

mini CORI-FLOW

# M15

Low Flow Coriolis Mass Flow Meter / Controller, 0...300 kg/h



## Technical specifications

### Measurement & control

Type of media	liquids and gases
Flow range	liquid: 0...300 kg/h (nominal flow rate: 100 kg/h) gas: 0...4000 l/min (N2) full scale (FS) value is user-configurable (5...300 kg/h)
Accuracy	±0.2 % Rd (liquids) ±0.5 % Rd (gases) ±5 kg/m3 (density)
Repeatability	±0.05 % Rd ± ½ (ZS x 100/actual flow)%
Turndown ratio	up to 1:1200
Zero point stability (ZS)	< ±50 g/h
Response time (sensor)	≤ 200 msec
Operating temperature	0...70 °C
Fluid temperature	0...70 °C; for ATEX Cat.3, Zone 2 max. 50 °C
Temperature sensitivity	on zero: < 5 g/h/°C; on span: < 0.001% Rd/°C; self heating (at zero flow): < 15 °C
Leak integrity, outboard	< 2 x 10 <sup>-9</sup> mbar l/s He
Max. Kv-value	6.6 x 10 <sup>-2</sup> for M15+C0I: Gas flow control valve 2.3 x 10 <sup>-3</sup> for M15+C2I: Liquid flow control valve 6.6 x 10 <sup>-2</sup> for M15+C5I: Gas/Liquid flow control valve 3.0 x 10 <sup>-1</sup> for M15+F-004AI: Gas/Liquid flow control 1.0 for M15+F-004BI: Gas/Liquid flow control
Mounting	any position
Warm-up time	30 minutes
Storage/transport conditions	0...50 °C, max. 95 % RH (non-condensing)

### Approvals

Marking	CE, UKCA, RoHS, WEEE, REACH
Ex-Protection	ATEX Zone 2, KCs

### Mechanical specs

Pressure rating (PN) - in barg	100
Ingress protection	IP65
Material wetted parts	Stainless steel 316L / 1.4404
Housing material	stainless steel 316L / 1.4404 (body); high-grade anodised aluminium alloy 3.2515 (housing and cover); FKM (sealings)
Sealing material	none (in fluid path)
Sensor inner diameter	single tube, DN 3.1
Process connections	compression type or face seal (VCR/VCO) fittings, or Tri-Clamp flanges (welded)
Weight	4.7 kg

### Electrical properties

Power supply	15...24 Vdc ±10%
Power consumption	meter: 2.5 W typical at 24 V controller: 7 W typical at 24 V for fieldbus: add 0.9 W
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	standard: RS232; option: DeviceNet™, PROFIBUS DP, Modbus RTU, FLOW-BUS

### Electrical interfaces

Actuator output	4-pin M8 (female)
Power (main connector)	8-pin DIN (male)
Function (instrument connector)	Analog, RS232
PROFIBUS DP	5-pin M12 B (female)
CANopen / DeviceNet	5-pin M12A (male)
Modbus RTU/ASCII/FLOW-BUS	5-pin M12A (male)