

S402 OEM

Thermal Mass Flow Meter

Insertion



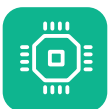
SMARTPHONE APP

For remote configuration



ACCURATE RESULTS

Very fast response time



EASY PROCESS MONITORING

Effective and inexpensive measurements



TOTAL FLOW

High accuracy and reliable measurements



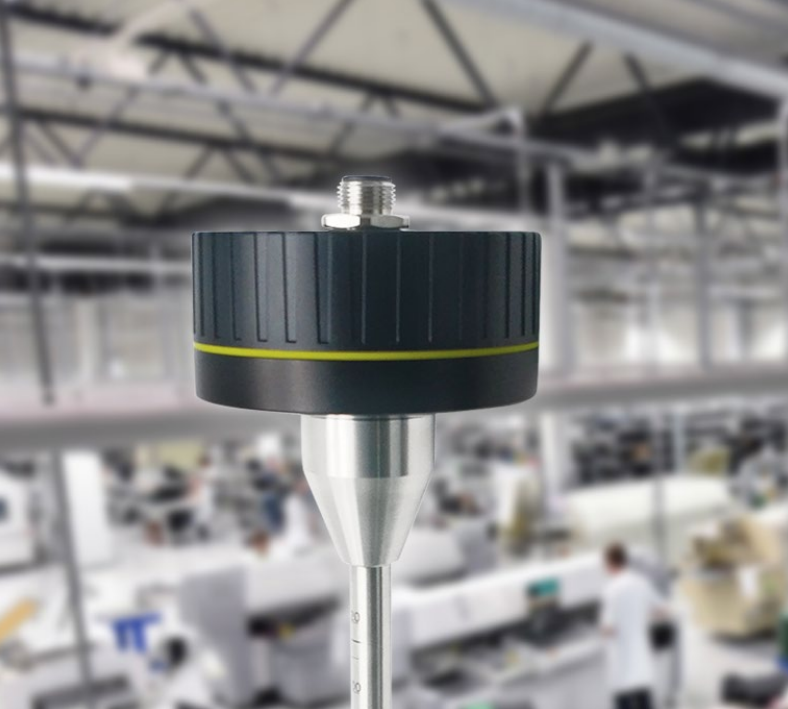
EASY INSTALLATION

Under pressure



IP65 CASING

Provides robust protection



Benefits

- ✔ High accuracy and wide measuring range
- ✔ Fits any pipe size from DN25 to DN500
One shaft length fits all (for bigger pipes > DN250 sensor is inserted 100 mm)
- ✔ Easy installation under pressure without interrupting the process
- ✔ Various signal outputs allow users to connect the sensor to any system
- ✔ Compact and robust design for long lifetime

Cost-efficient flow measurement

The S402 OEM offers reliable and cost-efficient standard flow, mass flow and consumption measurement of compressed air and gases.

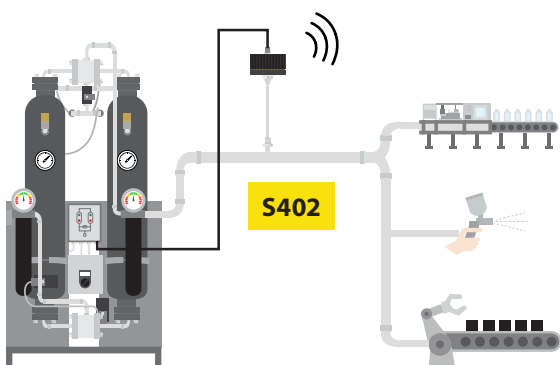
Due to the thermal mass flow principle, the sensor is independent of pressure and temperature changes. It also features very fast response time, high accuracy and wide measuring range.

The compact IP65 casing provides robust protection in rough industrial environment for constant measurement results. The gas type can be easily selected. Some gases require real gas calibration.

The S402 OEM also offers various output signals:

- Isolated 4... 20 mA & Pulse
- Modbus/RTU
- Modbus/TCP
- M-Bus

Compressed Air Measurement



High tech
Compressed Air Dryer

Compressed Air
Usage

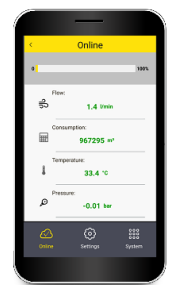
Three colors available

Private label version available with different colors, labels and features (MOQ required)

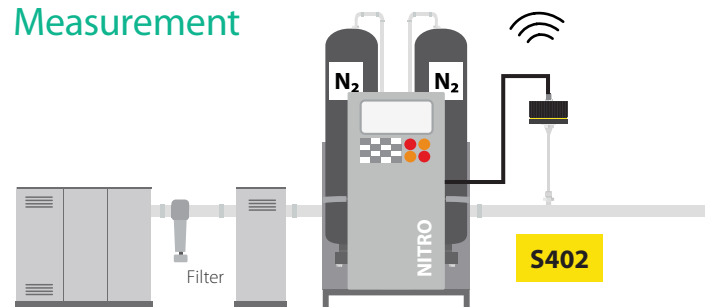


Smartphone App

Through the wireless interface, the flow meter can be connected to the smartphone by the S4C-FS app. This allows users to easily read live data and configure the S402 via their smartphone.



Nitrogen Measurement

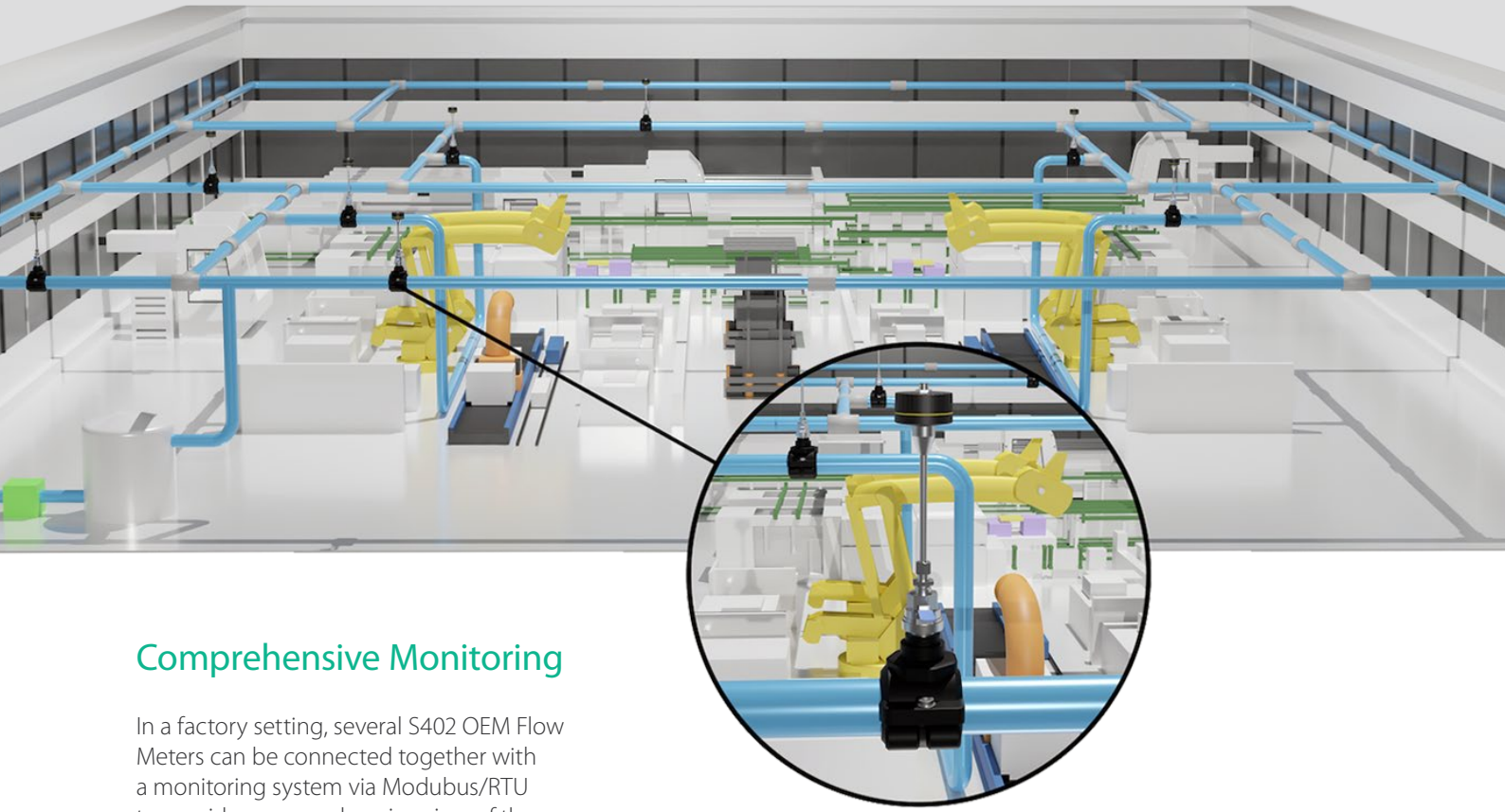


Compressor

Dryer

Nitrogen
Generator

Nitrogen
Usage



Comprehensive Monitoring

In a factory setting, several S402 OEM Flow Meters can be connected together with a monitoring system via Modbus/RTU to provide a comprehensive view of the compressed air usage and flow.

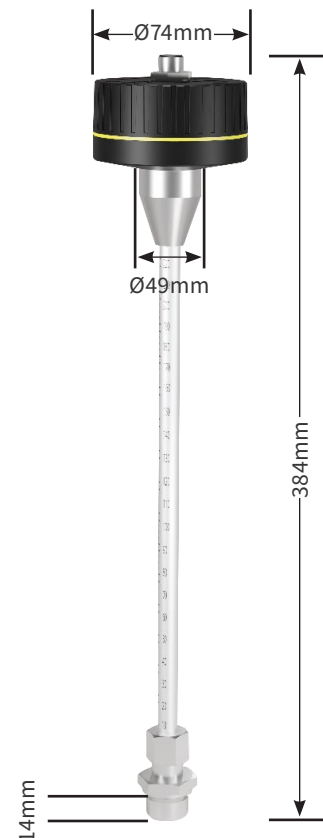
This helps factory managers and operators to identify and address any issues quickly, ultimately improving the overall efficiency of the production process.

Dimensions

Volumetric Flow Ranges

Inch	DN	Di (mm)	Standard (m ³ /h)	Max (m ³ /h)
1"	DN25	27.3	0.5 ... 147	0.6 ... 294
1¼"	DN32	36.0	0.9 ... 266	1.2 ... 531
1½"	DN40	41.9	1.2 ... 366	1.5 ... 731
2"	DN50	53.1	2.0 ... 600	2.5 ... 1197
2½"	DN65	68.9	3.5 ... 1026	5.0 ... 2048
3"	DN80	80.9	5.0 ... 1424	7.0 ... 2842
4"	DN100	100.0	10 ... 2183	12 ... 4357
5"	DN125	125.0	13 ... 3419	18 ... 6824
6"	DN150	150.0	18 ... 4930	25 ... 9838
8"	DN200	200.0	26 ... 8785	33 ... 17533
10"	DN250	250.0	40 ... 13743	52 ... 27428
12"	DN300	300.0	60 ... 19814	80 ... 39544

The table shows flow ranges up to 300 mm pipe diameter at standard conditions in air. Other standard conditions and gases flow ranges are available on request. In larger pipe diameters flow can also be measured.



Measurement

Flow	
Accuracy	2 % of reading \pm 0.3% FS
Selectable units	m ³ /h, m ³ /min, l/min, l/s, cfm, kg/h, kg/min, kg/s
Measuring range	see table below
Repeatability	0.25 % o.RDG
Sensor	Thermal mass flow sensor
Sampling rate	3 samples / sec
Turndown ratio	1:100
Response time (t90)	0.5 sec

Consumption

Selectable units	m ³ , ft ³ , l
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Reference conditions

Selectable conditions	20 °C 1000 mbar (ISO1217), 0 °C 1013 mbar (DIN1343) freely adjustable
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Signal / Interface & Supply

Analog output

Signal	4 ... 20 mA, isolated
Scaling	0 ... max flow, freely adjustable
Load	Max. 250R
Update rate	1/sec

Pulse output

Signal	Switch output, normally open, max. 30 VDC, 20 mA
Scaling	1 pulse per consumption unit

Fieldbus

Protocol	Modbus/RTU
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Supply

Voltage supply	15 ... 30 VDC
Current consumption	200 mA

General data

Configuration

Wireless	S4C-FS App for mobile phones
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Material

Process connection	Stainless steel 1.4404 (SUS 316L)
Housing	PC + ABS
Sensor	Ceramic, glass coated
Metal parts	Stainless steel 1.4404 (SUS 316L)

Miscellaneous

Electrical connection	A1415: M12 (6 pole) other options: M12 (5-pole)
Protection class	IP65
Approvals	CE, RoHS, FCC
Process connection	G1/2" (ISO 228/1)
Weight	0.9 kg

Operating conditions

Medium	Air, N ₂ , O ₂ , CO ₂ and other gases
Medium quality	ISO 8573: 4.4.3 or better
Medium temperature	-30 ... +140 °C
Medium humidity	< 90 % rH, no condensation
Operating pressure	Max. 1.6 MPa(g)
Ambient temperature	-30 ... +70 °C
Ambient humidity	< 99 % rH
Storage temperature	-30 ... +70 °C
Transport temperature	-30 ... 70 °C
Pipe sizes	½" ... 12" (bigger pipes on request)

S402 comes with a safety line made by steel to prevent from shooting out while uninstalling



Ordering

Please use the following tables to assist in placing your order with our sales staff.

S402 Thermal Mass Flow Meter (OEM Version)

Order No.	Code	Description
S695 4105	S402	S402 Thermal Mass Flow Meter, 220 mm shaft
Connection thread		
Standard	A	G1/2"
A1005	B	NPT 1/2" Adapter
A1006	C	PT 1/2" Adapter
Output		
A1415	A	Isolated analogue 4...20 mA and pulse, 6 pole
A1416	B	Modbus/RTU, 5 pole
A1417	C	MBUS, Analogue 4 ... 20 mA, 5 pole
A1418	D	Modbus/RTU, Analogue 4 ... 20 mA, 5 pole
A1419	E	Analogue 4 ... 20 mA and pulse, 5 pole (compatible S400)
Range		
Standard	A	Standard range version (92.7 m/s)
A1406	B	Max range version (185 m/s)
Gas type		
A1007	A	Air
A1008	B	CO ₂
A1009	C	O ₂ (Oil- & grease-free cleaned)
A1010	D	N ₂
Casing color		
A1421	A	Casing color yellow
A1422	B	Casing color light gray
A1423	C	Casing color black

Accessories

Order No.	Description
A553 0104	Sensor cable 5 m, M12 and open ends, 5 pole
A553 0105	Sensor cable 10 m, M12 and open ends, 5 pole
A553 0144	Sensor cable 5 m, M12 and open ends, 6 pole
A554 0008	1/2"G type ball valve

Example: S402ABBAA

S402, G1/2" connection, Modbus/RTU, Max range calibration, for air, yellow casing

Stated measuring ranges under following conditions:

- Standard flow in air
- Reference pressure: 1000 hPa
- Reference temperature: +20 °C



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