

# **Pressure Sensor with Ceramic Sensor Element**



measuring monitoring analysing

# **SEN-87** Option: pluggable sandwich display model AUF Gauge pressure Internal diaphragm Measuring range: -1...0 to 0...600 bar Temperature (medium): max. 85°C Accuracy class: 0.5 or 1.0 Material: stainless steel and ceramic Connection: G ¼ male

KOBOLD companies worldwide:

ALGERIA, ARGENTINA, AUSTRALIA, AUSTRIA, BELGIUM, BULGARIA, CANADA, CHILE, CHINA, COLUMBIA, CZECHIA, DOMINICAN REPUBLIC, EGYPT, FRANCE, GERMANY, GREAT BRITAIN, HUNGARY, INDIA, INDONESIA, ITALY, MALAYSIA, MEXICO, MOROCCO, NETHERLANDS, PERU, PHILIPPINNES, POLAND, ROMANIA, SINGAPORE, SLOVAKIA, SOUTH KOREA, SPAIN, SWITZER-LAND, TAIWAN, THAILAND, TUNISIA, USA, VENEZUELA, VIETNAM

KOBOLD Messring GmbH Nordring 22-24 D-65719 Hofheim/Ts. Head Office:

+49(0)6192 299-0 Sales DE: +49(0)6192 299-500

+49(0)6192 299-23398 info.de@kobold.com www.kobold.com



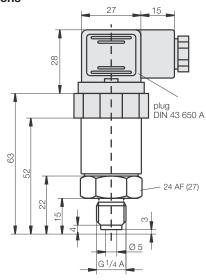
#### **Description**

KOBOLD Pressure sensors model SEN-86 are inexpensive pressure sensors with thick film ceramic pressure element. With their accuracy, reliability and compact design, they are perfectly suitable for OEM applications in medium to high quantities.

The materials and technology used make these pressure sensors insensitve to chemically aggressive media and mechanical load.

Particularly hydraulics systems with their high and fast pressure peaks are thus preferred applications.

#### **Dimensions**



## **Applications**

- Plant engineering
- Environmental engineering
- Machine building
- Cooling circuit

#### **Technical Details**

Technology: internal diaphragm
Pressure type: gauge pressure
Housing: stainless steel 1.4305

Connection: G 1/4 male stainless steel 1.4301

(NPT, UNF on request)

Sensor element: ceramic (Al<sub>2</sub>O<sub>3</sub>)

Measuring principle: thick film techn. (DMS)

O-Ring: NBR

Max. Temperature: storage: -40...+100°C

medium: -20...+85°C ambient: -40...+85°C to 60 bar: 2 x full scale

Pressure limitation: to 60 bar: 2 x full scale

ab 60 bar: 1.5 x full scale

Accuracy class: SEN-87\*0: 0.5 SEN-87\*1: 1.0

Repeatability: SEN-87\*0:  $\leq \pm 0.15\%$  of f.s. SEN-87\*1:  $\leq \pm 0.3\%$  of f.s.

Characteristic deviation: SEN-87\*0:  $\leq \pm 0.3\%$  of f.s.

SEN-87\*1:  $\leq \pm 0.6\%$  of f.s.

Stability (annual):  $\leq \pm 0.2\%$  of full scale

in rated conditions

Electrical connection: plug DIN 43 650 A/plug M12x1

cable connection

Power supply: 15...32 V<sub>DC</sub>

Output signal: 4-20 mA (2-wire), 0-5 V<sub>DC</sub>, 0-10 V<sub>DC</sub>

 $\leq (U_B-15V)/0,02 \text{ A (für 4-20 mA)}$  $\leq 1 \text{ ms (within 10-90\% of full scale)}$ 

Response time: ≤1 ms (within Temp. comp. range: -25...+85°C
Temperature drift: zero point:

Load  $(\Omega)$ :

SEN-87\*0:  $\leq \pm 0.02\%$  f.s./K SEN-87\*1:  $\leq \pm 0.04\%$  f.s./K

span:

SEN-87\*0:  $\leq \pm 0.01\%$  f.s./K SEN-87\*1:  $\leq \pm 0.02\%$  f.s./K

Protection: IP 65 (SEN-870..; SEN-873..)

IP 68 (SEN-875..)

### Order Details Sensor (Example: SEN-8700 C315)

Electrical connection	Class	Model	Output	Measuring range
DIN plug; IP 65	0.5	SEN-8700		C315 = -1 to 0 bar B025 = 0 to 1 bar B035 = 0 to 1,6 bar B035 = 0 to 1,6 bar
M12 plug; IP 65	0.5	SEN-8730		<b>B045</b> = 0 to 2,5 bar <b>B055</b> = 0 to 4 bar <b>P045</b> = 0 to 30 psig <b>P055</b> = 0 to 50 psig <b>P065</b> = 0 to 100 psig
Cable connection; IP 68	0.5	SEN-8750	without = 4 - 20 mA /1 = 0 - 5 V	B065 = 0 to 6 bar B075 = 0 to 10 bar B085 = 0 to 16 bar P075 = 0 to 150 psi g P085 = 0 to 200 psi g P095 = 0 to 350 psi g
DIN plug; IP 65	1.0	SEN-8701	/2 = 0 - 10 V	A105 = 0 to 25 bar A105 = 0 to 40 bar A115 = 0 to 60 bar P105 = 0 to 600 psi g P115 = 0 to 1000 psi g
M12 plug; IP 65	1.0	SEN-8731		A125 = 0 to 100 bar A135 = 0 to 160 bar A135 = 0 to 160 bar P145 = 0 to 2300 psi g P145 = 0 to 3600 psi g
Cable connection; IP 68	1.0	SEN-8751		A145 = 0 to 250 bar A155 = 0 to 400 bar A165 = 0 to 600 bar YYYY = special measuring range