



The **DEMS DUST MONITOR** from EX Solutio Engineering has been designed to meet the toughest conditions (certified **Ex ia I**) for the Mining and Commercial Industries. The blue powder coated IP54 mild steel enclosure offers a durable design whilst ensuring the unit can operate at maximum efficiency. The **DEMS DUST MONITOR** is available as a **Standalone** unit or in **Combination** with various **Ex Solutio QRS Gas Sensor Heads** and/or **Airflow** monitoring.

The design is based on the **Ex Solutio MEMS & DEMS** range of Sensor technology with the most features to provide seamless integration to existing and 3rd party systems. The unit can handle a wide Input Voltage Range, various signalling outputs and alarm levels that makes this detector versatile for any application. Output Signals and Audio Visual Alarms levels can be customised to Customer requirements.

DEMS Dust Monitor Features & Combinations

- Dust Detector Specifications
 - o Up to 4 Particulate Matter measurements PM1, PM2.5, PM4.25, PM10
 - o Max Particle Count Rate (Particles/second) 10,000
 - o Sampling Interval 1 to 30 seconds
 - o Total Flow rate 5.5 L/min (typ.)
 - o Sample flow rate 280 mL/min (typ.)
 - o Humidity Range 0 to 95 %rh (non-condensing)
 - o Laser Class 1
- Dust Monitor Inlet Port Filter can be changed without opening the unit
- Wide Voltage Input Range 7-30Vdc (Low power Consumption)
- Communications via MODBUS RTU (RS485)
 - Ex Solutio MODBUS Mapping for full diagnostics
 - MODBUS Map can be restructured to suite client's SCADA system
- Dual or Quad Analogue output (4-20mA or 0.4-2.0V)
- Voltage Free micro-Relay Contacts (SPDT)
- Audio and Visual alarms
- Large Display to show all readings (20 Characters by 4 lines).
 - Backlight Flashes on activated Alarms.
 - Access to Calibration menus to allow for onsite calibration
- Infra-Red link for handheld terminal to access the unit remotely
- Quick Coupling Plug for easy unit replacement "Plug n Play".
- Optional Support for Ex Solutio QRS Gas Sensor heads
 - o 4x Electro-Chemical Sensor Heads (Includes IR range and Barometric Pressure heads)
 - o 1x Pellistor Sensor Head
 - o 1x Airflow sensor

I.S. Parameters

MASC M16-0610X
Ui = 16.1Vdc li = 3A
Ci = Neg. Li = Neg.

Mark Scheme
Permit No.: EXI-40MR

Operating Parameters

Vin = 7-30Vdc I = 180mA
P = 3W (@16v)

Optional Micro-Relay Voltage free contacts available (0.3A @125Vac, 1A @30Vdc)



Accessories

- Complete Dust Monitor Filter available.
- Filter replacement kit available

Ordering Part Numbers

EXU.0036.01.DM – DEMS Dust Monitor Sensor

EXU.0036.04.* – DEMS Quad Sensor (Dust Monitor with Any 3 Gas Sensor Heads can be used)

Example for a 5% CH4 + 250ppm CO + 100ppm SO2 sensor >>> EXU.0036.04.DM.CH405.CO250.SO2100

...Please Call for custom options...

(Due to the numerous combinations available it would be too large to list all of them here)

EXS.0021.02.* – QRS Sensor Head (use Ordering Suffix for required Gas)

EXU.0026.01 – DEMS Airflow Sensor (0-15m/s) (Standalone Unit)

Enclosure Dimensions

EXU.0036.01.DM DEMS Dust Monitor

