



FMD 09

Product Information



The flow measuring device FMD 09 is a highly sensitive system for continuous in-situ measurement of the velocity and temperature of gas flows in pipelines.

The device is suitability tested according to DIN EN 15267 and certified in compliance with QAL1.

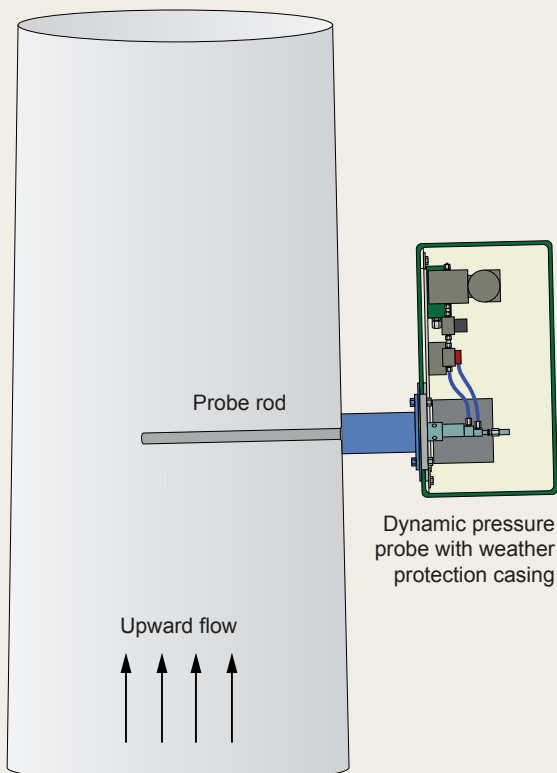
Features

The use of the measuring principle of dynamic pressure and PT100 assures a device which is easy in design and operating as well as the realtime monitoring of the measuring parameters.

The operating and display unit is integrated in the weather protection casing. On the high-quality display all measuring values, status information and parameters are displayed. Furthermore, a real-time display as line diagram is possible.



Installation example



Function

The continuous measurement of velocity and temperature of gas flows is much important at operation of a system with flowing gases (e.g. hall outlet air, exhaust etc.).

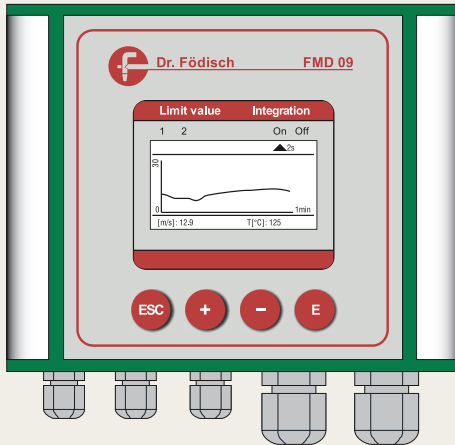
At emission measurements the current concentrations are determined. For the translation to absolute emitted masses the volume is necessary; this is calculated through the gas velocity.

In the FMD 09 the measuring gas is measured in the exhaust flow by the dynamic pressure probe. Thereby the differential pressure is continuously measured by the dynamic pressure probe. The signal which results from the differential pressure is a degree for the velocity of the exhaust. The microcontroller integrated in the operating unit generates a proportional signal and evaluates the volume flow.

Optionally, the absolute pressure at the measuring point can be measured continuously by an absolute pressure transmitter.



Operating unit



Highlights of the device

- compact device consisting of probe and operating unit → no separate operating device necessary
- local diagnosis of system state by integrated graphic display
- real-time display with line diagram
- readout of volume flow at standard reference conditions possible
- easy mounting
- very low maintenance requirement
- first-class price-performance ratio

Technical data

Housing:	compact device (integrated operating unit); protection class 1
Probe:	dynamic pressure probe with integrated PT100; protection degree IP 65; weight approx. 9.5 kg; dimensions approx. 440 mm x 640 mm x 1200 mm (w x h x d); immersion depth: 500 mm (standard) flange: DN 80 PN 6
Display/operating:	graphic display, 4 operating buttons
Media temperature:	max. 280 °C (higher temperatures on request)
Ambient temperature:	-20...+50 °C
Atmospheric humidity:	no special sensitivity
Flow velocity:	from approx. 3 m/s
Analogue outputs:	3 x 4...20 mA; selection of the following measurands: velocity, volume flow (in operation / in standard condition dry), differential pressure, temperature and optionally absolute pressure
Burdens:	max. 500 Ω
Digital outputs:	status signals: max. 24 V DC at 0.1 A; failure, maintenance, limit value 1 and 2
Power supply:	110/230 V AC, 50-60 Hz, 24 V DC, 5W
Operational availability:	after approx. 1 min
Measuring ranges:	- velocity: (0)3...100 m/s - volume flow (in operation / in standard condition dry): 0...3.200.000 m ³ /h - differential pressure: 0...100 mbar - temperature: 0...300/(800) °C
Suitability test:	DIN EN 15267, QAL1, ID: 0000001016
Optional:	- readout of absolute pressure (measuring range: 800...1200 mbar) - feeding of frost protection heating (230 V AC, 500 W) - manual or automatic back purging

Special models are possible on request.