Baumer
Passion for Sensors

Flow sensor/FlexFlow

PF20S

PF20S-#1.010.####.2#.#.0000.0

Overview

- Flow and temperature measurement in a single sensor
- Binary or analog output signal
- Compact and robust
- Available with IO-Link interface



Picture similar

Technical data

Performance characteristics	
Down time at temperature step	< 10 s
Max. measuring error	± 2 % FSR , water ± 15 % FSR , oil ± 1 °C , temperature measurement @ flow > 0 cm/s
Measuring range, flow	10 … 400 cm/s , water 10 … 300 cm/s , oil
Measuring range, temperature	-25 … 150 °C
Step response time	< 5 s
Process conditions	
Process temperature	-25 … 125 °C , water 0 … 90 °C , oil -25 … 150 °C , temperature measurement @ flow > 0 cm/s
Process pressure	-1 … 100 bar
Process connection	
Connection variants	Refer to section "Dimensional drawings"
Mounting position	Any, top, bottom, side
Wetted parts material	AISI 316L (1.4404)
Surface roughness wetted parts	Ra ≤ 0.8 µm
Ambient conditions	
Operating temperature range	-25 … 80 °C
Storage temperature range	-25 … 80 °C
Degree of protection (EN 60529)	IP67 IP68 , 30 min. @ 1 mH2O IP69K , with appropriate cable
Humidity	≤ 100 % RH , condensing

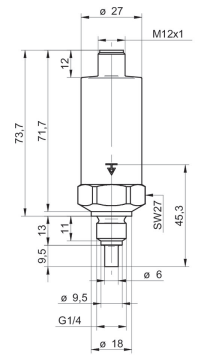
Ambient conditions	
Shock (EN 60068-2-27)	30 g / 11 ms, 6 impulses per axis and direction
Vibration (sinusoidal) (EN 60068-2-6)	5 g (10 ... 2000 Hz)
Output signal	
Current output	4 … 20 mA
Voltage output	0 … 10 V
Output type	Digital (push-pull) NPN PNP
Switching logic	Active high Active low Normally closed (NC) Normally open (NO)
Voltage drop	< 2 V, switching output
Current rating	100 mA , max.
Residual current	< 250 µA
Short circuit protection	Yes
Interface	IO-Link 1.1
Housing	
Style	Compact transmitter
Overall size	Refer to section "Dimensional drawings"
Material	Stainless steel
Electrical connection	
Connector	M12-A, 4-pin
Power supply	
Voltage supply range	12 … 32 V DC , with 2 x 4 … 20 mA 18 … 30 V DC , with IO-Link
Power-up time	10 s , max.
Reverse polarity protection	Yes

2025-09-23 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

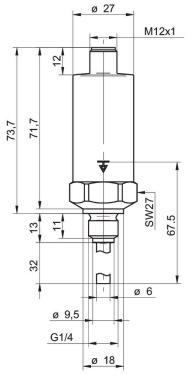
PF20S

PF20S-#1.010.####.2#.#.0000.0

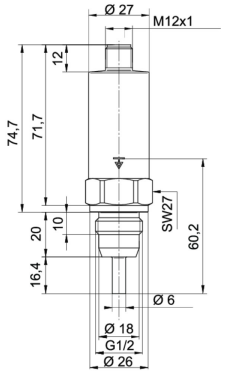
Dimensional drawings (mm)



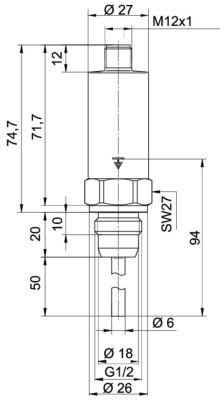
G03-G030
G 1/4 A ISO 228-1
Sensor length 9.5 mm (BCID: G03)



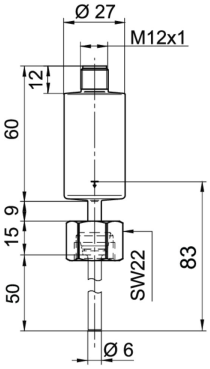
G03-G033
G 1/4 A ISO 228-1
Sensor length 32 mm (BCID: G03)



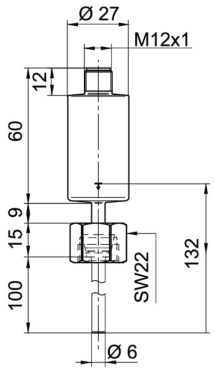
G08-G081
G 1/2 A ISO 228-1 with cone
Sensor length 16.4 mm (BCID: G08)



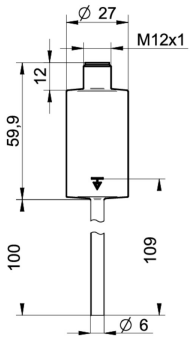
G08-G085
G 1/2 A ISO 228-1 with cone
Sensor length 50 mm (BCID: G08)



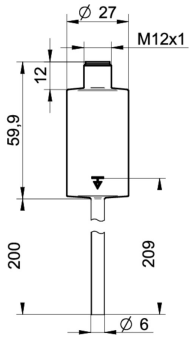
T44-T445
Sealing cone M18x1.5
Sensor length 50 mm (BCID: T44)



T44-T447
Sealing cone M18x1.5
Sensor length 100 mm (BCID: T44)



T52-T527
Compression fitting Ø 6
Sensor length 100 mm (BCID: T52)



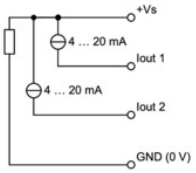
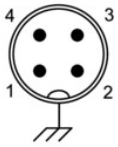
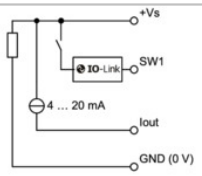
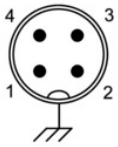
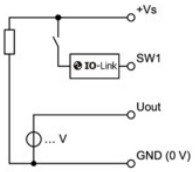
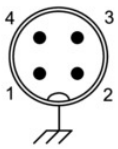
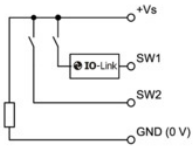
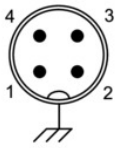
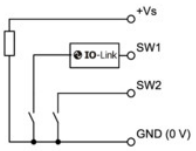
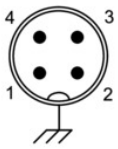
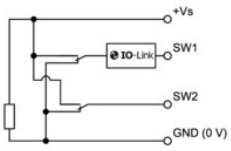
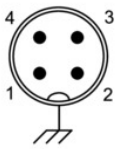
T52-T528
Compression fitting Ø 6
Sensor length 200 mm (BCID: T52)

2025-09-23 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

PF20S

PF20S-#1.010.####.2#.#.0000.0

Electrical connection

Output signal	Equivalent circuit	Electrical connection	Function	Pin assignment
Multi-parameter output 4 … 20 mA, 3-wire (flow) 4 … 20 mA, 3-wire (temperature)			+Vs Iout (flow) Iout (temperature) GND (0 V) Frame ground	1 2 4 3 Plug thread
Programmable output Factory setting with IO-Link IO-Link 4 … 20 mA, 3-wire			+Vs SW1 (IO-Link) Iout GND (0 V) Frame ground	1 4 2 3 Plug thread
Programmable output Configuration programmable by customer IO-Link 0 … 10 V (3-wire)			+Vs SW1 (IO-Link) Uout GND (0 V) Frame ground	1 4 2 3 Plug thread
Programmable output Configuration programmable by customer IO-Link PNP			+Vs SW1 (IO-Link) SW2 GND (0 V) Frame ground	1 4 2 3 Plug thread
Programmable output Configuration programmable by customer IO-Link NPN			+Vs SW1 (IO-Link) SW2 GND (0 V) Frame ground	1 4 2 3 Plug thread
Programmable output Configuration programmable by customer IO-Link Digital (push-pull)			+Vs SW1 (IO-Link) SW2 GND (0 V) Frame ground	1 4 2 3 Plug thread

Ordering information

Ordering key - Configuration possibilities see website

	PF20S	-	#	1	.	010	.	####	.	2	#	.	#	.	0	00	0	.	0
Product	PF20S																		
Version																			
Version for Water			1																
Version for Oil			2																
Housing																			
Stainless steel, AISI 316L (1.4404)				1															
Electrical connection																			
M12-A, 4-pin, stainless steel						010													

2025-09-23 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

PF20S

PF20S-#1.010.####.2#.#.0000.0

Ordering information

Ordering key - Configuration possibilities see website

	PF20S	-	#	1	.	010	.	####	.	2	#	.	#	.	0	00	0	.	0
Process conection																			
Sealing cone M18x1.5 (T44), Sensor length: 50 mm								T445											
Sealing cone M18x1.5 (T44), Sensor length: 100 mm								T447											
Compression fitting Ø 6 (T52), Sensor length: 100 mm								T527											
Compression fitting Ø 6 (T52), Sensor length: 200 mm								T528											
G 1/2 A ISO 228-1 with cone (G08), Sensor length: 16.4 mm								G081											
G 1/2 A ISO 228-1 with cone (G08), Sensor length: 50 mm								G085											
G 1/4 A ISO 228-1 (G03), Sensor length: 9.5 mm								G030											
G 1/4 A ISO 228-1 (G03), Sensor length: 32 mm								G033											
Process connection material																			
AISI 316L (1.4404)										2									
Seal																			
None											0								
FKM											3								
Output signal																			
Multi-parameter output, 2 x 4 - 20 mA (3-wire)													0						
Programmable output, IO-Link													1						
Explosion protection																			
Without															0				
Industrial approvals																			
Standard																00			
Special approvals																			
Standard																	0		
Configuration																			
Factory settings																			0

2025-09-23 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.