# L01V12

Ultra Low-Flow Thermal Liquid Mass Flow Controller





# **Technical specifications**

#### Measurement & control

Type of media	liquids water-like
Flow range	min. $5100$ mg/h max. $0,12$ g/h (liquid, flow based on $H_2O$ )
Accuracy	±2% FS
Repeatability	< 0.2% FS (typical H2O)
Turndown ratio	up to 1:20
Settling time (in control, typical)	2 sec.
Control stability	±0.1% FS/°C
Response time (sensor)	≤2 sec.
Operating temperature	550 °C
Fluid temperature	550 °C
Temperature sensitivity	±0.2% FS/°C
Leak integrity, outboard	< 2 x 10 <sup>-9</sup> mbar l/s He
Max. Kv-value	2,37x10 <sup>-3</sup>
Mounting	in any position
Warm-up time	30 minutes
Storage/transport conditions	050 °C, max. 95% RH (non-condensing)

#### **Approvals**

Marking

### **Mechanical specs**

Pressure rating (PN)	100
Ingress protection	IP65
Material wetted parts	stainless steel 316L or comparable
Housing material	high-grade anodised aluminium alloy 3.2515 (body), duplex 1.4462 (flange), ABS/stainless steel 1.4404 or comparable (cover)
Sealing material	FFKM/Kalrez®-6375
Sensor inner diameter	0.25 mm (20D); 0.25 mm (50S); 0.8 mm (60S); 1.2 mm (70S); 1.0 mm (80S)
Process connections	1/16" or 1/8" OD compression type
Purge connection	1/16" OD compression type
Max. ΔP	10 bar(d)
Weight	0.6 kg

## **Electrical properties**

Power supply	1524 Vdc ±10%
Power consumption	3.5 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/JP. POWERLINK

#### **Electrical interfaces**

Power (main connector)											9-pin D-sub (male)											
Function (main connector)											Analog, RS232, RS485											
PROFIBUS DP										9-pin D-sub (female)												
CANopen / DeviceNet									5-pin M12A (male)													
Мос	Modbus RTU/ASCII/FLOW-BUS										RJ45											
	Modbus TCP / EtherNet/IP / EtherCAT*/ PROFINET / POWERLINK									2x F	RJ45											