

## PF20S

PF20S-11.010.####.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



### Technical data

#### Performance characteristics

Down time at temperature step	< 10 s
Max. measuring error	± 2 % FSR , flow measurement ± 8 cm/s , flow measurement ± 1 °C , temperature measurement @ flow > 0 cm/s
Measuring range, flow	10 ... 400 cm/s
Measuring range, temperature	-25 ... 150 °C
Response time, T90	< 5 s

#### Process conditions

Process temperature	-25 ... 125 °C , flow measurement -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)	IP 67 IP 68 , 30 min. @ 1 mH2O IP 69K , with appropriate cable
Humidity	≤ 100 % RH , condensing
Shock (EN 60068-2-27)	30 g / 11 ms, 6 impulses per axis and direction

#### Ambient conditions

Vibration (sinusoidal) (EN 60068-2-6)	5 g (10 ... 2000 Hz)
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#### 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
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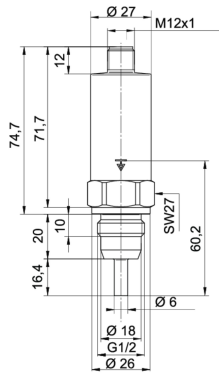
#### Power supply

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

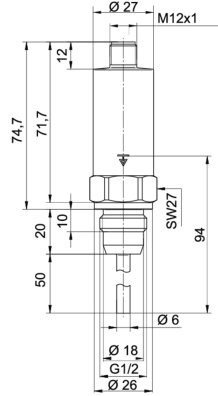
#### Compliance and approvals

EAC (Eurasian Conformity)	EAC (TR CU 020/2011)
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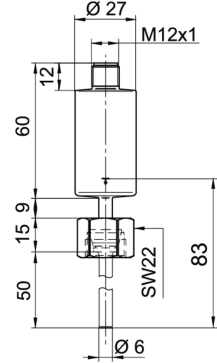
**Dimensional drawings**



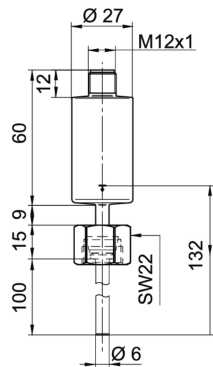
**G08-G081**  
G 1/2 A ISO 228-1 with cone  
Sensor length 16.4 mm (BCID: G08)



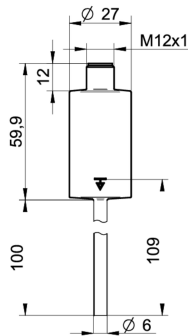
**G08-G085**  
G 1/2 A ISO 228-1 with cone  
Sensor length 50 mm (BCID: G08)



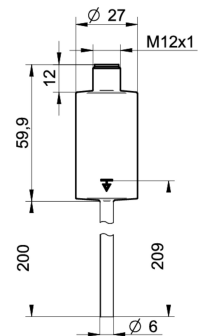
**T44-T445**  
Sealing cone M18x1.5  
Sensor length 50 mm (BCID: T44)



**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)

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PF20S-11.010.####.2#. #.0000.0

## Electrical connection

### Process connection

Output signal	Equivalent circuit	Electrical connection	Function	Pin assignment
<b>Multi-parameter output</b>  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
<b>Programmable output</b> 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
<b>Programmable output</b> 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
<b>Programmable output</b> Configuration programmable by customer  IO-Link PNP			+Vs SW1 (IO-Link) SW2 GND (0 V) Frame ground	1 4 2 3 Plug thread
<b>Programmable output</b> Configuration programmable by customer  IO-Link NPN			+Vs SW1 (IO-Link) SW2 GND (0 V) Frame ground	1 4 2 3 Plug thread
<b>Programmable output</b> 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	1	.	010	.	####	.	2	#	.	#	.	0	00	0	.	#	
<b>Product</b>	PF20S																			
<b>Version</b> Standard				1																
<b>Housing</b> Stainless steel, AISI 316L (1.4404)																				
<b>Electrical connection</b> M12-A, 4-pin, stainless steel						010														
<b>Process connection</b> Sealing cone M18x1.5 (T44), Sensor length: 50 mm																				T445
Sealing cone M18x1.5 (T44), Sensor length: 100 mm																				T447

**Ordering information**

**Ordering key - Configuration possibilities see website**

	PF20S	-	1	1	.	010	.	####	.	2	#	.	#	.	0	00	0	.	#
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											
<b>Wetted parts material</b>																			
AISI 316L (1.4404)										2									
<b>Seal</b>																			
None																			0
FKM (Viton®)																			3
<b>Output signal</b>																			
Multi-parameter output, 2 x 4 - 20 mA (3-wire)																			0
Programmable output, IO-Link																			1
<b>Explosion protection</b>																			
Without																			0
<b>Industrial approvals</b>																			
Standard																			00
<b>Special approvals</b>																			
Standard																			0
<b>Configuration</b>																			
Factory settings																			0
Customer-specific																			1