



Pressure Sensor with Ceramic Sensor Element



measuring
•
monitoring
•
analysing

SEN-96



- Gauge pressure
- Measuring range:
-1...0 to 0...600 bar
- Temperature (medium):
max. 85 °C
- Accuracy:
0.5 % (0,75%)
of full scale
- Material: stainless steel
and ceramic

P2



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Description

The KOBOLD SEN-96 standard model is an electronic transmitter with ceramic sensor for air, industrial, technical gases, water and oil, designed to be installed in gas distribution plants, on bottles, on refrigerators, on compressors, on vacuum pumps and hydraulics and water high pressure plants.

Technical Details

Ranges: 0 ... 1/0 ... 600 bar, relative,
-1 ... 0/-1 ... +24 bar, relative

Accuracy: $\leq \pm 0.5\%$ of full scale¹⁾
(all ranges except C315, B025 and A165)
 $\leq \pm 0.75\%$ of full scale¹⁾
(for ranges C315, B025 and A165)

Non-linearity (BFSL): $\leq \pm 0.25\%$ of full scale,
(all ranges except C315, B025 and A165)
 $\leq \pm 0.5\%$ of full scale,
(for ranges C315, B025 and A165)
according to EN 61298-2

Non-repeatability: $\leq 0.1\%$ of full scale,
according to EN 61298-2

Output signal deviation of zero: $\leq \pm 0.5\%$ of span, typical;
 $\leq \pm 0.75\%$ of span, max.

Thermal drift: 0 ... 80 °C, 1 % of span³⁾;
2.5 % of span, max.

Long term drift: $\leq 0.1\%$ of span,
according to EN 61298-2

Process fluid temperature, ambient and stocking temperature: -25 ... +85 °C

Output signals: 4 ... 20 mA, 0 ... 5 V_{DC}, 0 ... 10 V_{DC},
1 ... 5 V_{DC}, 0.5 ... 4.5 ratiometric V_{DC}

Response time: <4 ms

Emission and immunity: according to EN 61326, (group 1 - class B; industrial applications)

Process connection: AISI 316L (1.4404),
hole \varnothing 2.5 mm

Sensor: ceramic in Al₂O₃

Case: AISI 316L (1.4404)

Gasket (Sensor): FKM

Electric connection: EN 175301-803 Form A

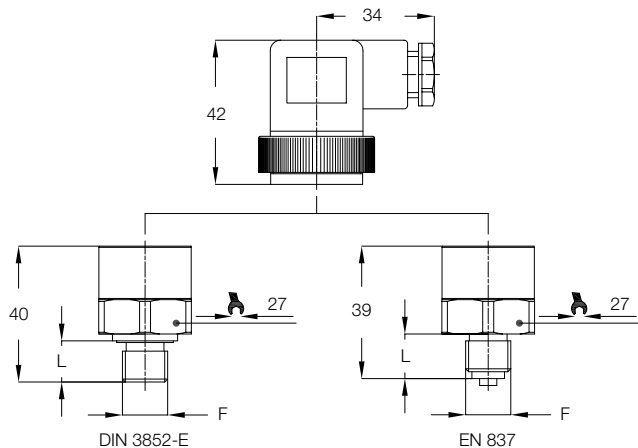
Protection degree: IP 65 according to IEC 529 / EN 60529²⁾

Weight: 0.12 kg

Measuring ranges [bar, relative]	Overpressure limit [bar, relative]
-1 ... 0	5
-1 ... 0.6	5
-1 ... 1.5	5
-1 ... 3	8
-1 ... 5	12
-1 ... 9	20
-1 ... 15	32
-1 ... 24	50
0 ... 1/0 ... 1.6/0 ... 2.5	5
0 ... 4	8
0 ... 6	12
0 ... 10	20
0 ... 16	32
0 ... 25	50
0 ... 40	80
0 ... 60	120
0 ... 100	200
0 ... 160	320
0 ... 250	500
0 ... 400	600
0 ... 600	800

Other ranges available on demand. Units of measurement available in psi, MPa, kPa too

Dimensions [mm]



F ¹⁾	L [mm]
A - G 1/2, male EN 837	20
B - G 1/4, male EN 837	13
E - G 1/4, male DIN 3852-E ²⁾	13
F - 1/2 - 14" NPT	20
G - 1/4 - 18" NPT	13

¹⁾ Torque 20...30 Nm

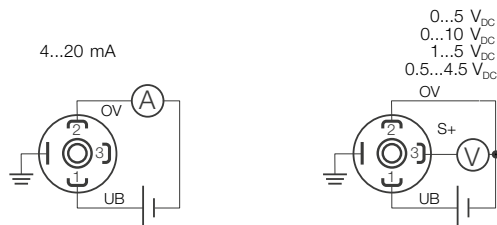
²⁾ For pressures up to 400 bar

¹⁾ Including non-linearity, hysteresis, non-repeatability and output signal deviation of zero at the reference conditions described in standard EN 61298-1

²⁾ With properly assembled electric connection

³⁾ For measuring ranges C 315... C 565, B 025 and A 165

Wiring Diagram



Order Details (Example: SEN-9601 0 B075 A 0)

Model	Output	Measuring range	Mechanical connection	Options
SEN-9601...	...0... = 4-20 mA, 2-wire (standard)	C 315 = -1 ... 0 bar C 505 = -1 ... 0.6 bar C 515 = -1 ... 1.5 bar C 525 = -1 ... 3 bar C 535 = -1 ... 5 bar C 545 = -1 ... 9 bar C 555 = -1 ... 15 bar C 565 = -1 ... 24 bar	A = G ½, male (standard) B = G ¼, male (standard) E = G ¼ DIN 3852-E, male F = ½" NPT, male G = ¼" NPT, male	0 = without Y = special option (specify in clear text)
	...1... = 0...5 V _{DC} (8...30 V _{DC})	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 B 105 = 0... 40 bar B 115 = 0... 60 bar B 125 = 0... 100 bar B 135 = 0... 160 bar B 145 = 0... 250 bar B 155 = 0... 400 bar A 165 = 0... 600 bar		
	...2... = 0... 10 V _{DC} (14... 30 V _{DC})			
	...3... = 0.5... 4.5 V _{DC} ratiometric (5 V _{DC} ±10%)			
	...4... = 1... 5 V _{DC} (8... 30 V _{DC})			

Output signal	4...20 mA 0	0...5 V _{DC} 1	0...10 V _{DC} 2	0.5...4.5 V _{DC} ratiometric - 3	1...5 V _{DC} 4
No. of wires	2	3	3	3	3
Load max.	$R_L \leq (UB-8)/0.02 \Omega$	$R_L \geq 5 \text{ k}\Omega$	$R_L \geq 10 \text{ k}\Omega$	$R_L \geq 4.5 \text{ k}\Omega$	$R_L \geq 5 \text{ k}\Omega$
Supply: UB	8... 30 V _{DC}	8... 30 V _{DC}	14... 30 V _{DC}	5 ±10%	8... 30 V _{DC}
Absorbed current (mA) max.	<25	<10	<10	<10	<10

All output signals are provided of protection against short circuit and polarity inversion. Insulation tension 500 V_{DC}