information provided is given without legal responsibility. Customers should test under their own conditions to ensure that the unit is suitable for their own requirements.

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	2 x 15 V dc 1 A outputs (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.



L	N	
1	2	3
Power		

ac power

V+	0 V	
4	5	6
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

CERTIFICATION AND CONFORMITY



The **AIR XS** complies with the following European Union Directives:
Electromagnetic Compatibility (EMC) Directive 2014/30/EU

EN 61326-1:2013

Low Voltage Directive (LVD) 2014/35/EU

EN 61010-1:2010+A1:2019



The **AIR XS** complies with the following RoHS Directives:

RoHS Directive 2002/95/EC

RoHS 2 Directive 2011/65/EU

ORDER REFERENCE

Option	Description
TX8100.00.00	General Purpose AC/DC
TX8100.00.01	General Purpose Wireless Ready AC/DC
TX8100.00.02	General Purpose Wireless Ready AC/DC + 1 year data and software
P5628.5000	Transportable Pack (Tripod, Mounting Plate + TX6650 Battery Pack)
P5628.5001	Tripod Kit
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)
P5633.800	BreatheXS Software License Online (Annual license per device)
P5642.5000	Spare Battery for Transportable Pack
P5675.100	X Series Connection Hub

Option	Description
P5675.201	Data Platform (Annual subscription)
P5675.200	X Series Connection Hub (2-year warranty)
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.

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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.

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