Baumer
Passion for Sensors

Pressure sensor

PP20S process - D1 IO-Link

PP20S-2.#####.D1##.##20##.000

Overview

- IO-Link dual channel output
- All market typical industrial connections available
- Condensate-proof measuring cell
- Space-savng installations
- Absolute pressure, relative pressure and vacuum measurement
- Pressure sensor with silicon measuring cell



Picture similar

Technical data

Performance characteristics	
Pressure type	Absolute Relative (gauged)
Compensated temperature range	-20 … 125 °C
Long term stability	≤ 0.2 % FSR/a
Max. measuring error	± 0.5 % FSR ± 1.0 % FSR , 0 … 0.4 bar Including zero-point and span error, non-linearity (by terminal base line), hysteresis and non-repeatability (EN 61298-2)
Max. measuring span	40 bar
Measuring range	-1 … 40 bar
Standard error of measurement (BFSL)	± 0.2 % FSR ± 0.5 % FSR , 0 … 0.4 bar Including non-linearity, hysteresis and non-repeatability according BFSL
Min. measuring span	0.4 bar
Rise time (10 ... 90 %)	≤ 5 ms
Temperature coefficient	≤ 0.2 % FSR/10 K , measuring span ≤ 0.2 % FSR/10 K , zero point
Process conditions	
Process temperature	-20 … 125 °C
Process pressure	Refer to section "Operating conditions"
Process connection	
Connection variants	Refer to section "Dimensional drawings"
Wetted parts material	AISI 316L (1.4404)
Wetted parts material, membrane	AISI 316L (1.4435)
Surface roughness (in contact with medium)	
Process connection	Ra ≤ 0.8 µm
Ambient conditions	
Operating temperature range	-20 … 85 °C
Storage temperature range	-40 … 85 °C
Degree of protection (EN 60529)	IP 67 , without connector M12-A, 5-pin IP 69 , with appropriate cable

Ambient conditions	
Insulation resistance	> 100 MΩ , 500 V DC
Bump (EN 60068-2-27)	100 g / 2 ms, 4000 impulses per axis and direction
Cold (EN 60068-2-1)	Ab: -40 °C, 2 h (not in operation)
Damp heat, cyclic (EN 60068-2-30)	Db: 55°C, Variant 1, 2 cycles (2 · 24 h)
Dry heat (EN 60068-2-2)	Be: 85 °C, 6 h (in operation)
Shock (EN 60068-2-27)	50 g / 11 ms, 100 g / 6 ms, 10 impulses per axis and direction
Vibration (sinusoidal) (EN 60068-2-6)	1.5 mm p-p (10 … 58 Hz), 10 g (58 Hz … 2 kHz), 10 cycles (2.5 h) per axis
Vibration, broad-band random (EN 60068-2-64)	0.1 g² / Hz, > 10 gRMS (20 Hz … 1 kHz), 30 min. per axis
Output signal	
Current output	4 … 20 mA , 3-wire
Load resistance	Rs ≤ (Vs - 11 V)/0.02 A
Short circuit protection	Yes
IO-Link interface	
IO-Link version	1.1
Device profile	Smart Sensor Profile
IO-Link port type	Class A
Baud rate	38,4 kbaud (COM2)
SIO-mode	Yes
Process data (cyclic)	Pressure or temperature Switch state State of alert Scaling factor
Diagnostic data (acyclic)	Ambient pressure Device temperature CPU temperature Operation time (since power-on) Device Status Power supply
Adjustable data (acyclic)	Offset settings Switch parameters Measuring mode

2025-10-09 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

PP20S process - D1 IO-Link

PP20S-2.#####.D1##.##20##.000

Technical data

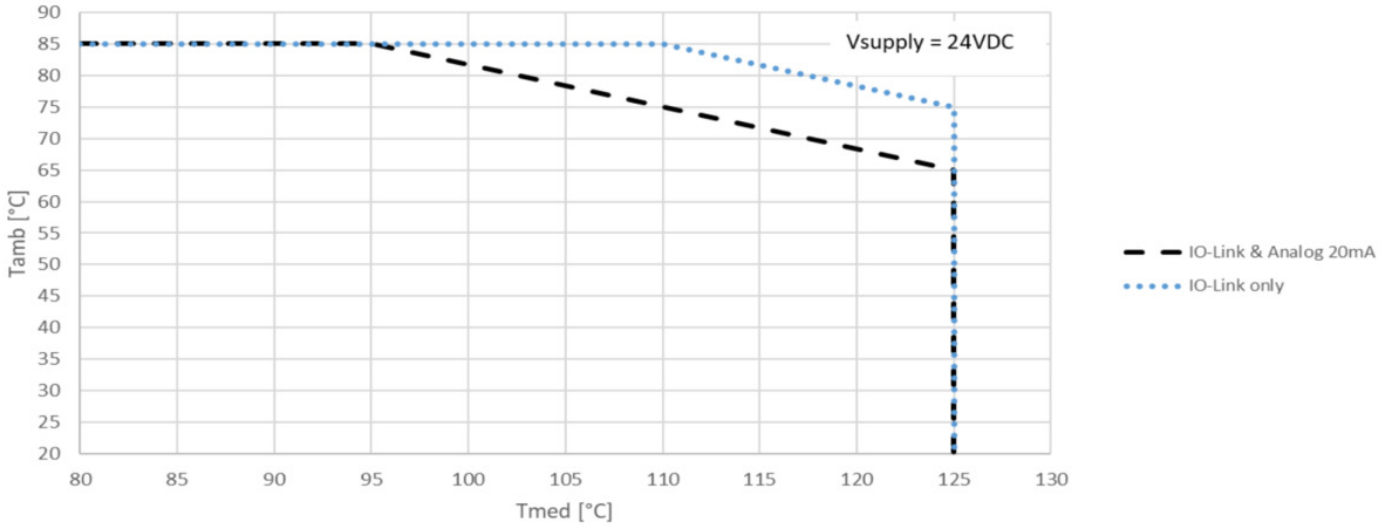
IO-Link interface	
Dual Channel	IO-Link / Analogue Analogue / SIO Mode
Housing	
Style	Compact transmitter
Overall size	Refer to section "Dimensional drawings"
Material	AISI 316L (1.4404)
Electrical connection	
Connector	M12-A, 5-pin, stainless steel, IO-Link output

Power supply	
Voltage supply range	18 … 30 V DC , with IO-Link 11 … 30 V DC , with 4 … 20 mA output signal
Reverse polarity protection	Yes
Compliance and approvals	
EMC	EN 61000-6-2 EN 61000-6-3 EN 61326-2-3

Operating conditions

Measuring range (bar)				Proof pressure (bar)	Burst pressure (bar)
-1 … 0	-1 … 1	0 … 0.4	0 … 1	5	10
-1 … 3 0 … 4	-1 … 5 0 … 5	0 … 2.5		10	20
-1 … 9	0 … 6	0 … 10		20	40
0 … 16	0 … 25			50	100
0 … 40				80	160

Maximum operating conditions in subject to temperature



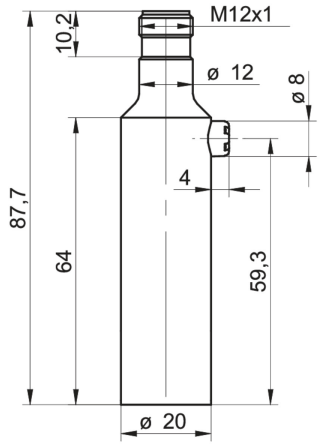
2025-10-09 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

PP20S process - D1 IO-Link

PP20S-2.#####.D1##.##20##.000

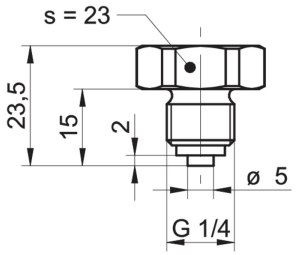
Dimensional drawings (mm)

Housing

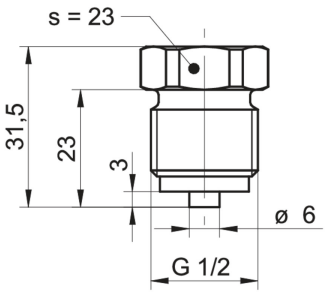


Housing with connector M12-A

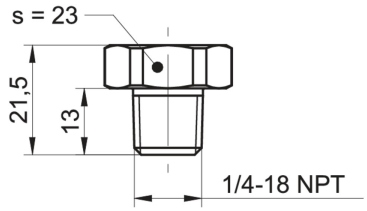
Process connection



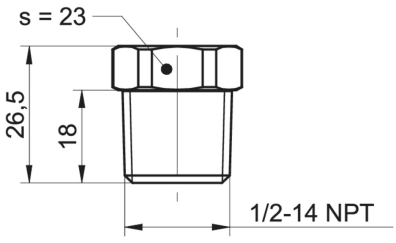
G30-02
G 1/4 B EN 837-1 (BCID: G30)



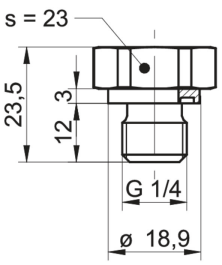
G31-03
G 1/2 B EN 837-1 (BCID: G31)



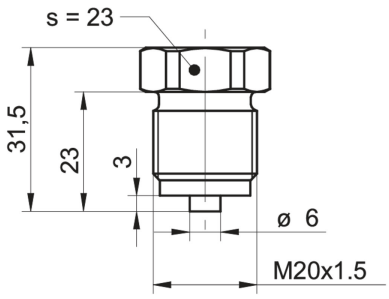
N01-04
1/4-18 NPT (BCID: N01)



N02-05
1/2-14 NPT (BCID: N02)



G50-06
G 1/4 A DIN EN ISO 1179-2 (3852-E) (BCID: G50)

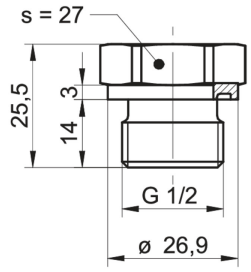


M08-07
M20 × 1.5 ISO 261 / ISO 965 (BCID: M08)

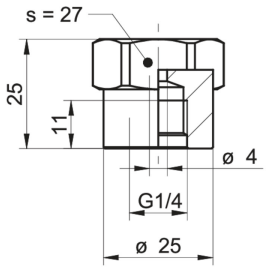
The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.
2025-10-09

Dimensional drawings (mm)

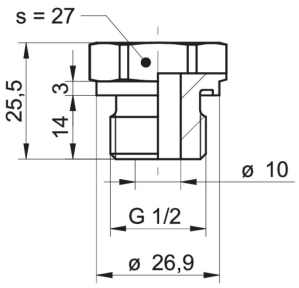
Process connection



G51-09
G 1/2 A DIN EN ISO 1179-2 (3852-E) (BCID: G51)

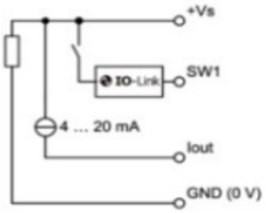
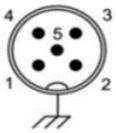


G21-12
G 1/4 A ISO 228-1 female thread (BCID: G21)



G51-19
G 1/2 A DIN EN ISO 1179-2, hole Ø 10 mm (3852-E) (BCID: G51)

Electrical connection

Output type	Equivalent circuit	Electrical connection
IO-Link & analog 3-wire		

Function	Pin assignment
+Vs	1
GND (0V)	3
SW1, IO-Link	4
Iout	2
Frame ground	plug thread
n.c.	5

operating mode	used pins
IO-Link	pin 1, 3, 4
Analog 4 ... 20 mA	pin 1, 2, 3
Dual-channel	pin 1, 2, 3, 4

2025-10-09 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

PP20S process - D1 IO-Link

PP20S-2.#####.D1##.##20##.000

Ordering information

Ordering key - Configuration possibilities see website

	PP20S	-	2	.	#	###	#	.	D1	15	.	##	2	0	#	0	.	0	0	0
Product																				
	PP20S																			
Housing material																				
Stainless steel 1.4404 AISI 316L			2																	
Accuracy																				
±1.0 % FS					1															
±0.5 % FS					3															
Measuring range																				
0 ... 0.4 bar (EN)						B11														
0 ... 1 bar (EN)						B15														
0 ... 2.5 bar (EN)						B18														
0 ... 4 bar (EN)						B19														
0 ... 6 bar (EN)						B20														
0 ... 10 bar (EN)						B22														
0 ... 16 bar (EN)						B24														
0 ... 25 bar (EN)						B26														
0 ... 40 bar (EN)						B27														
-1 ... 0 bar (EN)						B59														
-1 ... 1 bar (EN)						B73														
-1 ... 3 bar (EN)						B76														
-1 ... 5 bar (EN)						B77														
-1 ... 9 bar (EN)						B79														
0...5 bar (EN)						B98														
Kind of pressure																				
Relative (gauged)							R													
Absolute							A													
Output signal																				
IO-Link Dual Ch., 4...20 mA V1									D1											
Output Connection																				
M12-A, 5-pin										15										
Process connection																				
G 1/4 B EN 837-1 (G30)												02								
G 1/2 B EN 837-1 (G31)												03								
1/4-18 NPT (N01)												04								
1/2-14 NPT (N02)												05								
G 1/4 A DIN EN ISO 1179-2 (3852-E) (G50)												06								
M20 × 1.5 ISO 261 / ISO 965 (M08)												07								
G 1/2 A DIN EN ISO 1179-2 (3852-E)(G51)												09								
G 1/4 A ISO 228-1 female thread (G21)												12								
G 1/2 A DIN EN ISO 1179-2 (3852-E) pressure channel Ø 10 mm (G52)												19								
Process connection material																				
Stainless steel 1.4404 AISI 316L													2							
Seal																				
None														0						
Oil filling																				
Standard oil															1					
NSF H1 listed (FDA approved)															2					
Display																				
Without display																0				

2025-10-09 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

PP20S process - D1 IO-Link

PP20S-2.#####.D1##.##20##.000

Ordering information

Ordering key - Configuration possibilities see website

	PP20S	-	2	.	#	###	#	.	D1	15	.	##	2	0	#	0	.	0	0	0
Explosion protection																				
Without																		0		
Approvals																				
Standard approvals																			0	
Technology																				
Silicon																				0

2025-10-09 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.