# L231

Digital Thermal Liquid Mass Flow Meter, Industrial Style





## **Technical specifications**

#### Measurement & control

Type of media	liquids water-like
Flow range	min. 2100 g/h max. 201000 g/h (liquid, flow based on H <sub>2</sub> O)
Accuracy	±1% FS
Repeatability	< 0.2% FS (typical H2O)
Turndown ratio	up to 1:50
Response time (sensor)	≤2 sec.
Operating temperature	550 °C
Fluid temperature	550 °C
Temperature sensitivity	±0.1% FS/°C
Leak integrity, outboard	< 2 x 10 <sup>-9</sup> mbar l/s He
Mounting	in any position
Warm-up time	30 minutes
Storage/transport conditions	050 °C, max. 95% RH (non-condensing)

#### **Approvals**

M	Marking								CE											

### **Mechanical specs**

Pressure rating (PN)	100
Ingress protection	IP65
Material wetted parts	stainless steel 316L or comparable
Housing material	stainless steel 1.4308
Sealing material	FFKM/Kalrez®
Sensor inner diameter	0.8 mm (30S); 1.2 mm (70S)
Process connections	compression type or face seal male couplings
Weight	0.8 kg

#### **Electrical properties**

Power supply	1524 Vdc ±10%
Power consumption	2.5 W typical at 24 V for fieldbus: add 0.9 W
Analog output	05 (10) Vdc or 0 (4)20 mA (sourcing)
Analog setpoint	05 (10) Vdc or 0 (4)20 mA (sinking)
Digital communication	standard: RS232; options: DeviceNet™, CANopen®, PROFIBUS DP, Modbus RTU/ASCII, FLOW-BUS, EtherCAT®, PROFINET, Modbus/TCP, EtherNet/IP, POWERLINK

8-pin DIN (male)

#### **Electrical interfaces**

Power (main connector)

Function (main connector)								Analog, RS232, RS485 8-pin M12B (female) 5-pin M12A (male) 5-pin M12A (male)													
PROFIBUS DP																					
CANopen / DeviceNet  Modbus RTU/ASCII/FLOW-BUS  Modbus TCP / EtherNet/IP / EtherCAT®/ PROFINET / POWERLINK																					
																				2x 4 pin M12D (female)	