Continuous, tribo-electric in-situ measurement in potentially explosive atmospheres

APPLICATION
The PFM 02 EX serves the permanent control of dust emissions. It can be applied as a filter monitoring device as well as configured as a dust measuring device in potentially explosive atmospheres.

INSTALLATION EXAMPLE

YOUR BENEFITS AT A GLANCE
- compact device consisting of probe and operating unit → no separate operating device necessary
- variable application possibilities through probe rod modification
- local diagnosis of system state by integrated graphic display
- real-time display with diagram or in text mode with display in % or mg/m³
- no purge air blower required
- low operational costs
- easy mounting

PRECONDITIONS ON SITE
- ambient temperature: -20...+50 °C
- location free of percussion
- homogenous dust and stack gas distribution
- flow velocity of min. 3 m/s
- installation place with run-in/run-out zone of min. 5-fold/2-fold length of duct diameter
- power supply
- processing of measuring signals
**TECHNICAL DATA**

- **Housing:** compact device (integrated operating unit); IP65, protection class 1
- **Dimensions:** approx. 160 mm x 160 mm x 510/710 mm (w x h x d)
- **Weight:** approx. 2.5 kg
- **Probe:** tribo-electric probe consisting of probe rod and probe head; probe rod: electrically isolated from housing, standard length: 300 mm (other lengths on request); circular, rectangular or wing profile as option; immersion depth: 400 mm as standard (dependent on application)
- **Display / Operating:** graphic display (128 x 64 Pixel), 4 operating keys
- **Ambient temperature:** -20...+50 °C
- **Relative humidity:** no special sensitivity
- **Dew-point spread:** min. +5 K
- **Measuring gas temperature:** max. 250 °C
- **Flow velocity:** min. 3 m/s
- **Measuring range of dust:** qualitative: 0...100%; quantitative: 0...10 mg/m³ (0...1000 mg/m³)
- **Gain levels:** 4
- **Operational availability:** after approx. 5-15 min
- **Calibration:** by gravimetric comparison measurements (for trend measurement and filter analysis not required)
- **Analogue output:** 4...20 mA, galvanically isolated to device ground, burden max. 500 Ω
- **Digital outputs:** status signals max. 24 V DC at 0.1 A (for failure, maintenance, maintenance requirement, limit value 1 and 2); load capacity: max. 60 Vp, max. 75 mA; forward resistance: max. 10 Ω
- **Process connection:** 1“ welding sleeve
- **Cable gland / tightening zone:** 1x M20 x 1.5 / 9...13 mm
- **Power supply:** 24 V DC

Special models are possible on request.