8711

Nominal flow ranges from 0.010 I_N/min to 80 I_N/min

- High accuracy and repeatability
- Fast settling time
- Fieldbus option

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FOR DATA SHEET

The mass flow controller (MFC) Type 8711 is suited for regulating the mass flow of gases over a big flow range. The thermal MEMS sensor is located directly in the gas stream and therefore reaches very fast response times. A direct-acting proportional valve from Bürkert guarantees a high sensitivity. The integrated PI controller ensures outstanding control characteristics of the MFC. Type 8711 can optionally be calibrated for two different gases; the user can switch between these two gases. As electrical interfaces both, analog standard signals and fieldbuses are available. The mass flow controller type 8711 fits for various applications, like e.g. burner controls, heat treatment, material coatings, bio reactors, fuel cell technology or test benches.

Technical Data

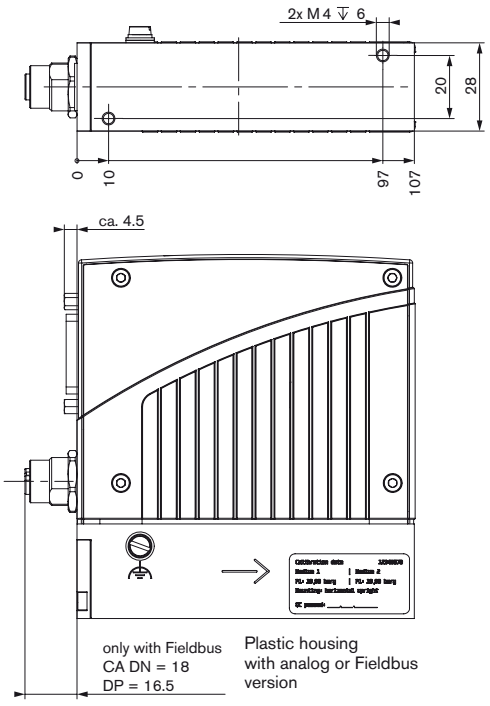
Turn-down ratio	1:50, higher turn-down ratio on request
Operating gas	Neutral, non-contaminated gases, others available on request
Calibration gas	Operating gas or air with conversion function
Max operating pressure (inlet pressure)	Up to max. 145 PSI (10 bar), depending on the orifice of the valve
Gas temperature	14°F to 158°F (-10°C to 70°C) (-10°C to 60°C with oxygen)
Ambient temperature	14°F to 122°F (-10°C to 50°C)
Accuracy (after 1 min. warm up time)	± 0.8 % o. R. ± 0.3 % of F. S.
Repeatability	±0.1% F.S.
Settling time ($t_{95\%}$)	<300 ms
Body material	Stainless steel, aluminium
Port connection	NPT 1/4", G 1/4", screw-in fitting or flange, others on request
Communication	Standard signal, RS-232 or RS-485, Profibus DP, DeviceNet, CANopen, Modbus
Power supply	24 V DC
Voltage tolerance	±10%
Power consumption	Max. 3.5 W - 14 W (depending on the proportional valve used)

Nominal Flow Ranges (other gases on request)

Gas	Min. Q_{nom} [I_N/min]	Max. Q_{nom} [I_N/min]
Argon	0.01	80
Helium	0.01	500
Carbon dioxide	0.02	40
Air	0.01	80
Methane	0.01	80
Oxygen	0.01	80
Nitrogen	0.01	80

Dimensions [mm] (see datasheet for more details)

Standard Version



Measuring Principle

The actual flow rate is detected by a sensor. This operates according to a thermal principle which has the advantage of providing the mass flow which is independent on pressure and temperature.