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DATA SHEET

FUM-H015F1MB80000

DOSIC
Flow sensors

SICK Sensor Intelligence



Illustration may differ

FLOW SENSORS

FUM-H015F1MB80000

ORDERING INFORMATION

Type	part no.
FUM-H015F1MB80000	1082025

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

DETAILED TECHNICAL DATA

FEATURES

Measurement principle	Ultrasonic sensor
Medium	Conductive and non-conductive liquids
Nominal width measuring tube	DN 15
Process temperature	–20 °C ... +95 °C, up to 143°C for 60 minutes for SIP process (temperature measurement only) [1]
Process pressure	–0.5 bar ... 16 bar
Communication interface	IO-Link, IO-Link V1.1
Temperature measurement	✓

[1] 0 °C ... +95 °C with flow and temperature measurement; up to 143°C only with temperature measurement.

PERFORMANCE

Minimum flow	0.5 l/min
Inlet zone	5 x DN (7.5 cm)
Output zone	3 x DN (4.5 cm)
Conductivity	No limitation
Measurement accuracy	± 1 % From measured value [1]
Repeatability	0.5 %
Resolution	10 ml/min
Response time	12 ms

[1] Under the following reference conditions: water 26 °C ± 2 K, 2.5 bar ± 0.5 bar, standard settings, DN15: 8 l/min ... 80 l/min, DN25: 25 l/min ... 250 l/min.

ELECTRONICS

Supply voltage	12 V DC ... 30 V DC [1]
Power consumption	< 3 W without output load
Switch-on time	≤ 5 s
Protection class	✓
Connection type	M12 round connector x 1, 8-pin
Output signal	2 x analog output: 4 mA ... 20 mA, 2 x digital input or output (configurable) [2] [3]
Output load	4 mA ... 20 mA, 500 ohms when Uv > 15 V, 350 ohms when Uv > 12 V
Lower signal level	3.5 mA ... 3.8 mA
Upper signal level	20.5 mA ... 21.5 mA
Digital output	≤ 100 mA
Impulse output signal	50 µs ... 2 s
Impuls/frequency output	0 kHz ... 10 kHz
Inductive load	< 1 H
Capacitive load	< 100 nF < 2.5 nF (IO-Link)
Enclosure rating	IP67 (according to DIN EN 60529) IP69 (according to DIN EN 60529)
EMC	EN 61326-1, EN 61326-2-3
Limit digital inputs	HIGH state voltage > 16.0 V, LOW state voltage < 4.0 V
MTTF	> 63 years

[1] All connections are reverse polarity protected. Q_A and Q_B are short-circuit protected. Q1 and Q2 are short-circuit protected.

[2] Digital output configuration: PNP/NPN/push-pull/open collector.

[3] Selectable analog output: flow/temperature.

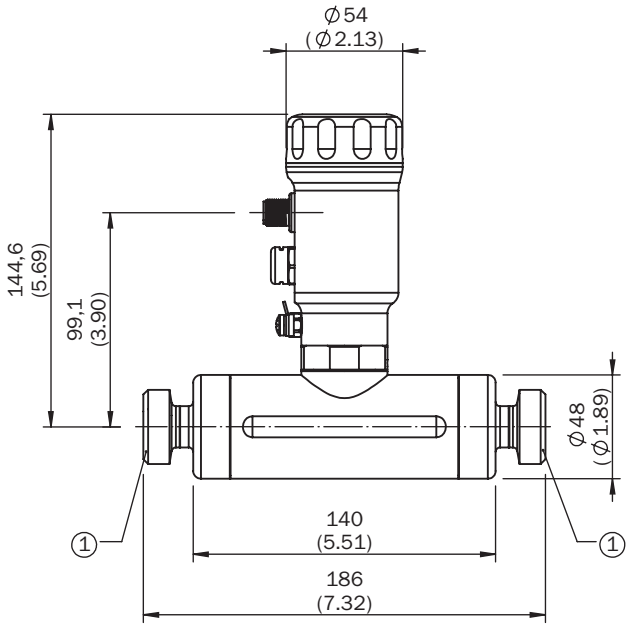
MECHANICS

Process connection	DIN 11851 DN 15
Wetted parts	Stainless steel 1.4404 (Ra ≤ 0,8 µm)
Housing material	Stainless steel 1,4305
Housing design	With viewing window made from PMMA (acrylic glass)
Weight	Approx. 2 kg

AMBIENT DATA

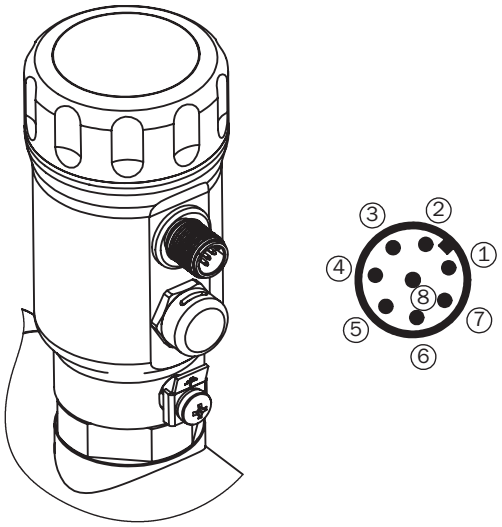
Ambient operating temperature	0 °C ... +60 °C
Ambient temperature, storage	–40 °C ... +80 °C

DIMENSIONAL DRAWING PROCESS CONNECTION



Dimensions in mm (inch)

CONNECTION TYPE



① L^+: Supply voltage
② Q2: Switching output/input 2, PNP/NPN/push-pull/open collector/frequency/pulse output
③ M: Ground, reference potential for current output
④ C/Q1: Switching output/input 1, PNP/NPN/push-pull/open collector/IO-Link communication
⑤ No function
⑥ No function
⑦ Q_A: analog current output 4 mA ... 20 mA
⑧ Q_B: analog current output 4 mA ... 20 mA

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/1082025



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SICK AT A GLANCE

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