

## Filter monitoring device



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

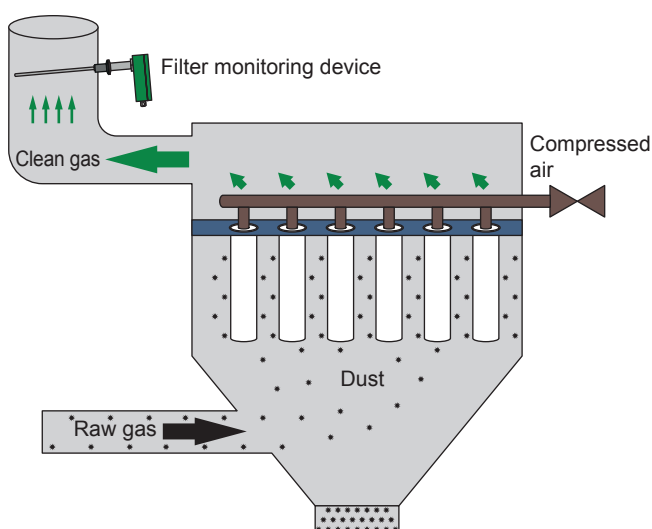
### APPLICATION

The PFM 92 C 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

- compact device with integrated operating elements
- variable application possibilities through probe rod modification
- different order configurations for power supply possible
- no purge air blower required
- low operational costs
- easy mounting

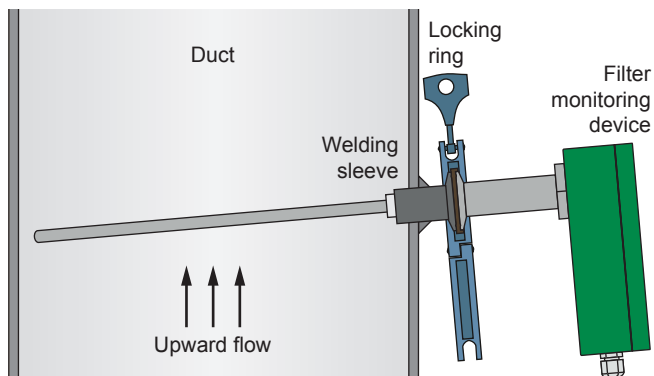
### INSTALLATION EXAMPLE



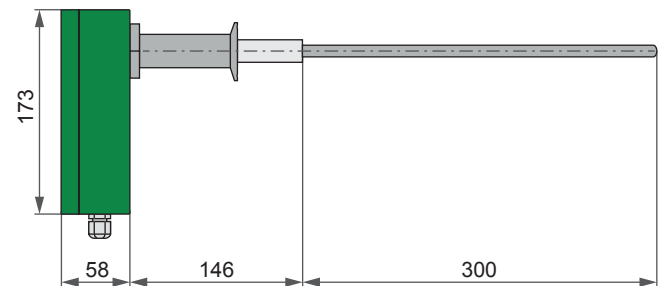
### PRECONDITIONS ON SITE

- ambient temperature:  $-20...+50\text{ °C}$
- relative humidity: max. 90% (non-condensing)
- 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 BY TRI-CLAMP



## DIMENSIONS



## TECHNICAL DATA

Housing:	compact device; IP65; protection class 1
Dimensions:	approx. 78 mm x 203 mm x 504 mm (w x h x d)
Weight:	approx. 1.8 kg
Probe:	tribo-electric probe consisting of probe rod and probe head; probe rod: electrically isolated from the housing, stainless steel, length: 300 mm (standard); immersion depth: approx. 300 mm (dependent on application)
Display / Operating:	LEDs and switches at signal module
Ambient temperature:	-20...+50 °C
Relative humidity:	max. 90% (non-condensing)
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 energising of power supply
Calibration:	by gravimetric comparison measurement (not required for trend measurements and filter analysis)
Analogue output:	4...20 mA, 4-wire transmitter, not galvanically separated (optionally with internal separation), burden max. 500 Ω
Digital outputs:	potential-free relay contacts (status signals for error, limit value 1 and 2); load capacity: max. 24 V DC at 0.1 A
Process connection:	1" welding sleeve with Tri-Clamp fastener
Cable gland / tightening zone:	M20 x 1.5 / 9...13 mm
Power supply:	24 V DC or 110 V AC, 50/60 Hz or 230 V AC, 50 Hz; 5 VA
<i>Special models are possible on request.</i>	