

S415/418 THERMAL MASS FLOW METER



S 415 as DN8 or
DN15 version



S 418 as DN20 or
DN25 version

Features / Benefits

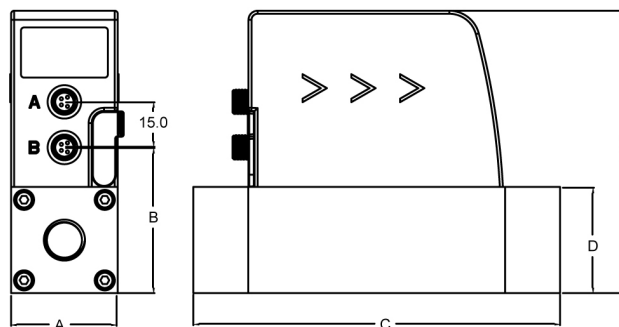
- Thermal mass flow measurement, independent of pressure and temperature
- Eco Version S 415, Pro Version S 418
- Service App for setup and configuration
- Accuracy of 1.5% o. RDG (S 418) and 3% o. RDG (S 415)
- Output signal options:
 - analogue 4 ... 20 mA and pulse
 - digital Modbus
 - digital M-Bus
- Simple installation, no straight pipe required
- Measures the full flow, no bypass measurement
- 4-Digit LED display
- Available in DN8, DN15, DN20, DN25 process connection G inner thread
- S 418 comes standard with integrated data logger
- Optional pressure measurement available for S 418

Extra technical data S 418		
Data logger	Size:	10,000,000 samples
	Channels:	up to 3 channels
	Sampling rate:	1 sec ... 1 h
Pressure option	Range:	0 ... 1.0 MPa
	Accuracy:	1 % F.S.

The SUTO S 415 and S 418 thermal mass flow meters offer gas flow and consumption measurement directly at the point of use. These highly economical units will help you improve system efficiency, while helping reduce compressed air usage and operating costs. Both versions come standard with Service App to help the user quickly and easily check the flow meter readings or adjust the settings via the SUTO flow meter App.

The S 415 is best suited to general process work where low cost and broad monitoring is required, while the S 418 is ideal for remote locations or high accuracy with its built in data logger and optional pressure sensing.

Dimensions



Dimensions in mm	A	B	C	D	E
DN8/DN15	35.0	48.0	120.4	35.0	93.0
DN20/DN25	48.0	61.0	178.0	48.0	106.0

Technical data	S 415	S 418
Measuring ranges	See separate table	
Accuracy	3% of reading	1.5% of reading
Turndown ratio	50:1	100:1
Pressure range	0 ... 1.0 MPa	
Power supply	18 ... 30 VDC / 120 mA	
Measured gas	Air, N ₂	Non-corrosive gases, up to 2 calibrated gases
Ambient conditions	0° ... 50°C	
Transport Temp.	-30° ... +70°C	
Response time	T ₉₀ = 1 sec	T ₉₀ = 0.1 sec
Output signal (only 1 of it)	- 4 ... 20 mA and pulse, isolated - RS-485 (Modbus RTU)	
Interface	Wireless for Service App or USB for logger read out (S 418 only)	
Casing	Process connection: aluminum alloy Wetted parts: aluminum alloy Top casing: PC + ABS	
Classification	IP54	
Electrical connection	2 x M8, 4 poles	
Process connection	G inner thread, ISO 228-1: DN8, DN15, DN20, DN25	
Approvals	CE, RoHS	

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Measuring range [sl/min]				
	DN8	DN15	DN20	DN25
Size	0	1	2	3
Standard range (S)	250	1000	2000	3500
Low range (L)	50	200	400	700

Stated measuring ranges under following conditions:

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

Gas table	
	Gas type
A	Air
B	CO ₂
C	O ₂ (oil & grease free)
D	N ₂
E	N ₂ O
F	Ar
G	Natural gas (mix ratio)
H	H ₂ (real gas calibration)
I	Other gas (specify)
J	He (real gas calibration)
K	C ₃ H ₈
Z	No gas

Sensors are calibrated in air. On request calibration can be performed in other gases.

S 415 order table (air and N2 only)				
Order no.	Size	Range	Output	Description
S695 415				S 415, thermal mass flow meter, 3% o. RDG., 24 VDC, cable: 5m, M8 and open ends
	0			DN8 G inner thread
	1			DN15 G inner thread
	2			DN20 G inner thread
	3			DN25 G inner thread
		S		Standard range version of S 415
A1453		L		Low range version of S 415
A1450			A	Analogue 4 ... 20 mA, pulse
A1451			B	Digital Modbus RTU
A1452			C	Digital M-Bus
A1458				S 415 with imperial units instead of SI units

Example: S695 4152-SB: S 415, DN20, range 2000 l in Air, Modbus interface

S 418 order table						
Order no.	Size	Range	Output	Gas 1	Gas 2	Description
S695 418						S 418, thermal mass flow meter, data logger, 1.5% o. RDG, 24 VDC, cable: 5m, M8 and open ends
	0					DN8 G thread
	1					DN15 G thread
	2					DN20 G thread
	3					DN25 G thread
	5					DN8 G thread, pressure sensor 10 barg, 1 % F.S.
	6					DN15 G thread, pressure sensor 10 barg, 1 % F.S.
	7					DN20 G thread, pressure sensor 10 barg, 1 % F.S.
	8					DN25 G thread, pressure sensor 10 barg, 1 % F.S.
		S				Standard range version of S 418
A1453		L				Low range version of S 418
A1455			A			Analogue 4 ... 20 mA, pulse
A1456			B			Digital Modbus RTU
A1457			C			Digital M-Bus
				A-K	B-Z	See gas table above
A1459						S 418 with imperial units instead of SI units

Example: S695 4185-SAAF: S 418, DN8 with pressure sensor, range 250 l in Air, Analog and pulse output, gas 1 = Air, gas 2 = Argon

S 415/ S 418 accessories	
Order no.	Description
A554 3315	T-BOX for S 415/418 Modbus/M-Bus systems, including 2 m cable with M8 connector
A554 0109	Mains power supply 100-240 VAC / 24 VDC, 0.5 A, 2 m cable with M8 connector
A553 0137	Connection cable S415/418 to S 551, 5 m