



# FTMG-ESD20AXX

FTMg

FLOW SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	part no.
FTMG-ESD20AXX	1100215

Other models and accessories → [www.sick.com/FTMg](http://www.sick.com/FTMg)

### Detailed technical data

#### Features

<b>Measurement principle</b>	Calorimetric (flow, temperature), piezoresistive (pressure)	
<b>Medium</b>	Compressed air (air quality ISO 8573-1:2010 [3:4:4]), Argon, nitrogen, carbon dioxide	
<b>Measured values</b>	Mass, volume, Mass flow rate, Volumetric flow rate, Energy, Flow velocity, pressure, Temperature	
<b>Nominal width measuring tube</b>	DN 20	
<b>Measuring range</b>	Standard	9.4 l/min ... 1,884.9 l/min <sup>1)</sup>
		0.5 m/s ... 100 m/s <sup>1)</sup>
	Enhanced	1,884.9 l/min ... 2,827.4 l/min <sup>1)</sup>
		100 m/s ... 150 m/s <sup>1)</sup>
<b>Process temperature</b>	-20 °C ... +60 °C	
<b>Process pressure</b>	0 bar ... 16 bar <sup>2)</sup>	
<b>Communication interface</b>	MQTT	
<b>Temperature measurement</b>	✓	
<b>Pressure measurement</b>	✓	
<b>Display</b>	✓ 128 x 128 pixels, adjustable rotary OLED display (90° steps) and 4 pushbuttons	

<sup>1)</sup> Reference conditions according to DIN 1343 (atmospheric pressure 1,013 mbar, compressed air temperature 0 °C).

<sup>2)</sup> Evaluation according to DIN EN 61298-2 best fit straight line.

## Performance

<b>Measurement accuracy</b>	Standard	$\pm 3\%$ of the measured value + 0.3% of the measuring range limit value (extended measuring range) <sup>1)</sup>
	Enhanced	$\pm 8\%$ of the measured value + 1% of the measuring range limit value (extended measuring range) <sup>1)</sup>
<b>Repeatability</b>		$\pm 1.5\%$ From measured value <sup>1)</sup>
<b>Response time</b>		< 0.3 s
<b>Temperature measurement</b>		
	Measurement accuracy (temperature)	$\pm 2\text{ °C}^{2)}$
	Repeatability (temperature)	$\pm 0.5\text{ °C}^{2)}$
<b>Pressure measurement</b>		
	Measurement accuracy (pressure)	$\pm 1.5\%$ of measuring range end value
	Non-linearity (pressure)	$\pm 0.5\%$ from measuring range
	Repeatability (pressure)	$\pm 0.2\%$ from measuring range

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

<sup>2)</sup> When flow rate  $\geq 10\%$  of the measuring range limit value (standard measuring range).

## Electronics

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

<sup>1)</sup> Not UL-tested.

## Mechanics

<b>Process connection</b>	G $\frac{3}{4}$ (according to DIN ISO 228-1)
<b>Wetted parts</b>	Probe: stainless steel 1.4305, PA6; seal: FKM (Viton®); measurement channel: aluminum
<b>Housing material</b>	PC+ABS, PA66+PA6I GF50, PC, TPE, stainless steel 1.4301
<b>Weight</b>	Approx. 755 g

## Ambient data

<b>Ambient operating temperature</b>	$-20\text{ °C} \dots +60\text{ °C}^{1)}$
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<sup>1)</sup> According to the UL approval: degree of contamination 3 (UL61010-1: 2012-05); air humidity: 80% at temperatures up to  $31\text{ °C}$ ; installation altitude: max. 3,000 m above sea level.

<b>Ambient temperature, storage</b>	-40 °C ... +80 °C
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<sup>1)</sup> 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.

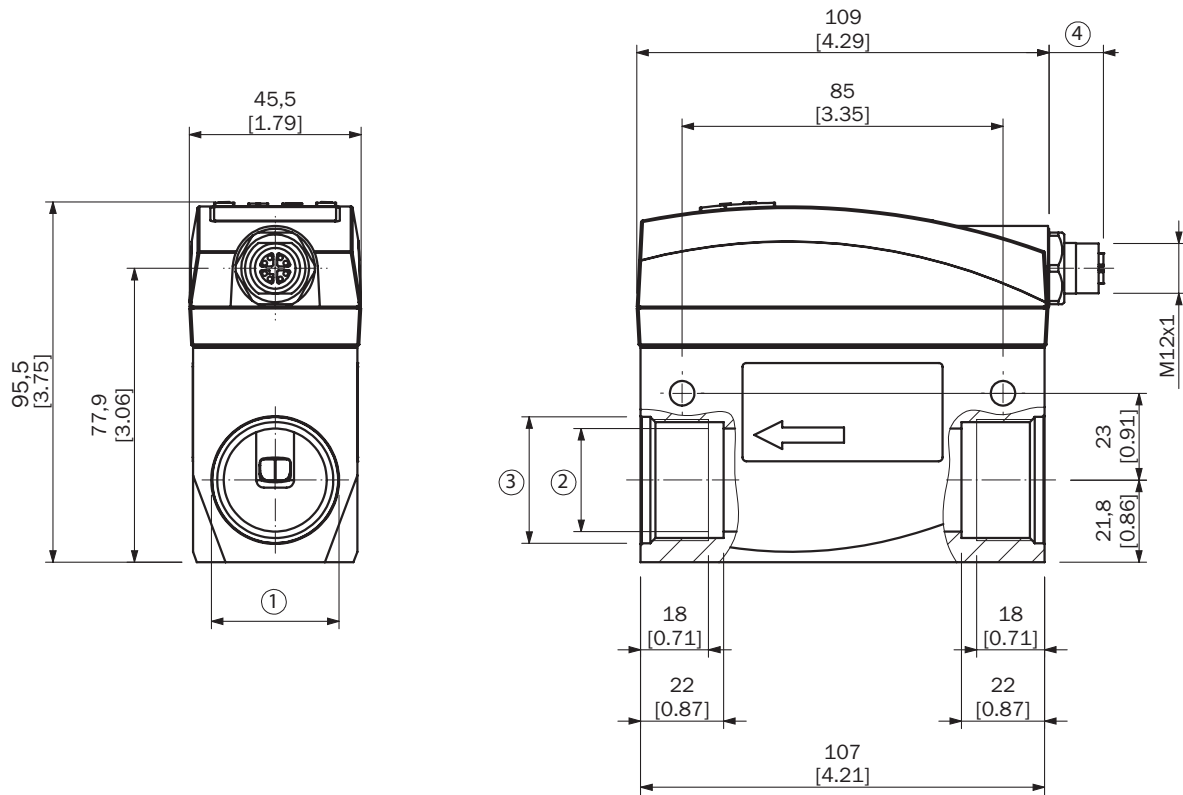
**Classifications**

<b>ECLASS 5.0</b>	27200403
<b>ECLASS 5.1.4</b>	27200403
<b>ECLASS 6.0</b>	27200403
<b>ECLASS 6.2</b>	27200403
<b>ECLASS 7.0</b>	27200403
<b>ECLASS 8.0</b>	27200403
<b>ECLASS 8.1</b>	27200403
<b>ECLASS 9.0</b>	27200403
<b>ECLASS 10.0</b>	27200403
<b>ECLASS 11.0</b>	27200403
<b>ECLASS 12.0</b>	27200403
<b>ETIM 5.0</b>	EC002580
<b>ETIM 6.0</b>	EC002580
<b>ETIM 7.0</b>	EC002580
<b>ETIM 8.0</b>	EC002580
<b>UNSPSC 16.0901</b>	41112501

**Certificates**

<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓
<b>China RoHS</b>	✓
<b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b>	✓

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)
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)

Type	DN	1	2	3	4	5	6	7	8
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)

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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