

# PFM 13-C

## Product Information

The PFM 13-C is a highly sensitive qualitative monitoring system for continuous, tribo-electric in-situ filter monitoring. It is specifically designed to detect the early failure of bag filter plants. This compact, cost effective probe either works individually to determine an overall fault, or can be co-ordinated as part of a multi-sensor system to localise faults. Depending on the configuration of the device it can be used as a filter monitoring device as well as a dust measuring device.

## Application

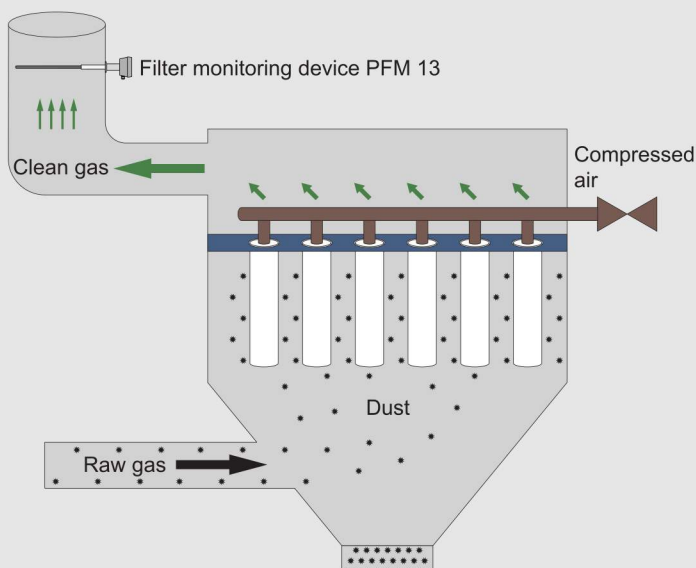
The PFM 13-C can provide permanent control over dust emissions. As a filter monitoring device it provides an early detection of plant failure, which leads to reduced plant down-time and minimises loss of valuable product. Depending on the configuration of the device, it can be used as a dust measuring device, seeking to minimise 'nuisance' dust therefore improving environmental conditions. The PFM range of monitors have 5000+ installations worldwide and are suitable for use in a wide range of applications / industries.

### Application Examples

- Quarries
- Metal recycling
- Bag-filter plants
- Road-stone dryers
- Coating plants
- Cement Industry
- Foundries
- Cartridge filter plants
- Sorting plants
- Centrifugal cyclones



### Installation example



### Technology

The measurement with the PFM 13-C is carried out via the tribo-electric measuring method. The measuring gas in the exhaust gas flow is gathered by means of the probe rod. A charge exchange takes place between the probe rod and the passing and impinging dust particles.

From the discharged current a signal is generated which depends on the mechanical and electrical characteristics of the dust. The dust-proportional signal which is generated by the microcontroller integrated in the device is the degree for the dust content of the exhaust.



## Features and Benefits

- dust measurement and filter monitoring with one compact device
- no separate power supply necessary (2-wire transmitter)
- no purge air blower required
- low operational costs / no consumables
- easy mounting
- first-class price-performance ratio
- simple commissioning

## Technical data

Housing:	compact device; IP 65; protection class 1
Dimensions:	approx. 100 mm x 120 mm x 530/730 mm (w x h x d)
Weight:	approx. 0.9 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 analysis not required)
Measuring range of dust:	0...100% (qualitative)
Amplification 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>	