

**ONE LIFE.  
PROTECT IT.**



**XKD  
ONE  
DATA SHEET**

## MAIN FEATURES

- Moveable and mountable
- Early warning of personal exposure to airborne particulates
- Early warning alerts for increased particulate levels
- PM1, PM2.4, PM4.25, PM10 and TSP measurement ranges
- 0.35 to +40 µm particle sizing range
- Low-end sensor resolution, measuring down to 0.35 µm with 99% capture
- Custom particle density for increased characterisation
- Operational stability in varying atmospheric and environmental conditions
- Custom Logging Intervals from 10 to 60 seconds
- On-device audio/visual alarms
- Custom alarm setpoints
- Custom STEL and TWA period alarm thresholds
- On-device self-check routine
- Battery operated, rechargeable (16+ hours)
- On-device data logging
- Live data readout via **BreatheLITE** software
- Data analytics functions via **BreatheLITE** software
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- Range of personal, industrial and cabin mounting options
- Low maintenance

## PRODUCT OVERVIEW

The TX8061 **XD ONE Portable Dust Monitor** is designed to provide data on airborne particulates so that users can take appropriate actions from particulate-related health hazards.

**XD ONE** allows users to specifically monitor respirable particulate matter (PM) to indicate and warn of personal exposure in working and operating environments.

The device can be configured to measure and warn users based on selectable particulate matter sizes (PM1.0, PM2.5, PM4.25 and PM10) and report on all environmental total suspended particulates (TSP).

**XD ONE** uses an innovative light scattering photometer that combines adaptive flowrate with advanced sensing technology to ensure a high level of measurement accuracy.

The size of each particle is instantaneously measured and classified at up to 10,000 samples per second to allow detailed real-time reporting even in high dust level environments.

Precise data is collected for all measurable particulates, enabling detailed concentration profiling and analysis using the Trolex **BreatheLITE** software. As the **XD ONE** records data on all particulates between 0.35  $\mu\text{m}$  and +40  $\mu\text{m}$ , users can easily access and view detailed information about a wide range of particulate sizes.

Measurement information is displayed on-device in the form of custom short-term exposure limit (STEL) or long-term exposure limit/time-weighted average (TWA) audio visual alarms, or directly connected to the Trolex **BreatheLITE** software for live particulate readings.



TX8060 **XD ONE**

## PRODUCT DIMENSIONS



## MOUNTING DETAILS

The **XD ONE** is supplied with an alligator mounting clip as standard. A Klick Fast stud is available to allow the **XD ONE** to be compatible with a range of wearable, wall and pole fixing kits.



**XD ONE** alligator clip



**XD ONE** klick-fast stud

The **XD ONE** is supplied with 4 x M3 threaded mounting holes as standard to allow for custom mounting of the device.

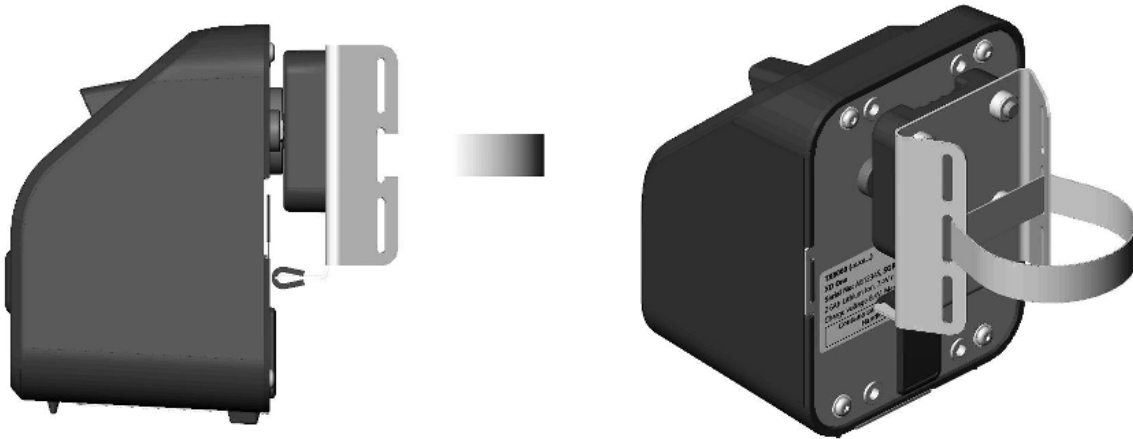


The **XD ONE** is supplied with a stability bracket and strap for additional support of the product when body-mounting. Fit the bracket using the bottom 2 x threaded M3 mounting holes and the fixing screws provided.



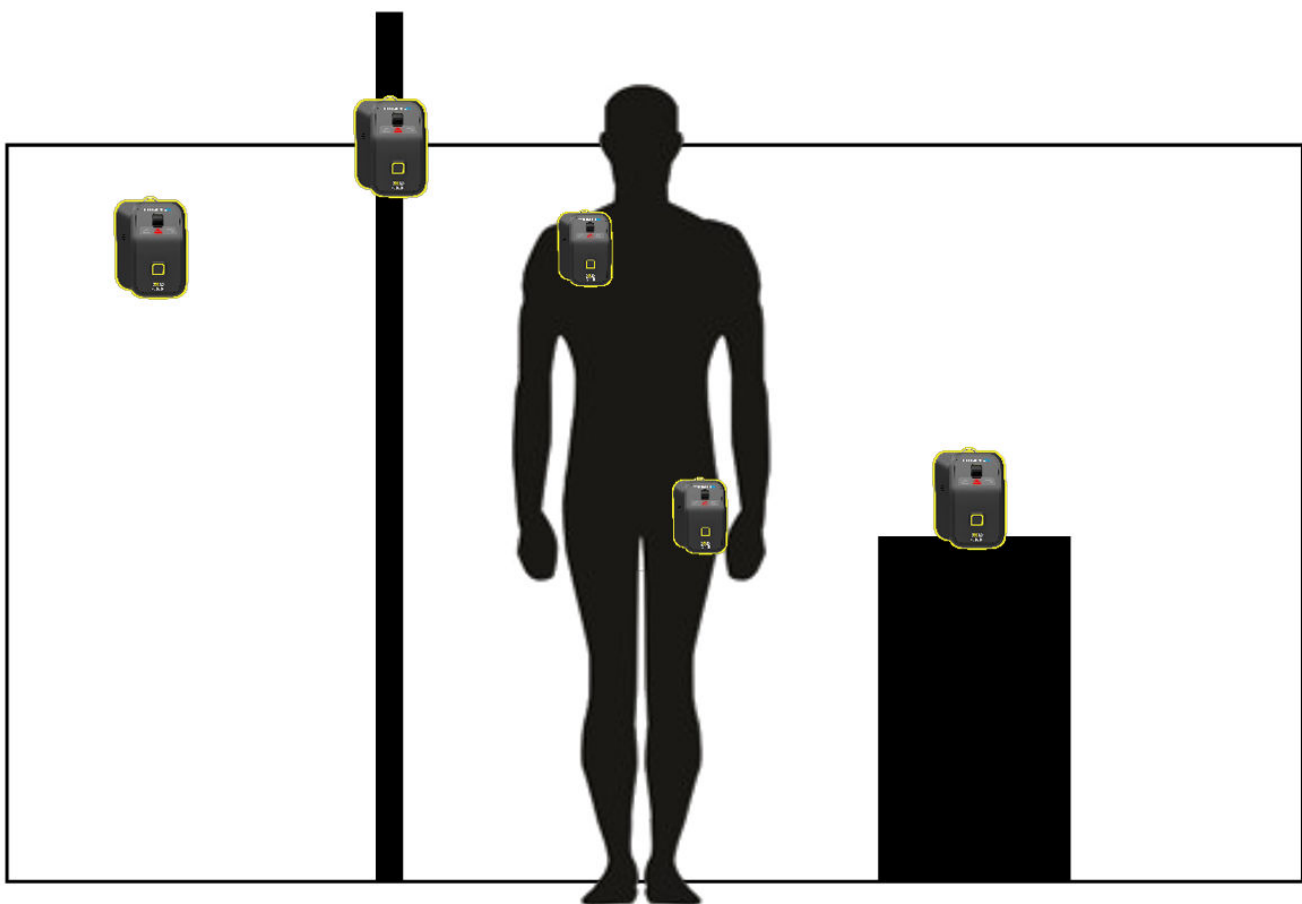
**XD ONE** stability bracket

The **XD ONE** is compatible with the pole mounting kit, which allows mounting onto the **XD ONE** unit using the M3 mounting holes ranging from 50 mm to 150 mm. Fit the bracket using 4 x threaded M3 mounting holes and the fixing screws provided.



### XD ONE pole mount bracket

Position the **XD ONE** device via personal or body mount fixings, wall and pole adapters or in-cab vehicle mounting.



## PARTICULATE SENSING PARAMETERS

|                                     |  |
|-------------------------------------|--|
| <b>Sensing technology</b>           | Optical Particle Counter (OPC)   |
| <b>Particulate measurement</b>      | 0.35 $\mu\text{m}$ to +40 $\mu\text{m}$ (PM1.0, PM2.5, PM4.25 and PM10)  |
| <b>Particle count</b>               | Up to and including 40 $\mu\text{m}$   |
| <b>PM measurement capability*</b>   | 0.35 $\mu\text{m}$ to +40 $\mu\text{m}$ over 24 bins   |
| <b>Continuous operating range**</b> | Up to 1500 $\text{mg}/\text{m}^3$  |
| <b>PM density</b>                   | 0.8 $\text{g}/\text{ml}$ to 8.0 $\text{g}/\text{ml}$ (default 1.65 $\text{g}/\text{ml}$ )<br>Custom particle density profiling |
| <b>PM measurement units</b>         | $\mu\text{g}/\text{m}^3$ – logged on-device<br>$\text{mg}/\text{m}^3$ – <b>BreatheLITE</b> software                            |
| <b>Sampling interval</b>            | 0.1 L/min (typical)  |
| <b>Particle count</b>               | $\pm 10\%$   |
| <b>Flow rate</b>                    | Dynamic (1.2 L/min nominal)  |
| <b>Total flow rate</b>              | 5.5 L/min (typical)  |
| <b>Accuracy</b>                     | $\pm 5\%$  |

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

\*\*During sustained high dust loading periods, the instrument will report on PM data up to the quantity specified.

**Note:** Sustained exposure to PM quantities above 25  $\text{mg}/\text{m}^3$  will be logged; however, this may affect the operating life of the particulate sensor.

## PARTICULATE SENSING PARAMETERS

|                                    |   |
|------------------------------------|---|
| <b>Ambient temperature limits</b>  | -10 °C to +40 °C  |
| <b>Humidity</b>                    | 0 to 95% RH, non-condensing   |
| <b>Protection classification</b>   | Main enclosure, dust and waterproof: IP66<br>Particulate flow path (cap open): IP22<br>Particulate flow path (cap closed): IPX6 |
| <b>Housing material</b>            | Polymer coated stainless steel  |
| <b>Net weight</b>                  | 445 g   |
| <b>Data connections</b>            | 1 x mini USB (maximum cable length – 2 m)   |
| <b>User options</b>                | Particulate measurements<br>STEL and TWA alarm setpoints<br>Latching alarms   |
| <b>User interface/alarms</b>       | Visual icon illumination (STEL, TWA and battery indications)  |
| <b>Self-test</b>                   | Sensor hardware, circuitry and battery test on activation<br>Manual self-test during use  |
| <b>Battery capacity</b>            | 18.72 Wh  |
| <b>Battery run time</b>            | 16 hours (full health at ambient)   |
| <b>Changing temperature limits</b> | 0 to +45 °C   |
| <b>Maximum charge current</b>      | 1.2 A   |
| <b>Product fixing/mounting</b>     | Personal mounting clip, Klick Fast stud, pole mount or custom bracket   |
| <b>Certification</b>               | CE and UKCA   |
| <b>On-device data storage</b>      | 8 GB up to 10 years (log rate dependent)<br>Stored device data can be cleared as required                                       |

**CERTIFICATION AND CONFORMITY**

The **XD ONE** complies with the following European Union Directives and United Kingdom Regulations:



EMC Directive 2014/30/EU  
EMC Regulations 2016 S.I. 2016/1091



**EN 61326-1:2013**  
**EN 61000-6-2:2019**  
**EN 61000-6-3:2007+A1:2011**  
**EN 62368-1:2020+A11:2020**  
**EN IEC 62311:2020**

Radio Equipment Directive 2014/53/EU  
Radio Equipment Regulations 2017 S.I. 2017:1206

**EN 61000-6-3:2007+A1:2011**  
**EN 62368-1:2020+A11:2020**  
**EN IEC 62311:2020**



RoHS Directive 2011/65/EU  
RoHS Regulations 2012 S.I. 2012/3032

**ORDER REFERENCE**

| Option       | Description   |
|--------------|---|
| TX8060.00.01 | GP  |
| P5644.4001   | Body Mount Kit  |
| P5644.4002   | Pole or Wall Mount Kit  |
| P5628.4000   | Compliance Pack <sup>+</sup> · 4 x Samples, 4 x Applicators + 1 x Hood) |
| P5644.4004   | Sample Replacement Kit · 12 x Samples + 12 x Applicators                |
| -            | BreatheLITE   |
| P5650.15     | Replacement Sensor Assembly   |

## DISPOSAL

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



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.

## TRADEMARK

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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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