



## 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, 0 .. 10V and 0 .. 20 mA (source) are available as standard.

### Special features:

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

### Technical data:

Input data	
Measuring ranges	6; 16; 60; 100; 250; 400; 600 bar
Overload pressures	15; 32; 120; 200; 500; 800; 1000 bar
Burst pressures	100; 200; 300; 500; 1000; 2000; 2000 bar
Mechanical connection	G1/4 A DIN 3852
Torque value	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 $R_{L,min} = 2 \text{ k}\Omega$ 0 .. 20 mA, 3 conductor source $R_{L,max} = (U_B - 4 V) / 20 \text{ mA} [\text{k}\Omega]$
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	$\leq \pm 0.005\%$ FS / °C typ.
Zero point	$\leq \pm 0.01\%$ FS / °C max.
Temperature compensation Over range	$\leq \pm 0.005\%$ FS / °C typ. $\leq \pm 0.01\%$ FS / °C 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	$\leq 1 \text{ ms}$
Long-term drift	$\leq \pm 0.1\%$ FS typ. / year
Environmental conditions	
Compensated temperature range	-25 .. +85 °C
Operating temperature range <sup>1)</sup>	-40 .. +85 °C / -25 .. +85 °C
Storage temperature range	-40 .. +100 °C
Fluid temperature range <sup>1)</sup>	-40 .. +100 °C / -25 .. +100 °C
CE mark	EN 61000-6-1 / 2 / 3 / 4
cULus mark <sup>2)</sup>	Certificate No. E318391
Vibration resistance to DIN EN 60068-2-6 at 10 .. 500 Hz	$\leq 20 \text{ g}$
Protection class to IEC 60529	IP 65 (for male EN175301-803 (DIN 43650) and Binder 714 M18) 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	$\leq 15 \text{ mA}$
Life expectancy	> 10 million cycles 0 .. 100 % FS
Weight	~ 180 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> -25 °C with FPM seal, -40 °C 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 4 X - X - XXX - 000

### Mechanical connection

4 = G1/4 A DIN 3852 (male)

### Electrical connection

4 = Male, 4 pole Binder series 714 M18  
(connector not supplied)

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

E = 0 .. 20 mA, 3 conductor

### Pressure ranges in bar

006, 016; 060; 100; 250; 400; 600

### Modification number

000 = Standard

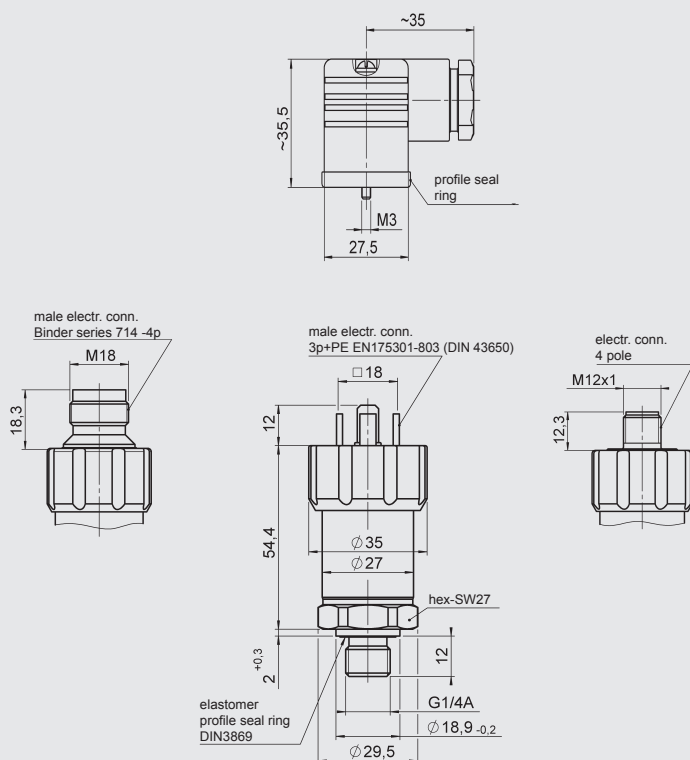
### Note:

On instruments with a different modification number, please read the label or the technical amendment details supplied with the instrument.

### Accessories:

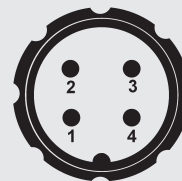
Appropriate accessories, such as electrical connectors, can be found in the Accessories brochure.

## Dimensions:



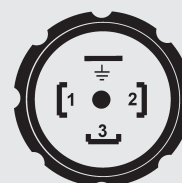
## Pin connections:

Binder series 714 M18



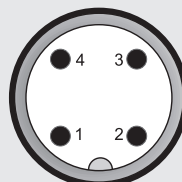
Pin	HDA 4844-A	HDA 4844-B	HDA 4844-E
1	n.c.	+U <sub>B</sub>	+U <sub>B</sub>
2	Signal+	Signal	Signal
3	Signal-	0 V	0 V
4	n.c.	n.c.	n.c.

EN175301-803 (DIN 43650)



Pin	HDA 4845-A	HDA 4845-B	HDA 4845-E
1	Signal+	+U <sub>B</sub>	+U <sub>B</sub>
2	Signal-	0 V	0 V
3	n.c.	Signal	Signal
⊥	Housing	Housing	Housing

M12x1



Pin	HDA 4846-A	HDA 4846-B	HDA 4846-E
1	Signal+	+U <sub>B</sub>	+U <sub>B</sub>
2	n.c.	n.c.	n.c.
3	Signal-	0 V	0 V
4	n.c.	Signal	Signal

### 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.

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