

## OEM Pressure sensors for the refrigeration and ventilation technology Model P3307

Standard output: 4...20 mA; 2-wire technology  
or 0...10 VDC; 3-wire technology  
or 0.5...4.5 VDC; 3-wire technology



### Description

The key strengths of these compact pressure sensors intended for refrigeration and air conditioning systems are their robustness and good long-term stability. Their attractive price level and technical specifications make them optimally suited to OEM applications.

Optimal resistance to dew formation and to attack by all of the main refrigerants is the hallmarks of these compact pressure sensors. Elements wetted by the measuring medium are made of brass, ceramic and chloroprene. The compact design makes space- and weight-saving installation possible.

A wide variety of electrical and mechanical pressure connections also allows the optimal solution to be chosen for any application that involves refrigeration or air conditioning systems. Furthermore, the electrical connecting cable output offers an IP69K degree of protection.

The pressure sensors are conformant to electromagnetic compatibility (EMC) standard EN 61326.

### Features

- RoHS-conformity
- Condensation tight
- High load cycle stability
- For dynamical and static measurement
- Customized pin-configuration is possible

### Measuring ranges

-1 / 0...6 bar to -1 / 0...60 bar

### Applications

Refrigeration and ventilation technology,  
Compressors,  
Coolers,  
Condenser,  
Water chiller

Model: P3307

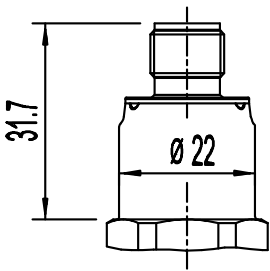
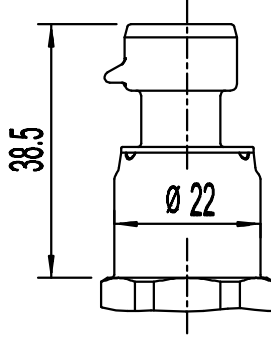
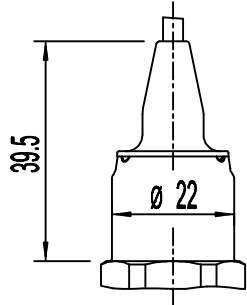
## Technical data

Model	P3307		Option
Pressure type	positive or negative gauge pressure		
- Ranges [bar]	0...6 bar bis 0...60 bar -1...7 bar -1...9 bar		Other on request
- Overrange limit [bar]	≤ 16 bar 2x ; >16 bar 1,6x		
- Burst pressure [bar]	2 x		
Sensor element	ceramic Al <sub>2</sub> O <sub>3</sub> 96%		
Output signal	4...20 mA, 2- wire technology 0...10 VDC, 3- wire technology 0,5...4,5 VDC ratio., 3- wire technology		
Accuracy	≤ 2,0% of measurement span <sup>1)</sup>		
Material			
- Case	brass		
- Wetted parts	brass, ceramic Al <sub>2</sub> O <sub>3</sub> 96%		
- Resistance	O-ring: CR70 (Chloropren) against refrigerant R12, R22, R134a, R404a, R407c, R410a, R502, R507		
Pressure connection	Highly resistant fibre-glass reinforced plastic (PBT GF 30) 7/16-20 UNF-2A 7/16-20 UNF-2B G1/4 B nach EN 837 1/4 NPT 1/8 NPT		
Electrical connection	Round plug connector M12x1 (4-pin) (IP 67) Connector plug Metri Pack serie 150, 3-pin Cable outlet 1m / 2m		Other on request
Power supply / resistance	Power supply	Permissible max. resistance R <sub>A</sub>	
4...20 mA	7...30 VDC	R <sub>A</sub> ≤ (U <sub>B</sub> - 7V) / 0,02 A	
0...10 V	14...30 VDC	R <sub>A</sub> > 10 kOhm	
0,5...4,5 V ratiometrical	5 ± 0.5V	R <sub>A</sub> > 4.5 kOhm	
Pressure setting time	≤ 5ms inside of 10% to 90% of measurement span		
Isolation span	500 VDC		
RoHS-conformity	yes		
CE-conformity			
- EMV-directive	2004/108/EG, according to EN 61326 transient emissions (group 1, class B ) and interference resistance (industrial range)		
Electrical protections			
- Short-circuit strength	Sig+ against 0V		
- Inverse-polarity protection	U <sub>B</sub> + against 0V		
- Overvoltage protection	36 DC		
Temperature influence			
- Zero point	typ. ≤ 0.5% / 10K		
- Span	≤ 0.3% / 10K		
Temperature ranges			
- Compensated range	0...80°C		
- Storage	-25...80°C		
- Media	-40...80°C		
- Ambient	-25...80°C		
Weight	ca. 0.08 kg		

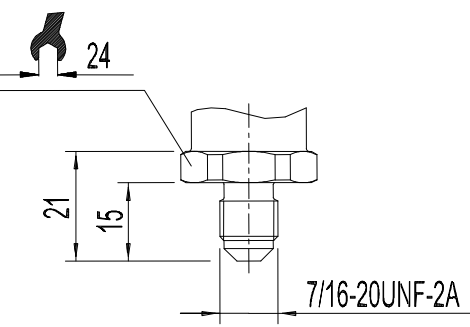
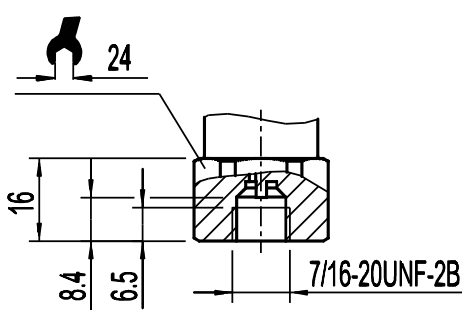
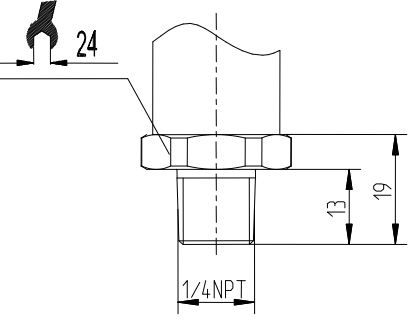
<sup>1)</sup> Incl. non-linearity, hysteresis, zero point- and full scale value-variations (conform to measurement-variations acc. to IEC 61298-2)

## Dimensions (mm)

### Case

Round plug connector M12x1	Connector Plug Metri Pack Serie 150	Cable outlet
		

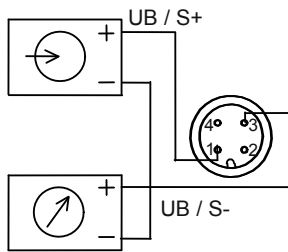
### Pressure connections

7/16-20UNF-2A	7/16-20UNF-2B Schrader female	1/4 NPT
		

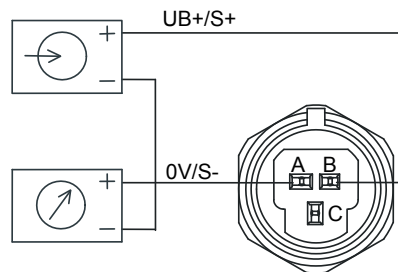
## Electrical connections

### Two-wire system

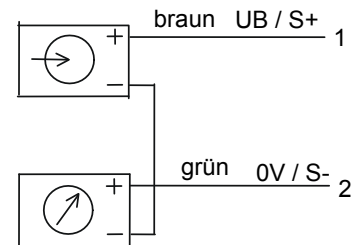
Round plug connector M12x1



Connector Plug Metri Pack 150



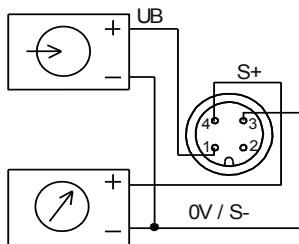
Cable outlet



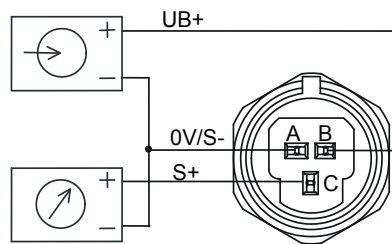
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### Three-wire system

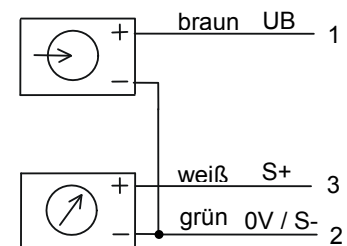
Round plug connector M12x1



Connector Plug Metri Pack 150



Cable outlet



### Connection table for plug or cable outlet

	4...20 mA (2 - Leiter)			0...10VDC (3 - Leiter)		
	Connector M12x1	Connector Metri	Cable outlet	Connector M12x1	Connector Metri	Cable outlet
Power supply: UB+	1	B	brown	1	B	brown
Power supply: 0V	3	A	green	3	A	green
Signal: S+		-	-	4	C	white
Signal: S-		-	-	3	A	green
Protection	IP 67		IP 69K	IP 67		IP 69K
Lead cross-section	-----		3 x 0.14 mm <sup>2</sup>	-----		3 x 0,14 mm <sup>2</sup>
Cable diameter	-----		3.2 mm	-----		3,2 mm
The specified protection apply only in the plugged condition with the cable connectors according to protection						

### Order details

1. Model
2. Measuring range
3. Output signal
4. Options

Modifications reserved