Mass Flow Controller for Gases (MFC)

Nominal flow ranges from
20 l_N/min to 2500 l_N/min

- High accuracy
- Fast settling times
- Fieldbus option
- Special version for ammonia gas
- Protection class IP65

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FOR DATA SHEET

The mass flow controller is suited for regulating the mass flow of high gas flows. The thermal inline 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 8626 can optionally be calibrated for two different gases; the user can switch between these two gases. The mass flow controller type 8626 is especially designed for use in harsh environments due to a low sensitivity to contamination and the high protection class. The MFC fits for various applications.

Technical Data

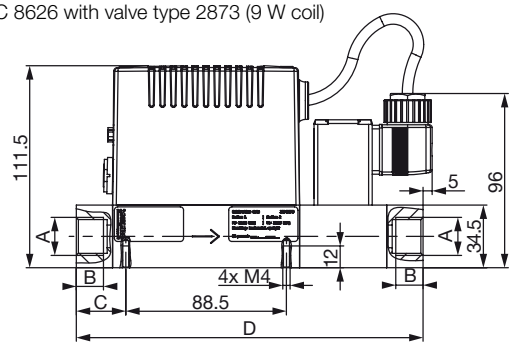
Turn-down ratio	1:50 [3]
Operating gas	Neutral, non-contaminated gases, others available on request
Calibration gas	Operating gas or air with correcting function
Max operating pressure (inlet pressure)	Up to max. 145 PSI (10 bar), depending on the orifice of the valve
Gas temperature	14°F to 158°F (-10°C to 70°C) (-10°C to 60°C with oxygen)
Ambient temperature	14°F to 113°F (-10°C to 45°C) higher temperatures on request
Accuracy (after 15min warm up time)	±1.5% of rate ±0.3% F.S. (o.R.: of reading; F.S.: of full scale)
Repeatability	±0.1% F.S.
Settling time ($t_{95\%}$)	<500 ms
Body material	Stainless steel, aluminium
Port connection	G 1/4", 3/8", 1/2", 3/4", 1" NPT 1/4", 3/8", 1/2", 3/4", 1"
Communication	Standard signal, RS-232 or RS-485, Profibus DP, DeviceNet, CANopen, Modbus
Operating voltage	24 V DC
Voltage tolerance	±10%
Power consumption	12.5 W - 37 W (depending on the version)

Nominal Flow Ranges (other gases on request)

Gas	Min. Q_{nom} [l_N/min]	Max. Q_{nom} [l_N/min]
Ammonia	20	1250
Argon	20	1500
Carbon dioxide	20	800
Air	20	1500
Methane	20	750
Propane	20	400
Oxygen	20	1500
Nitrogen	20	1500

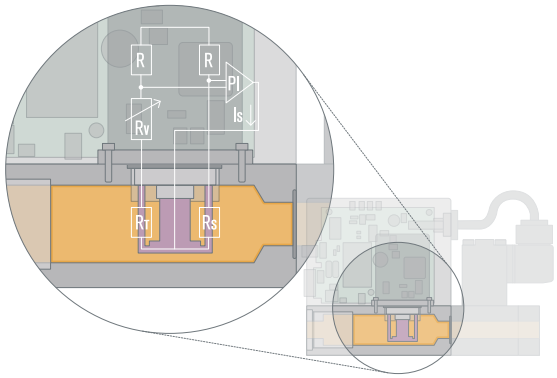
Dimensions [mm] (see datasheet for more details)

MFC 8626 with valve type 2873 (9 W coil)



A	B	C	D
NPT 1/4"	10	22.25	181
NPT 3/8"	11	22.25	181
NPT 1/2"	14	27.25	191
NPT 3/4"	15	27.25	191

Measuring Principle



The Inline sensor works in the CTA operating mode (Constant Temperature Anemometer), whereby an electrical heating resistance (RS) and a measurement resistance (RT) are regulated at a constant temperature difference. Both resistances are directly placed in the flow channel; three more resistances are outside. Together they are all connected into a measurement bridge.