

Filter monitoring device



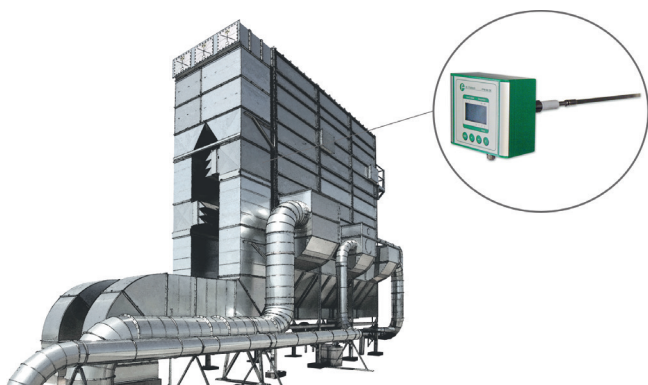
- EU-type examination certificate according to EN 60079, ATEX directive (IBExU04ATEX1249 X)
- approved for Ex II 1/3D Ex ia/IIc IIIc T74 °C Da/Dc, -20 °C ≤ T_a ≤ +50 °C
- application in hazardous areas possible (Ex-Zone 22/21/20 within pipes/stacks; Ex-Zone 22 outside of pipes/stacks), depending on the risk assessment

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.

APPLICATION EXAMPLE



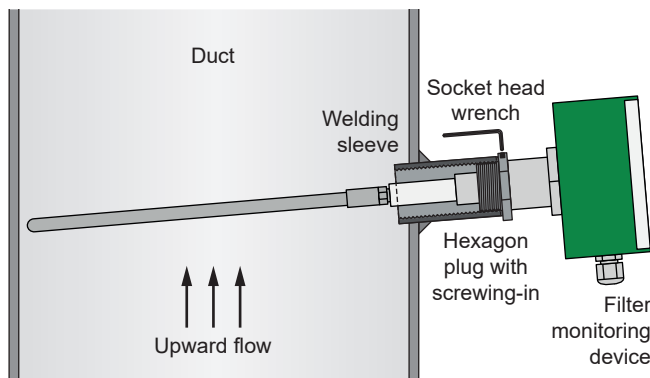
YOUR BENEFITS AT A GLANCE

- 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

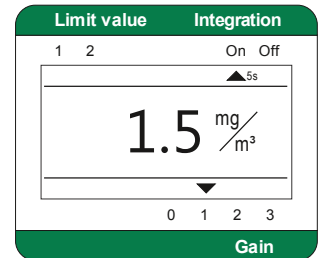
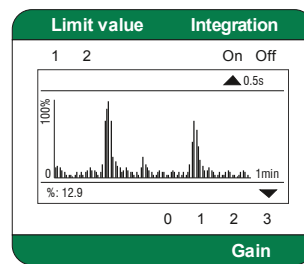
PRECONDITIONS ON SITE

- 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

PROCESS CONNECTION



DISPLAY AS GRAPHIC & TEXT MODE



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 (not required for trend measurement and filter analysis)
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
<i>Special models are possible on request.</i>	