

IQ+FLOW

# IQFD-200C

Microfluidic Mass Flow Controller for Gases, Downported



## Technical specifications

### Measurement & control

Type of media	Dry, clean and non-corrosive gases
Flow range	min. 0.2...10 ml <sub>n</sub> /min max. 0.1...5 l <sub>n</sub> /min
Accuracy	< ±1.5% Rd + ±0.5% FS
Repeatability	for flows < 20 ml <sub>n</sub> /min: < ±0.2% FS; for flows > 20 ml <sub>n</sub> /min: < ±0.5% Rd
Turndown ratio	1:50 (2...100%)
Multi fluid capability	storage of max. 8 calibration curves
Settling time (in control, typical)	t98% down to 300 msec, 700 msec typical
Operating temperature	5...+50°C
Temperature sensitivity	span: < 0.2% Rd/°C; zero: < 0.01 ml <sub>n</sub> /min/°C
Leak integrity, outboard	1 x 10 <sup>-8</sup> mbar-l/sec He
Max. Kv-value	2.37 x 10 <sup>-3</sup>
Pressure drop	20 mbar(d) based on 1 l <sub>n</sub> /min Air at 0 bar(g)
Mounting	max. error at 90° off horizontal 0.5 ml <sub>n</sub> /min at 1 bar, typical N2
Storage/transport conditions	0...+50°C, max. 95% RH (non-condensing)

### Approvals

Marking	CE, RoHS, WEEE, REACH
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### Mechanical specs

Pressure rating (PN)	10
Ingress protection	IP40
Material wetted parts	body: aluminum or stainless steel SS316L; chip sensor (flow or pressure): Si, SiO <sub>x</sub> , epoxy, aluminum
Sealing material	standard: Viton®; other on request
Process connections	downported construction
Max. ΔP	9 bar dif.
Weight	0.3 kg

### Electrical properties

Power supply	+ 15 ... 24 Vdc
Power consumption	1.8 W typical at 24 V
Analog output	0...5 (10) Vdc or 0 (4)...20 mA (sourcing)
Analog setpoint	0...5 (10) Vdc or 0 (4)...20 mA (sinking)
Digital communication	RS232/RS485 (Modbus RTU/ASCII or FLOW-BUS)

### Electrical interfaces

Power (main connector)	RJ45
Function (instrument connector)	Analog, RS232, RS485
Modbus RTU/ASCII/FLOW-BUS	RJ45