

## Filter monitoring device



Continuous, tribo-electric in-situ measurement for qualitative monitoring of exhaust gas

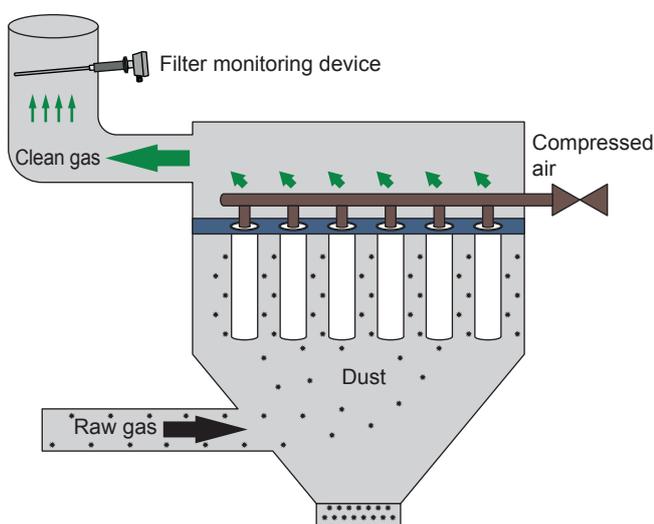
### APPLICATION

The PFM 13 serves the permanent control of dust emissions. Applied as a filter monitoring device it is an effective implement to detect and localise damages to filtering precipitators at an early stage. Configured as a dust measuring device it can be used for continuous monitoring of clean gas contents and dust contents of filtering precipitators.

### YOUR BENEFITS AT A GLANCE

- local diagnosis of system state by integrated graphic display
- no separate power supply necessary (2-wire transmitter)
- dust measurement and filter monitoring with one compact device
- no purge air blower required
- low operational costs
- easy mounting

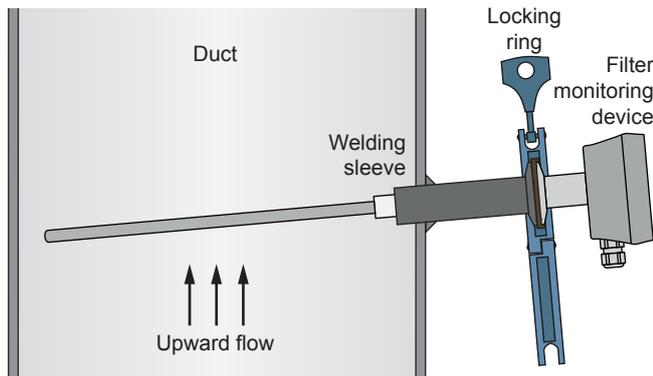
### INSTALLATION EXAMPLE



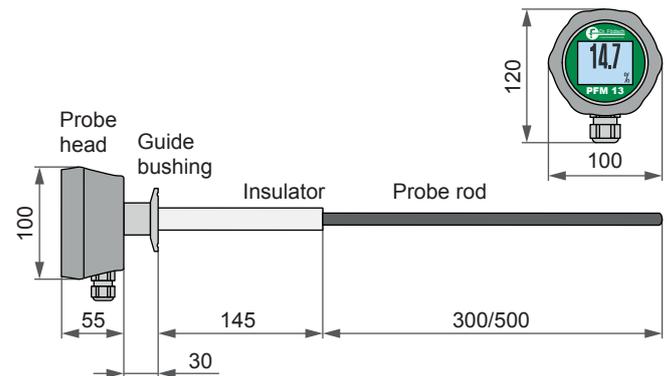
### PRECONDITIONS ON SITE

- 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 for 2-wire transmitter
- processing of measuring signals

## PROCESS CONNECTION BY TRI-CLAMP



## DESIGN &amp; DIMENSIONS



## TECHNICAL DATA

Housing:	compact device (integrated graphic display with operating); IP65; protection class 1
Dimensions:	approx. 100 mm x 120 mm x 530/730 mm (w x h x d)
Weight:	approx. 1.0 kg
Probe:	tribo-electric probe consisting of probe rod and probe head; probe rod: electrically isolated from housing, length: 300/500 mm (possible to shorten mechanically); immersion depth: approx. 410/610 mm (dependent on application)
Display / Operating:	graphic display with touch function at probe head; switches at signal module
Ambient temperature:	-20...+50 °C
Relative humidity:	no special sensitivity
Dew-point spread:	min. +5 K
Measuring gas temperature:	max. 280 °C
Flow velocity:	min. 3 m/s
Measuring range of dust:	0...100% (qualitative)
Gain levels:	4
Operational availability:	immediately after switch-on of power supply
Calibration:	by gravimetric comparison measurements (for trend measurement and filter analysis not required)
Analogue output:	4...20 mA, 2-wire transmitter, galvanically isolated to device ground, burden max. 150 Ω
Digital outputs:	limit value 1 and 2 freely adjustable via menu (solid-state relays, standard: not activated); load capacity: max. 60 Vp, max. 75 mA; forward resistance: max. 10 Ω
Process connection:	welding sleeve with Tri-Clamp fastener
Cable gland / tightening zone:	M20 x 1.5 / 9...13 mm
Power supply:	2-wire transmitter (4...20 mA); min. 15 V DC / max. 30 V DC
<i>Special models are possible on request.</i>	