Filter monitor

Triboelectric filter monitor for efficiency monitoring after filter plants and for continuous dust measuring in dry emissions.

Features

- Compact and rugged design
- Good price/performance ratio
- Ideal for monitoring bag filters
- Minimal maintenance required
- Early detection of filter malfunctions
- Savings in cost, as no preventative filter exchange is necessary.

Applications

- Power stations
- Bag filter plants of all types
- Dust extraction plants in the production industry
- Waste incineration plants
- Crematoriums
- ✖ Not suitable for use directly behind electrostatic precipitators.

Approvals

- Suitability-tested by the TÜV Hamburg, test report 98CU026
- Itemized in the list of suitable measuring devices for continuous emission measuring.

Measuring principle

The filter monitor uses the triboelectric effect to determine dust loads in flowing gases. The electrical charge which the dust particles experience due to friction is picked up by a probe protruding into the dust channel and converted into a measuring signal by electronics. The measuring signal is proportional to the dust concentration and is calibratable at a constant gas speed.

System versions

D-FW 231 measuring probe

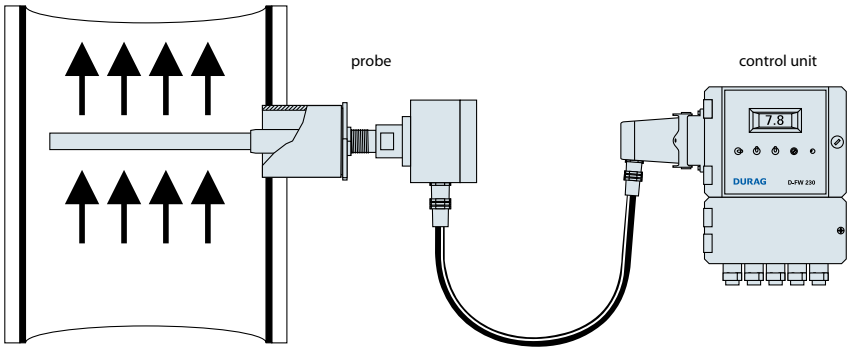
- With complete electronics in the probe
- Probe rod length 400 mm
- Fitted via 1"(G1) thread

D-FW 230 filter monitor

- D-FW 231 measuring probe Probe rod length 400 mm
- D-FW 230-B control unit with digital display 115/230V 50/60 Hz.

D-FW 235 mobile filter monitor

- D-FW 231filter monitor with 80, 250 and 400 mm probe length in a system case including a 3-channel paperless recorder.



Options

- Measuring gas temperature up to 500°C
- Ex version **D-FW 240/Ex**
- Weather protection cover
- Various mounting options (flange, connection piece)
- Probe rod lengths 80, 250, 700 mm

measurements	dust mass flow	detection limit	<2% of measuring range/month
measuring ranges	0–100% (flue gas velocity >5 m/s)	reference point drift	<0.3% of measuring range/month
measuring principle	tribo electric	zero point drift	<0.3% of measuring range/month
flue gas temperature	above dew point up to 200°C, optional up to 500°C, flue gas humidity <80%	supply voltage	24 VDC, 5 VA 115 / 230 VAC, 50 / 60 Hz, 10 VA*
flue gas pressure	-500 up to +500 hPa	dimensions (h x w x d) probe length	probe: 180 x 80 x (270 + probe length) mm 80, 250, 400, 700 mm
duct diameter	0.3–4 m	weight	probe: max. 4.5 kg control unit: 3 kg
ambient temperature	-20 up to +50 °C		
protection	IP65		
measuring outputs	0 / 4–20 mA / 500 Ohm		
digital outputs*	1 relay output, permissable load 250 V / 100 VA		
digital inputs*	2 potential free inputs		
accuracy	<2% of measuring range	remarks	*D-FW 230 only

CE

Ex

TÜV