

Blind INSERTION Magmeter

8041

For use with fitting DN15-350 mm

- Solid state technology
- Clean in place
- FDA approved

Please see fitting S020

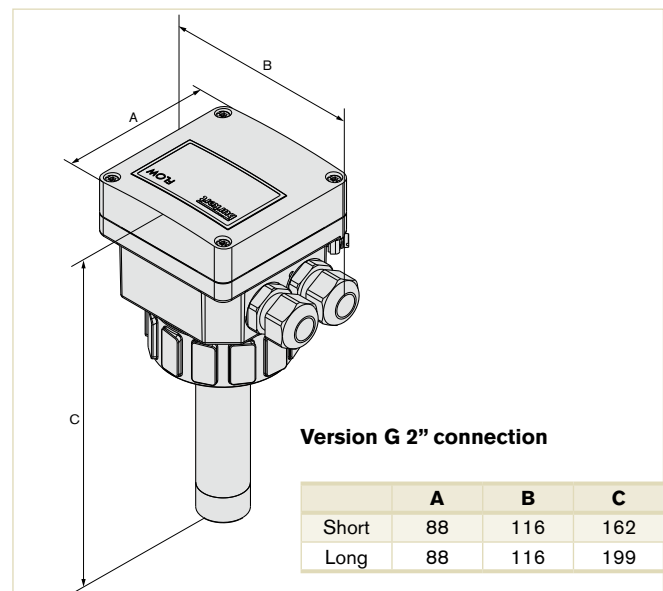


The insertion magmeter constructed from a PVDF finger and high quality blind electronic module. Perfect for contaminated or aggressive fluids it has both 4 to 20 mA and pulse output, with optional 3A relays, making this a flexible solution for flow control or batching.

Technical Data

General data	
Compatibility	with fittings S020 (see corresp. datasheet)
Materials	
Housing, cover, nut	PC (glass fibre reinforced for housing) PPA (glass fibre reinforced)
PVDF sensor version	Stainless steel sensor version
Stainless steel sensor version	Stainless steel / NBR / PA with neoprene seal
Screws/Seal/Cable glands	
Wetted parts materials	PVDF or Stainless steel 1.4404/316L
Sensor holder	Stainless steel 1.4404/316L
Electrodes	G 2" connection: FKM (FDA approved), [EPDM (KTW approved)]
Seals	Clamp connection: EPDM or FEP (to be ordered separately) Stainless steel 1.4404/316L
Earth ring (PVDF sensor version)	PEEK (FDA approved)
Electrode holder (St. Steel sensor version)	
Surface finishing quality	Ra < 0.8 mm (Clamp connection)
Electrical connections	2 cable glands M20 x 1.5
Recommended cable	0.5 to 1.5 mm ² cross-section, shielded cable, 6... 12 mm diameter (if only one cable is used per cable gland) or 4 mm diameter (if two cables are used per cable gland with using the supplied multi-way seal)
Environment	
Ambient temperature	-10 °C to +60 °C (14 to 140 °F) (operating) -20 °C to +60 °C (-4 to 140 °F) (storage)
Relative humidity	< 80%, without condensation
Height above sea level	max. 2000 m
Complete device data (Fitting S020 + flowmeter)	
Pipe diameter	
G 2" connection	DN06 to DN400
Clamp connection	DN32 to DN100
Measuring range	0.2 to 10 m/s
Sensor element	
Electrodes	
Fluid temperature	
see Pressure/Temperature diagram	
PVDF sensor version	0 °C to 80 °C (32 to 176°F) (depends on fitting)
Stainless steel sensor version	-15 °C to 150°C (5 to 302°F) (depends on fitting)

Envelope Dimensions [mm] (see datasheet for details)



Options

- Stainless steel finger for +150 °C and 16 bar with PPA housing
- FDA approved wetted materials, - Hastelloy C Electrodes

Fluid pressure max.	see pressure/temperature diagram
PVDF sensor version	PN10 (145.1 PSI)
Stainless steel sensor version	PN10 (145.1 PSI) (with plastic fitting) - PN16 (232.16 PSI) (with metal fitting)
Conductivity	min. 20 mS/cm
Accuracy	
Teach-In	±0.5% of Reading ¹⁾ (at the teach flow rate value)
Standard K-factor	±3.5% of Reading ¹⁾
Linearity	±0.5% of F.S. ¹⁾
Repeatability	±0.25% of Reading ¹⁾

¹⁾ Under reference conditions i.e. measuring fluid=water, ambient and water temperature = 20 °C (68°F), applying the minimum inlet and outlet pipe straights, matched inside pipe dimensions.

* F.S.= Full scale (10 m/s)

Technical Data (continued)

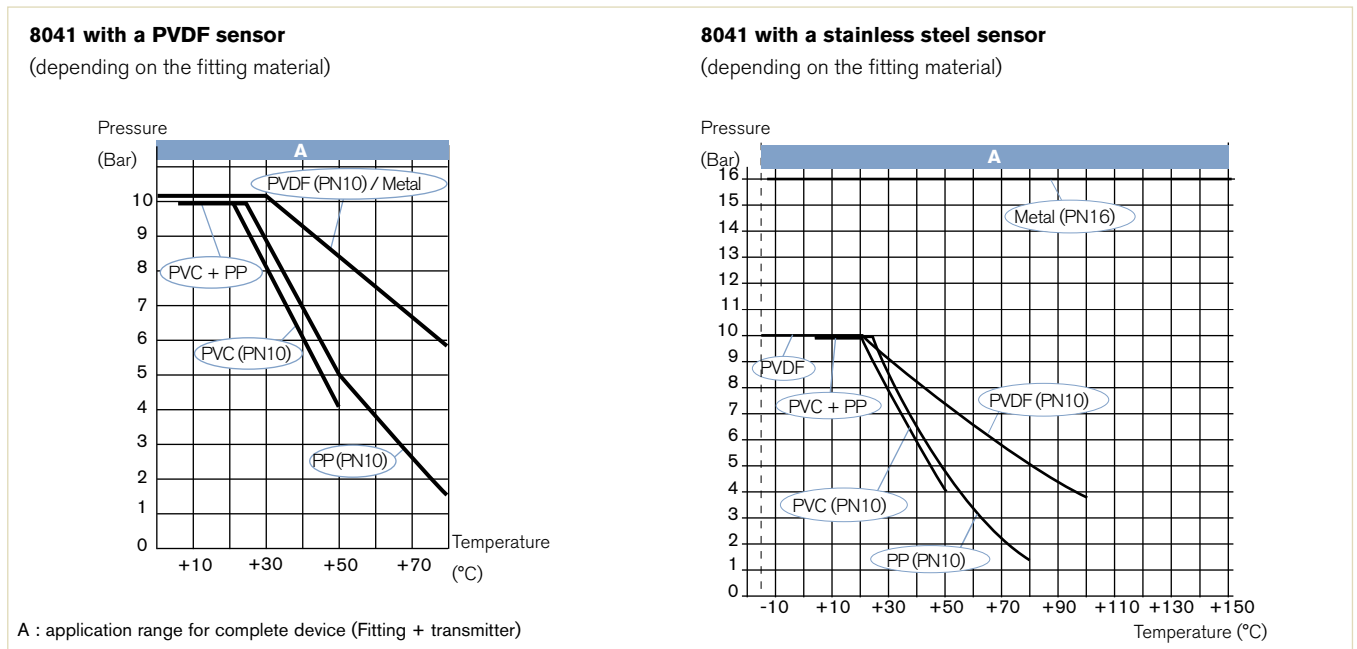
Electrical data	
Power supply	18 - 36V DC filtered and regulated (3 wires)
Reversed polarity of DC	protected
Current consumption	≤ 220 mA (at 18V DC)
Output	
Signal current	4... 20 mA (sink or source by wiring), 100 ms refresh time; max. loop impedance: 1100 Ω at 36V DC; 330 Ω at 18V DC
Frequency	0... 240 Hz, duty cycle = 50%±1%; 100 mA max., protected against short-circuits and polarity reversals.
Relay	Normally open or normally closed (depending on wiring), 3 A, 250V AC
4... 20 mA output accuracy	±1%
Alarm	
Full scale exceeding	22 mA and 256 Hz
Fault signalling	22 mA and 0 Hz
User parameter	Saved in EEPROM

Standards, directives and approvals	
Protection class	IP65
Standards and directives	
EMC	EN 50081-1, EN 61000-6-2
Low voltage (LVD)	EN 61010-1
Pressure	Complying with article 3 of §3 from 97/23/CE directive.*
Vibration	EN 60068-2-6
Shock	EN 60068-2-27
Approval	FDA

* For the 97/23/CE pressure directive, the device can only be used under following conditions (dependent on max. pressure, pipe diameter and fluid).

Type of fluid	Conditions
Fluid group 1, §1.3.a	Forbidden
Fluid group 2, §1.3.a	DN ≤ 32, or DN > 32 and PN*DN ≤ 1000
Fluid group 1, §1.3.b	PN*DN ≤ 2000
Fluid group 2, §1.3.b	DN ≤ 200 or PN ≤ 10 or PN*DN ≤ 5000

Pressure/Temperature diagram



Ordering Chart

Output	Relay	Housing material	Seal material	Sensor version	Electrical connection	Item no.	
4 - 20 mA, frequency	1	PC	FKM	short, PVDF	2 cable glands	558 064	
				long, PVDF	2 cable glands	558 065	
			PPA	FKM	short, stainless steel	2 cable glands	552 779
					long, stainless steel	2 cable glands	552 780

Note

1 Kit 558 102, 1 relay connection kit 552 812 and 1 EPDM seal are supplied with each transmitter.

To select a complete device the following items need to be ordered:

- Product no. of the desired flow meter for Type 8041
- Product no. of the Type S020 fitting, for gauges with G 2" connector, must be ordered separately