



## Pressure Transducer Heavy Duty Precision Piezoresistive



messen  
•  
kontrollieren  
•  
analysieren

SEN-3291



- Gauge pressure
- Flush diaphragm
- Measuring range:  
-0,25 ... 0 to -1 ... +5 bar  
and  
0 ... 0,25 to 0 ... 25 bar
- Temperature (medium):  
max. 105 °C
- Accuracy:  
0,1 % of full scale
- Material: stainless steel
- Connection: G½, G1



P2

KOBOLD companies worldwide:

ARGENTINA, AUSTRALIA, AUSTRIA, BELGIUM, BULGARIA, CANADA, CHILE, CHINA, COLOMBIA, CZECHIA, EGYPT, FRANCE, GERMANY, GREAT BRITAIN, HUNGARY, INDIA, INDONESIA, ITALY, MALAYSIA, MEXICO, NETHERLANDS, PERU, POLAND, REPUBLIC OF KOREA, ROMANIA, SINGAPORE, SPAIN, SWITZERLAND, TAIWAN, THAILAND, TUNISIA, TURKEY, USA, VIETNAM

KOBOLD Messring GmbH  
Nordring 22-24  
D-65719 Hofheim/Ts.  
☎ Head Office:  
+49(0)6192 299-0  
+49(0)6192 23398  
✉ info.de@kobold.com  
www.kobold.com



**Description**

The Heavy Duty Industrial pressure transducers are leaders among pressure transducers. The flush type diaphragm allows the use with aggressive, viscous or crystallizing process fluids. This type of sealing permits cleaning of the process connections without residues.

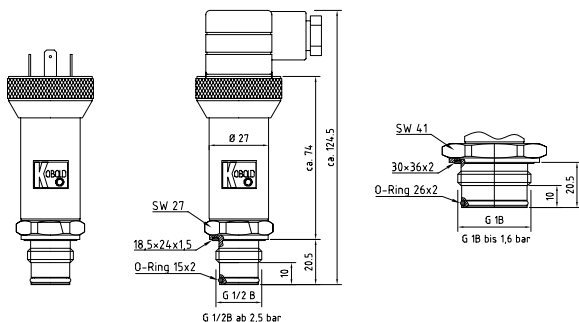
With an accuracy of 0.1% (0.05% optional) use in testing and calibration is given. By a programmatic compensation temperature of +10°C...+60°C the temperature-induced error is practically zero.

As measuring element, a piezoresistive sensor is used. Case and wetted parts are stainless steel. Therefore the are extremely resistant against aggressive media and fulfil the most demanding requirements.

The pressure connection and measuring element are welded together, making the measuring system particularly resistant to mechanical shock or vibration. Optional software is available to adjust zero and span in difficult applications like measurement of the hydrostatic column.

**Dimensions (in mm)**

SEN-3291...



**Applications**

- Testing and calibration
- R & D and laboratory
- Process engineering
- Hydraulics
- Pneumatics

**Technical Details**

Technology: flush diaphragm  
 Pressure type: gauge pressure, optional absolute pressure (max. 16 bar)  
 Housing: stainless steel  
 Connections: measuring span < 1.6 bar G 1 male  
 measuring span > 2.5 bar G 1/2 male  
 Wetted parts: stainless steel; o-ring NBR (option FPM/FKM or EPDM)  
 Sensor: piezoresistive  
 Max. temperature: storage: -40...+80°C  
 medium: -20...+105°C  
 ambient: -20...+80°C  
 Pressure limitation: ≤ 16 bar: 3.5 x range; > 16 bar: 2 x range, vacuum-tight  
 Accuracy: 0.1% of full scale in range +10...+60°C (option 0.05% of full scale at +20°C)  
 Repeatability: ≤ ±0.03% of full scale  
 Stability per year: ≤ ±0.2% of full scale (at reference conditions)  
 Electrical connection: connector DIN EN 175301-803 Form A (DIN 43 650 A); optional: cable outlet 1,5 m, connector M12x1  
 Auxiliary power: 9...30 V<sub>DC</sub>  
 (14...30 V<sub>DC</sub> for output 0-10 V)  
 Output: 4-20 mA (2-wire), optional (0)4-20 mA (3-wire), 0-5 V<sub>DC</sub>, 0-10 V<sub>DC</sub>  
 Load (Ω): RA[Ω] ≤ (U<sub>B</sub>[V]-9V)/0,02A (for 4-20 mA); > 5 kΩ for 0-5 V; > 10 kΩ for 0-10 V  
 Response time: 1 ms (1 kHz) 3-wire; 3 ms (0,33 kHz) 2-wire  
 Heating period: < 10 min  
 Variability: zero-point -5...+20% and span -20...+5% (setting via software)  
 Compensated range: -20...+80°C  
 Temperature influence: on zero-point and span ≤ 0.1% / 10 K  
 Protection: IP 65 (IP 67 for cable / M12x1)

**Accessory**

Weld on Adapter for flush diaphragm transducer

Connection	Model
Weld on adapter G 1/2	MZB-ESAR15
Weld on adapter G 1	MZB-ESAR25
Screw in adapter G 1 male x G 1/2 female	MZB-ESAR25R15
Screw in adapter G 3/4 male x G 1/2 female	MZB-ESAR20R15
Screw in adapter DIN 11851 1,5" x G 1 female	MZB-ESAF40R25
Screw in adapter DIN 11851 2" x G 1 female	MZB-ESAF50R25

**Order Details Sensor (Example: SEN-3291 C315)**

Model	Output	Measuring range	Connection
SEN-3291... Accuracy class 0.10 %	without = 4-20 mA, 2-wire /1 = 0...5 V <sub>DC</sub> /2 = 0...10 V <sub>DC</sub> /3 = 4-20 mA, 3-wire	C 426 = -0.25 ... 0 bar	without = plug Form A DIN EN 175301-803 Form A (DIN 43 650 A) incl. junction box 3 = plug M12x1 (4-pin, IP67) 5 = 2 m cable, IP67
		C 436 = -0.4 ... 0 bar	
		C 305 = -0.6 ... 0 bar	
		C 315 = -1 ... 0 bar	
		C 515 = -1 ... +1,5 bar	
		C 525 = -1 ... +3 bar	
		C 535 = -1 ... +5 bar	
		B 146 = 0 ... 0.25 bar	
		B 156 = 0 ... 0.4 bar	
		B 015 = 0 ... 0.6 bar	
B 025 = 0 ... 1 bar			
B 035 = 0 ... 1.6 bar			
B 045 = 0 ... 2.5 bar			
B 055 = 0 ... 4 bar			
B 065 = 0 ... 6 bar			
B 075 = 0 ... 10 bar			
B 085 = 0 ... 16 bar			
B 095 = 0 ... 25 bar			