

THERMAL MASS FLOW SENSOR - OS 421

DESCRIPTION

OS 421 is based on the thermal mass flow principle. It measures volumetric standard flow over a wide measuring range, pressure and temperature independent. The sensor installation is done through the selected measuring section. The sensor is equipped with color display to show all measured values like flow and total consumption. At the same time display can be used to manage sensor settings like pipe diameter, gas type or analogue output scaling. The sensor offers two different signal output options. It can have analogue and pulse output to read out flow and total consumption, Alternatively Modbus RTU interface can be used to access all measured values.



APPLICATIONS ⁽²⁾

- Air Compressor
- Compressed air piping
- After-cooler
- Cyclone condensate separator
- Pressure vessel/Air tank
- Air dryer
- Point of use

⁽¹⁾ For any other technical gas please contact us or your local dealer

⁽²⁾ OS series can be used in variety of applications. For applications not listed please contact us or your local dealer.

TECHNICAL SPECIFICATION

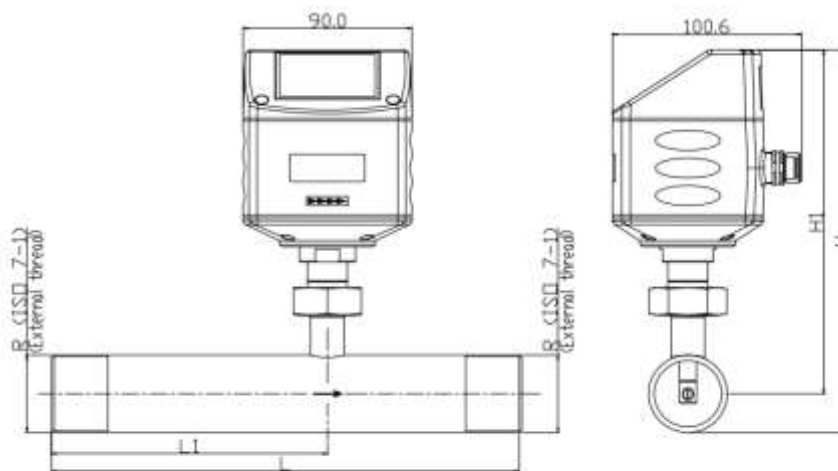
Measured unit	m ³ /h, m ³ /min, l/min, cfm, m/s, kg/min, kg/h, kg/s
Accuracy	1.5% of reading +0.3% full scale
Repeatability	± 0.25% of reading
Sampling rate	> 10 samples / sec
Medium	Air, gas (non-corrosive gas)
Medium temperature	-30 ... 140 °C / relative humidity < 90% no condensation
Material	Metal parts: 1.4404 Casing: PC + ABS Sensor: Ceramic with glass coating
Classification	IP65
Electrical connection	2 x M12 (5 poles)
Operating pressure	0 ... 1.6 MPa
Analogue output	Signal: 4 ... 20 mA Scaling: 0 ... max flow Max. load: ≤250 R
Pulse output	Signal: Isolated switch output, normally open, max. 30 VDC, 20mA Scaling: 1 pulse per consumption unit
Modbus output	Isolated RS-485 with Modbus/RTU protocol or Modbus/TCP output
Power supply	15 ... 30 VDC, 200 mA
Principle of measurement	Thermal mass flow
Sensor	Glass coated resistive sensor
Display:	2.4" colour graphics display with keypad
Transport temperature	Without display: -30 ... 70 °C With display: -10 ... 50 °C

SIZES


CONNECTION TREAD [inch]	DN	MEASURING RANGE [m ³ /h]
1/2	DN15	0.5 ... 90
3/4	DN20	0.9 ... 170
1	DN25	1.5 ... 290
1 1/4	DN32	2 ... 500
1 1/2	DN40	3 ... 700
2	DN50	4 ... 1000
2 1/2	DN65	6 ... 1500
3	DN80	8 ... 2500

* Stated flow values are at standard conditions of P_s=0.1 MPa(a) and T_s=20°C with medium air

PIPE NOMINAL SIZE (inch/DN)	L (mm)	L1 (mm)	H (mm)	H1 from pipecenter to casing top (mm)	R External Thread
1/2 (DN15)	300	210	197.4	186.7	R1/2"
3/4 (DN20)	475	275	200.2	186.7	R3/4"
1 (DN25)	475	275	203.6	186.7	R1"
1 1/4 (DN32)	475	275	207.9	186.7	R1 1/4"
1 1/2 (DN40)	475	275	210.9	186.7	R1 1/2"
2 (DN50)	475	275	216.9	186.7	R2"
2 1/2 (DN65)	475	275	232.7	194.6	R2 1/2"
3 (DN80)	475	275	245.5	201.0	R3"



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	<p>Our quality management system is certified by BUREAU VERITAS in conformity with ISO 9001:2015 Reg. number: 200285</p>	
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