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DATA SHEET

FTMG-ESD25AXX

FTMg
Flow sensors

SICK Sensor Intelligence



Illustration may differ

FLOW SENSORS

FTMG-ESD25AXX

ORDERING INFORMATION

Type	part no.
FTMG-ESD25AXX	1100216

Further device versions and accessories at www.sick.com/FTMg

DETAILED TECHNICAL DATA

FEATURES

Measurement principle	Calorimetric (flow, temperature), piezoresistive (pressure)
Medium	Compressed air (air quality ISO 8573-1:2010 [3:4:4]), Argon, nitrogen, carbon dioxide
Measured values	Mass, volume, Mass flow rate, Volumetric flow rate, Energy, Flow velocity, pressure, Temperature
Nominal width measuring tube	DN 25
Measuring range	
Standard	14.7 l/min ... 2,945.2 l/min [1] 0.5 m/s ... 100 m/s [1]
Enhanced	2,945.2 l/min ... 4,417.9 l/min [1] 100 m/s ... 150 m/s [1]
Process temperature	–20 °C ... +60 °C
Process pressure	0 bar ... 16 bar [2]
Communication interface	MQTT
Temperature measurement	✓
Pressure measurement	✓
Display	✓ 128 x 128 pixels, adjustable rotary OLED display (90° steps) and 4 pushbuttons

[1] Reference conditions according to DIN 1343 (atmospheric pressure 1,013 mbar, compressed air temperature 0 °C).

[2] Evaluation according to DIN EN 61298-2 best fit straight line.

PERFORMANCE

Maximum flow	≤ 4,418 l/min
Measurement accuracy	
Standard	± 3 % of the measured value + 0.3% of the measuring range limit value (extended measuring range) [1]
Enhanced	± 8 % of the measured value + 1% of the measuring range limit value (extended measuring range) [1]
Repeatability	± 1.5 % From measured value [1]
Response time	< 0.3 s
Temperature measurement	
Measurement accuracy (temperature)	± 2 °C [2]
Repeatability (temperature)	± 0.5 °C [2]
Pressure measurement	
Measurement accuracy (pressure)	± 1.5 % of measuring range end value
Non-linearity (pressure)	± 0.5 % from measuring range
Repeatability (pressure)	± 0.2 % from measuring range

[1] Reference conditions during measurement: media conditions: air according to ISO 8573-1:2010 [3:4:4] or better; static pressure = 7 ± 0.2 bar (abs.); medium temperature 22 ± 3 °C; straight inlet zone > 250xDN; average filter can be parameterized by customer: 10 seconds / ambient conditions: ambient temperature 15 °C ... 25 °C; ambient pressure: 1013 mbar / measured value via digital interface.

[2] When flow rate ≥ 10% of the measuring range limit value (standard measuring range).

ELECTRONICS

Power consumption	< 5 W
Switch-on time	≤ 10 s
Protection class	✓
Connection type	1 x M12 round connector, 8-pin, X-coded
Output signal	OPC UA, MQTT, integrated web server, REST API
Enclosure rating	IP65 (IEC 60529) [1] IP67 (IEC 60529) [1]
MTTF	> 100 years
Standard communication	IEEE802.3 Clause 25 (100BaseTx); 100 Mbit/sec
Standard supply	Power over Ethernet according to IEEE802.3af
Performance class	Class 0; acc. IEEE802.3af Powered Device < 13 W
Power supply mode	Mode A and Mode B

[1] Not UL-tested.

MECHANICS

Process connection	G 1 (according to DIN ISO 228-1)
Wetted parts	Probe: stainless steel 1.4305, PA6; seal: FKM (Viton®); measurement channel: aluminum
Housing material	PC+ABS, PA66+PA6I GF50, PC, TPE, stainless steel 1.4301
Weight	Approx. 685 g

AMBIENT DATA

Ambient operating temperature	–20 °C ... +60 °C [1]
Ambient temperature, storage	–40 °C ... +80 °C

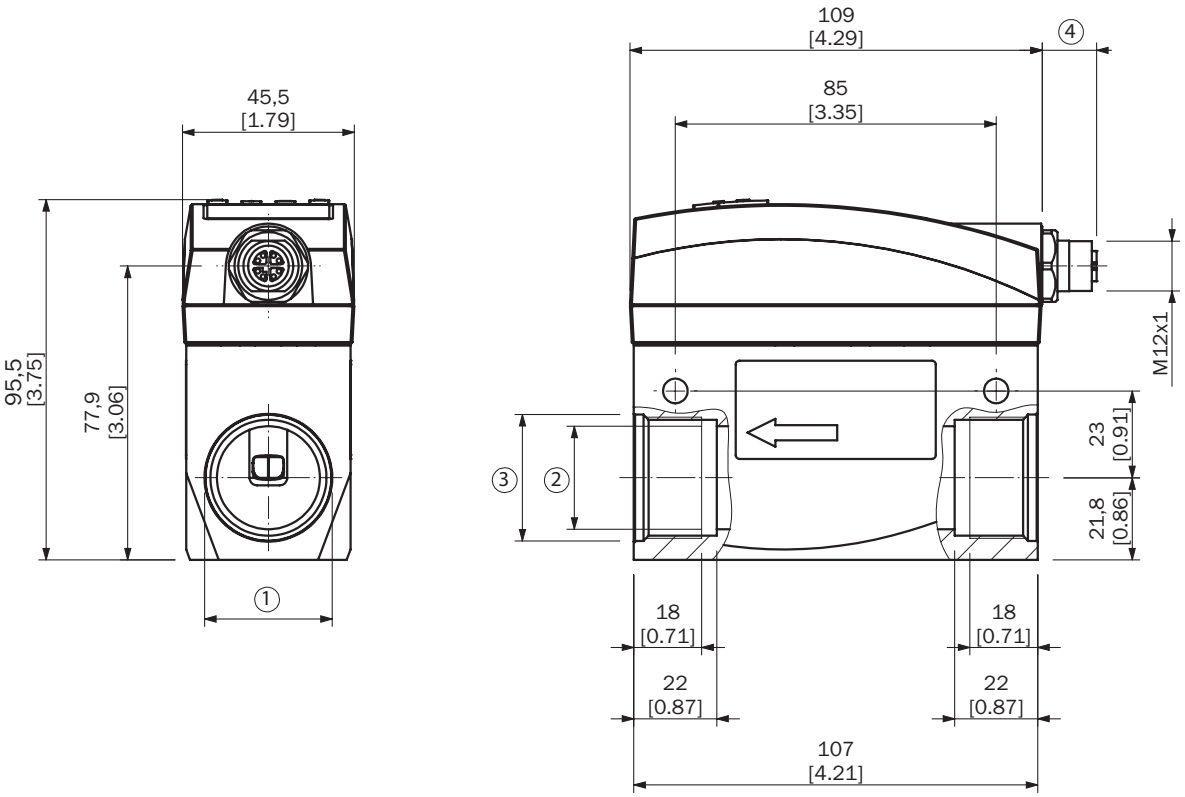
[1] According to the UL approval: degree of contamination 3 (UL61010-1: 2012-05); air humidity: 80% at temperatures up to 31 °C; installation altitude: max. 3,000 m above sea level.

CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓

ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

DN08, DN15, DN20, DN25; UNIT: MM (INCH), DECIMAL SEPARATOR: PERIOD



Dimensions in mm (inch)

Type	DN	1	2	3	4	5	6	7	8
FT-MG-ISD08AXX	08	G 1/4	Ø 8.8 (Ø 0.35)	Ø 13.5 (Ø 0.53)	18.5 (0.73)	17.5 (0.69)	20.3 (0.80)	70.9 (2.79)	88.5 (3.17)
FT-MG-ESD08AXX	08	G 1/4	Ø 8.8 (Ø 0.35)	Ø 13.5 (Ø 0.53)	13.4 (0.53)	17.5 (0.69)	20.3 (0.80)	70.9 (2.79)	88.5 (3.17)
FT-MG-ISD08AXC	08	G 1/4	Ø 8.8 (Ø 0.35)	Ø 13.5 (Ø 0.53)	18.5 (0.73)	17.5 (0.69)	20.3 (0.80)	70.9 (2.79)	88.5 (3.17)
FT-MG-ESD08AXC	08	G 1/4	Ø 8.8 (Ø 0.35)	Ø 13.5 (Ø 0.53)	13.4 (0.53)	17.5 (0.69)	20.3 (0.80)	70.9 (2.79)	88.5 (3.17)
FT-MG-ISD15AXX	15	G 1/2	Ø 16.1 (Ø 0.63)	Ø 20.0 (Ø 0.79)	18.5 (0.73)	21.8 (0.86)	23.0 (0.91)	77.9 (3.06)	95.5 (3.75)
FT-MG-ESD15AXX	15	G 1/2	Ø 16.1 (Ø 0.63)	Ø 20.0 (Ø 0.79)	13.4 (0.53)	21.8 (0.86)	23.0 (0.91)	77.9 (3.06)	95.5 (3.75)
FT-MG-ISD15AXC	15	G 1/2	Ø 16.1 (Ø 0.63)	Ø 20.0 (Ø 0.79)	18.5 (0.73)	21.8 (0.86)	23.0 (0.91)	77.9 (3.06)	95.5 (3.75)
FT-MG-ESD15AXC	15	G 1/2	Ø 16.1 (Ø 0.63)	Ø 20.0 (Ø 0.79)	13.4 (0.53)	21.8 (0.86)	23.0 (0.91)	77.9 (3.06)	95.5 (3.75)
FT-MG-ISD20AXX	20	G 3/4	Ø 21.7 (Ø 0.85)	Ø 27.5 (Ø 1.08)	18.5 (0.73)	21.8 (0.86)	23.0 (0.91)	77.9 (3.06)	95.5 (3.75)
FT-MG-ESD20AXX	20	G 3/4	Ø 21.7 (Ø 0.85)	Ø 27.5 (Ø 1.08)	13.4 (0.53)	21.8 (0.86)	23.0 (0.91)	77.9 (3.06)	95.5 (3.75)

Type	DN	1	2	3	4	5	6	7	8
FT-MG-ISD20AXC	20	G 3/4	Ø 21.7 (Ø 0.85)	Ø 27.5 (Ø 1.08)	18.5 (0.73)	21.8 (0.86)	23.0 (0.91)	77.9 (3.06)	95.5 (3.75)
FT-MG-ESD20AXC	20	G 3/4	Ø 21.7 (Ø 0.85)	Ø 27.5 (Ø 1.08)	13.4 (0.53)	21.8 (0.86)	23.0 (0.91)	77.9 (3.06)	95.5 (3.75)
FT-MG-ISD25AXX	25	G 1	Ø 27.3 (Ø 1.07)	Ø 33.5 (Ø 1.32)	18.5 (0.73)	21.8 (0.86)	23.0 (0.91)	77.9 (3.06)	95.5 (3.75)
FT-MG-ESD25AXX	25	G 1	Ø 27.3 (Ø 1.07)	Ø 33.5 (Ø 1.32)	13.4 (0.53)	21.8 (0.86)	23.0 (0.91)	77.9 (3.06)	95.5 (3.75)
FT-MG-ISD25AXC	25	G 1	Ø 27.3 (Ø 1.07)	Ø 33.5 (Ø 1.32)	18.5 (0.73)	21.8 (0.86)	23.0 (0.91)	77.9 (3.06)	95.5 (3.75)
FT-MG-ESD25AXC	25	G 1	Ø 27.3 (Ø 1.07)	Ø 33.5 (Ø 1.32)	13.4 (0.53)	21.8 (0.86)	23.0 (0.91)	77.9 (3.06)	95.5 (3.75)

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1100216

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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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