

# PP20S compact

Fully welded pressure sensor with industrial connection

PP20S-5.4####R.####.##8#03

## Overview

- Ideal solution for challenging measuring requirements
- General industrial applications in the mid and high pressure ranges
- Robust stainless steel design with hermetic port (no internal sealing)
- High proof and burst pressure capabilities
- Typical applications:
  - ▶ Hydraulic and Pneumatic pressure monitoring
  - ▶ Plastic injection molding machines
  - ▶ High Pressure Refrigeration systems (CO<sub>2</sub>, Amonia)

Packing size 50 pcs or a multiple of it


**UK  
CA**

## Technical data

### Performance characteristics

Pressure type	Relative (gauged)
Compensated temperature range	-40 ... 125 °C
Long term stability	≤ 0.1 % FSR/a
Max. measuring error	± 0.5 % FSR Including zero-point and span error, non-linearity (by terminal base line), hysteresis and non-repeatability (EN 61298-2)
Max. measuring span	600 bar
Measuring range	60 ... 600 bar
Step response time	≤ 2 ms
Standard error of measurement (BFSL)	± 0.25 % FSR Including non-linearity, hysteresis and non-repeatability according BFSL
Min. measuring span	60 bar
Total error band	1.5 % FSR

### Process conditions

Maximum media temperature	- 40 ... + 125 °C
Process pressure	Refer to section "Operating conditions"

### Process connection

Connection variants	Refer to section "Dimensional drawings"
Wetted parts material	AISI 630 (1.4542)
Wetted parts material, process connection	AISI 630 (1.4542)
Wetted parts material, membrane	AISI 630 (1.4542)
Wetted parts material, gasket	FKM

### Ambient conditions

Operating temperature range	- 40 ... 100 °C
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### Ambient conditions

Storage temperature range	- 40 ... 125 °C
Degree of protection (EN 60529)	IP 67 , with M12-A, 4-pin
Insulation resistance	> 100 MΩ , 500 V DC
Shock (EN 60068-2-27)	500 g / 1 ms, 3 impulses per axis and direction, 100 g / 11 ms, 10 impulses per axis and direction
Vibration (sinusoidal) (EN 60068-2-6)	30 g / 10...2000 Hz, 1000 cycles each axis

### Output signal

Current output	4 ... 20 mA , 2-wire
Voltage output	0 ... 10 V DC , 3-wire 0.5 ... 4.5 V DC , 3-wire 0 ... 5 V DC , 3-wire 0.5 ... 4.5 V DC ratiometric , 3-wire
Load resistance	≥ 4.7 kΩ ≤ (Vs - 8 VDC)/0.02 A, with current output
Short circuit protection	Yes Not Applicable for 4...20mA

### Housing

Style	Compact transmitter
Overall size	Refer to section "Dimensional drawings"
Material	AISI 630 (1.4542)

### Electrical connection

Connector	M12-A, 4-pin DT04, 3-pin
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## Technical data

### Power supply

Voltage supply range	8 ... 32 V DC , with 4 ... 20 mA output signal
	12 ... 32 V DC , with 0 ... 10 V output signal
	5 ± 0.25 V DC , with 0.5 ... 4.5 V ratiometric output signal
	8 ... 32 V DC , with 0 ... 5 V output signal , with 1 ... 5 V output signal
	, with 0.5 ... 4.5 V output signal

### Power supply

Reverse polarity protection	Yes
	Not Applicable for 4...20mA

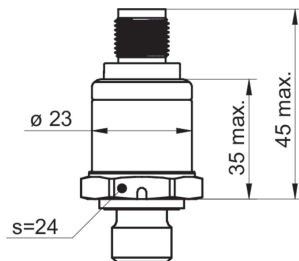
### Compliance and approvals

EMC	EN 61326-1
	EN 61326-2-3

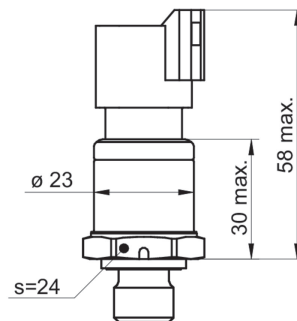
## Operating conditions

Measuring Range (bar)	Proof pressure (bar)	Burst pressure (bar)
0 ... 60	200	2000
0 ... 100	200	2000
0 ... 160	500	2000
0 ... 250	500	2000
0 ... 400	800	4000
0 ... 600	1200	4000

## Dimensional drawings (mm)



G1/4 A DIN 3852-E (G50); M12 (4-Pin)



G1/4 A DIN 3852-E (G50); DT04 (3-Pin)

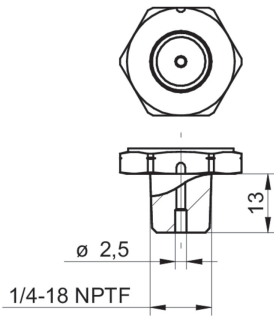
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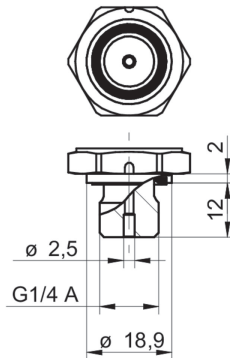
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## Dimensional drawings (mm)

### Process connection



1/4-18 NPTF



G1/4 A DIN 3852-E (G50)

## Electrical connection

Output signal	Equivalent circuit	Electrical connection	Function	Pin assignment
Current output, 2-wire (e.g. 4 ... 20 mA)			+Vs	1
			Iout	3
			n.c.	2, 4
			+Vs	A
			Iout	B
			n.c.	C

Output signal	Equivalent circuit	Electrical connection	Function	Pin assignment
Voltage output, 3-wire (e.g. 0 ... 10 V)			+Vs	1
			Uout	4
			GND (0 V)	3
			n.c.	2
			+Vs	A
			Uout	C
			GND (0 V)	B

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## Ordering information

Ordering key - Configuration possibilities see website

	PP20S	-	5	.	4	###	R	.	##	##	.	##	8	#	0	3
<b>Product</b>	PP20S compact															
<b>Housing material</b>	Stainless steel 1.4542 (AISI 630L AISI 630 (17-4PH))		5													
<b>Accuracy</b>	±0.25 % FS				4											
<b>Measuring range</b>	0 ... 60 bar (EN)															B29
	0 ... 100 bar (EN)															B31
	0 ... 160 bar (EN)															B33
	0 ... 250 bar (EN)															B35
	0 ... 400 bar (EN)															B38
	0...600 bar (EN)															B39
<b>Kind of pressure</b>	Relative (gauged)						R									
<b>Output signal</b>	4...20 mA															A1
	0...10 V															A2
	0...5 V															A4
	0.5...4.5 V															A5
	0.5...4.5 V ratiometric															A6
<b>Output Connection</b>	M12-A, 4-pin															14
	DT04, 3-pin															88
<b>Process connection</b>	G 1/4 A DIN 3852-E (G50)															06
	1/4-18 NPT F (N01)															21
	G 1/4 A DIN 3852-E, pressure channel 0.2 mm (G50)															27
<b>Process connection material</b>	Stainless steel 1.4542 AISI630															8
<b>Seal</b>	None															0
	FKM															3
<b>Approvals</b>	Standard approvals															0
<b>Technology</b>	Metal strain gauge STD															3