



## Electronic Pressure Transmitter HDA 4800

### Description:

The pressure transmitter series HDA 4800 has a very accurate and robust sensor cell with a thin-film strain gauge on a stainless steel membrane.

Outstanding technical specifications and robust construction make the HDA 4800 particularly suited to the field of test rig and diagnostic technology. It is also suitable for a broad range of industrial applications.

Since the accuracy of a pressure transmitter varies greatly with the temperature of the fluid, the instrument has excellent characteristics in this respect. The output signals 4 .. 20 mA, and 0 .. 10V are available as standard.

### Special features:

- Accuracy  $\leq \pm 0.125\%$  FS B.F.S.L.
- Highly robust sensor cell
- Very small temperature error
- Excellent EMC characteristics
- Excellent long term stability

### Technical data:

Input data	
Measuring ranges	150, 500, 750, 1000, 1500, 3000, 5000, 6000, 9000 psi
Overload pressures	290, 1160, 1740, 2900, 2900, 7250, 11600, 11600, 14500 psi
Burst pressures	1450, 2900, 4350, 7250, 7250, 14500, 29000, 29000, 29000 psi
Mechanical connection	9/16-18 UNF 2A (SAE 6 male)
Torque value	15lb-ft (20 Nm)
Parts in contact with medium	Mech. connection: Stainless steel Seal: FPM
Output data	
Output signal, permitted load resistance	4 .. 20 mA, 2 conductor $R_{L,max.} = (U_B - 10 V) / 20 \text{ mA} [\text{k}\Omega]$ 0 .. 10 V, 3 conductor $R = 2 \text{ k}\Omega$
Accuracy to DIN 16086, Max. setting	$\leq \pm 0.125\%$ FS typ. $\leq \pm 0.25\%$ FS max.
Accuracy at min. setting (B.F.S.L.)	$\leq \pm 0.06\%$ FS typ. $\leq \pm 0.125\%$ FS max.
Temperature compensation	$\leq \pm 0.003$ FS/°F typ.
Zero point	$\leq \pm 0.006$ FS/°F max.
Temperature compensation Over range	$\leq \pm 0.003$ FS/°F typ. $\leq \pm 0.006$ FS/°F max.
Non-linearity at max. setting to DIN 16086	$\leq \pm 0.15\%$ FS max.
Hysteresis	$\leq \pm 0.1\%$ FS max.
Repeatability	$\leq \pm 0.05\%$ FS
Rise time	$\leq 1$ ms
Long-term drift	$\leq \pm 0.1\%$ FS typ. / year
Environmental conditions	
Compensated temperature range	-13..+185°F
Operating temperature range <sup>1)</sup>	-40..+185°F/-13..+185°F
Storage temperature range	-40..+212°F
Fluid temperature range <sup>1)</sup>	-40..+212°F/-13..+212°F
CE mark	EN 61000-6-1 / 2 / 3 / 4
UL mark <sup>2)</sup>	Certificate No. E318391
Vibration resistance to DIN EN 60068-2-6 at 10 .. 500 Hz	$\leq 20$ g
Protection class to IEC 60529	IP 65 (for male EN175301-803 (DIN 43650) IP 67 (M12x1, when an IP 67 connector is used)
Other data	
Supply voltage	10 .. 30 V DC 2-conductor 12 .. 30 V DC 3 conductor
for use acc. to UL spec.	- limited energy - according to 9.3 UL 61010; Class 2; UL 1310/1585; LPS UL 60950
Residual ripple of supply voltage	$\leq 5\%$
Current consumption	$\leq 15$ mA
Life expectancy	> 10 million cycles 0 .. 100 % FS
Weight	$\sim 145$ g

Note: Reverse polarity protection of the supply voltage, excess voltage, override and short circuit protection are provided.

FS (Full Scale) = relative to complete measuring range

B.F.S.L. = Best Fit Straight Line

<sup>1)</sup> 13 °F with FPM seal, -40 °F on request

<sup>2)</sup> Environmental conditions according to 1.4.2 UL 61010-1; C22.2 No 61010-1

## Model code:

HDA 4 8 7 X - X - XXXX - 000 (PSI)

### Mechanical connection

7 = 9/16-18 UNF2A (SAE 6 male)

### Electrical connection

5 = Male, 3 pole+ PE, EN175301-803 (DIN 43650) (connector supplied)

6 = Male M12x1, 4 pole (connector not supplied)

### Signal

A = 4 .. 20 mA, 2 conductor

B = 0 .. 10 V, 3 conductor

### Pressure ranges in psi

0150, 0500, 0750, 1000, 1500, 3000, 5000, 6000, 9000

### Modification number

000 = Standard

### Version

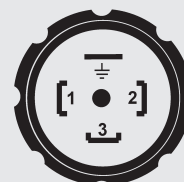
PSI = Pounds per square inch

### Accessories:

Appropriate accessories, such as electrical connectors, can be found in the Accessories catalog.

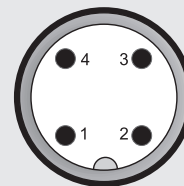
## Pin connections:

EN175301-803 (DIN 43650)



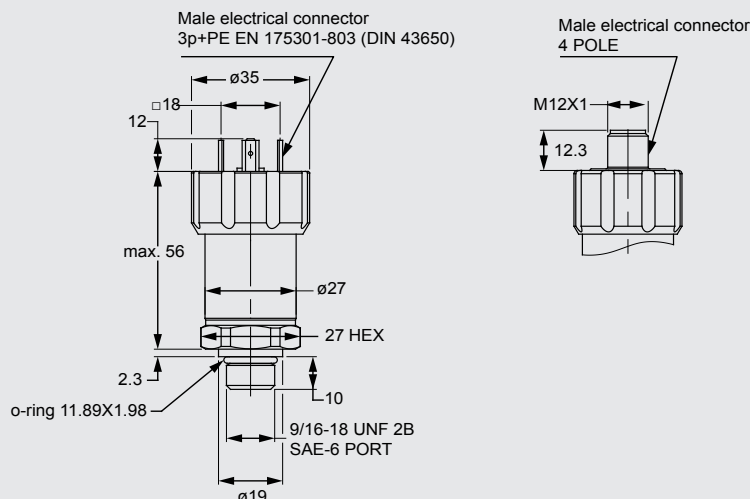
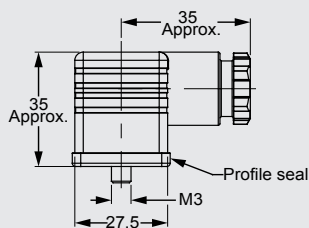
Pin	HDA 4875-A	HDA 4875-B
1	Signal+	+U <sub>B</sub>
2	Signal-	0 V
3	n.c.	Signal
⊥	Housing	Housing

M12x1



Pin	HDA 4876-A	HDA 4876-B
1	Signal+	+U <sub>B</sub>
2	n.c.	n.c.
3	Signal-	0 V
4	n.c.	Signal

## Dimensions:



## Note:

The information in this brochure relates to the operating conditions and applications described.

For applications and operating conditions not described, please contact the relevant technical department. Subject to technical modifications.

For European mechanical connection and bar ranges see European Catalog

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