



# FTMG-ISD20AX0

FTMg

FLOW SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
FTMG-ISD20AXO	1100212

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]), helium, argon, nitrogen, carbon dioxide
<b>Nominal width measuring tube</b>	DN 20
<b>Measuring range</b>	9.4 l/min ... 1,884.9 l/min, standard measuring range <sup>1)</sup> 1,884.9 l/min ... 2,827.4 l/min, extended measuring range <sup>1)</sup>
<b>Process temperature</b>	-20 °C ... +60 °C
<b>Process pressure</b>	0 bar ... 16 bar
<b>Communication interface</b>	IO-Link V1.1
<b>Temperature measurement</b>	✓
<b>Pressure measurement</b>	✓
<b>Indication</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).

#### Performance

<b>Minimum flow velocity</b>	≥ 0.5 m/s
<b>Maximum flow velocity</b>	≤ 150 m/s
<b>Accuracy of sensor element</b>	± 3 % From measured value + 0.3 % of the measuring range end value (standard measuring range) according to ISO 8573-1:2010 [3:4:4] ± 8 % From measured value + 1 % of the measuring range end value (extended measuring range)
<b>Reproducibility</b>	± 1.5 % From measured value
<b>Response time</b>	< 0.3 s
<b>Temperature measurement</b>	
Accuracy (temperature)	± +2 °C

Reproducibility (temperature)	± +0.5 °C
<b>Pressure measurement</b>	
Accuracy (pressure)	± 1.5 % from measuring range
Non-linearity (pressure)	± 0.5 % from measuring range
Reproducibility (pressure)	± 0.2 % from measuring range

## Electronics

<b>Supply voltage</b>	17 V DC ... 30 V DC <sup>1)</sup>
<b>Power consumption</b>	< 12 W at 24 V DC without output load
<b>Initialization time</b>	≤ 10 s
<b>Protection class</b>	III
<b>Connection type</b>	Round connector M12 x 1, 5-pin
<b>Output signal</b>	1 analog output 4 mA ... 20 mA +1 digital/analog output (PNP, NPN, push-pull, 4 mA ... 20 mA / switchable) +1 digital output (PNP, NPN, push-pull, switchable), IO-Link V1.1 (COM3 / 230K4 baud)
<b>Output load</b>	4 mA ... 20 mA, max. 500 ohm at U <sub>v</sub> > 15 V
<b>Lower signal level</b>	3.5 mA ... 3.8 mA
<b>Upper signal level</b>	20.5 mA ... 21.5 mA
<b>Digital output</b>	≤ 100 mA
<b>Signal voltage HIGH</b>	> U <sub>v</sub> - 2 V
<b>Signal voltage LOW</b>	≤ 2 V
<b>Inductive load</b>	≤ 1 H
<b>Capacitive load</b>	≤ 100 nF (2.5 nF, IO-Link mode)

<sup>1)</sup> All connections are reverse polarity and overload protected. Q1 and Q2 are short-circuit protected.

## Mechanics

<b>Process connection</b>	G ¾ (according to DIN ISO 228-1)
<b>Wetted parts</b>	Stainless steel 1.4305, PA6, Viton <sup>®</sup> , aluminum
<b>Housing material</b>	PC+ABS, PA66+PA6I GF50, PC, TPE, stainless steel 1.4301
<b>Enclosure rating</b>	IP65/IP67 (according to IEC 60529)
<b>Weight</b>	Approx. 755 g

## Ambient data

<b>Ambient operating temperature</b>	-20 °C ... +60 °C
<b>Ambient storage temperature</b>	-40 °C ... +85 °C
<b>Max. rel. humidity (not condensing)</b>	90 %

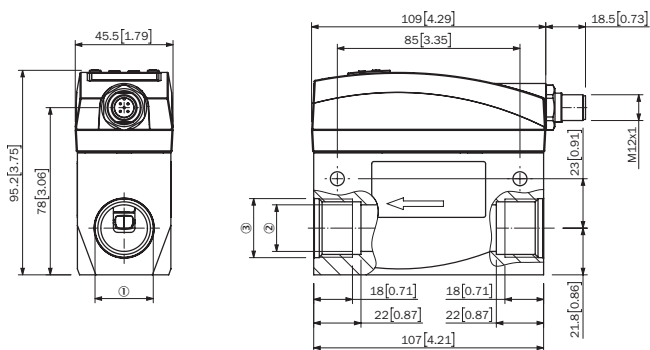
## Classifications

<b>ECl@ss 5.0</b>	27371815
<b>ECl@ss 5.1.4</b>	27371815
<b>ECl@ss 6.0</b>	27371815
<b>ECl@ss 6.2</b>	27371815
<b>ECl@ss 7.0</b>	27371815
<b>ECl@ss 8.0</b>	27371815
<b>ECl@ss 8.1</b>	27371815

<b>ECl@ss 9.0</b>	27371815
<b>ECl@ss 10.0</b>	27371815
<b>ECl@ss 11.0</b>	27371815
<b>ETIM 5.0</b>	EC002580
<b>ETIM 6.0</b>	EC002580
<b>ETIM 7.0</b>	EC002580
<b>UNSPSC 16.0901</b>	41112501

### Dimensional drawing (Dimensions in mm (inch))

Industrial version, unit: mm (inch), decimal separator: period



Type	DN	1	2	3
FTMG-ISD15AXX	15	G 1/2	Ø 16.1	Ø 22
FTMG-ISD20AXX	20	G 3/4	Ø 21.7	Ø 27.5
FTMG-ISD25AXX	25	G1	Ø 27.3	Ø 33.5

### Recommended services

Additional services → [www.sick.com/FTMg](http://www.sick.com/FTMg)

	Type	Part no.
Function Block Factory	Function Block Factory	On request
<ul style="list-style-type: none"> <li><b>Brief description:</b> The Function Block Factory supports common programmable logic controllers (PLCs) from various manufacturers, such as Siemens, Beckhoff, Rockwell Automation and B&amp;R. More information on the FBF can be found &lt;a href="https://fbf.cloud.sick.com" target="_blank"&gt; here&lt;/a&gt;.</li> </ul>		

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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.

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