



## Electronic Pressure Transmitter HDA 7446

### Description:

The pressure transmitter series HDA 7400 combines excellent technical specifications with a highly compact design.

The HDA 7446 was specifically developed for OEM applications e.g. in mobile applications. A strain gauge sensor cell is the basis for a robust, long-life pressure transmitter.

Various pressure ranges between 0 .. 40 bar and 0 .. 600 bar provide versatility when adapting to particular applications.

For integration into modern controls (e.g. with PLC), the analogue output signals 4 .. 20 mA or 0 .. 10V are also available on the standard version.

Other output signals are available on request.

### Special features:

- Accuracy  $\leq \pm 0.5\%$  FS typ.
- Highly robust sensor cell
- Very compact design
- Very small temperature error
- Excellent EMC characteristics
- Excellent durability

### Technical data:

Input data	
Measuring ranges	40; 60; 100; 250; 400; 600 bar
Overload pressures	80; 120; 200; 500; 800; 1000 bar
Burst pressures	200; 300; 500; 1000; 2000; 2000 bar
Mechanical connection	G1/4 A DIN 3852
Torque value	20 Nm
Parts in contact with medium	Mech. conn.: Stainless steel Seal: FPM
Output data	
Output signal, permitted load resistance	4 .. 20 mA, 2 conductor $R_{Lmax.} = (U_B - 8 V) / 20 \text{ mA}$ [k $\Omega$ ] 0 .. 10 V, 3 conductor $R_{Lmin.} = 2 \text{ k}\Omega$
Accuracy to DIN 16086	$\leq \pm 0.5\%$ FS typ.
Max. setting	$\leq \pm 1\%$ FS max.
Accuracy at min. setting (B.F.S.L.)	$\leq \pm 0.25\%$ FS typ. $\leq \pm 0.5\%$ FS max.
Temperature compensation	$\leq \pm 0.015\%$ FS / °C typ.
Zero point	$\leq \pm 0.025\%$ FS / °C max.
Temperature compensation	$\leq \pm 0.015\%$ FS / °C typ.
Over range	$\leq \pm 0.025\%$ FS / °C max.
Non-linearity at max. setting to DIN 16086	$\leq \pm 0.3\%$ FS max.
Hysteresis	$\leq \pm 0.4\%$ FS max.
Repeatability	$\leq \pm 0.1\%$ FS
Rise time	$\leq 2 \text{ ms}$
Long-term drift	$\leq \pm 0.3\%$ 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
eURus-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 67 (for M12x1, when an IP 67 connector is used)
Other data	
Supply voltage	8 .. 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	$\leq 25 \text{ mA}$
Life expectancy	> 10 million cycles 0 .. 100 % FS
Weight	~ 60 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 7 4 4 6 - X - XXX - 000

### Mechanical connection

4 = G1/4 A DIN 3852 (male)

### Electrical connection

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

### Signal

A = 4 .. 20 mA, 2 conductor

B = 0 .. 10 V, 3 conductor

### Pressure ranges in bar

040; 060; 100; 250; 400; 600

### Modification number

000 = Standard

### Note:

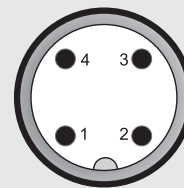
On instruments with a different modification number, please read the label or the technical amendment details supplied with the instrument.

### Accessories:

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

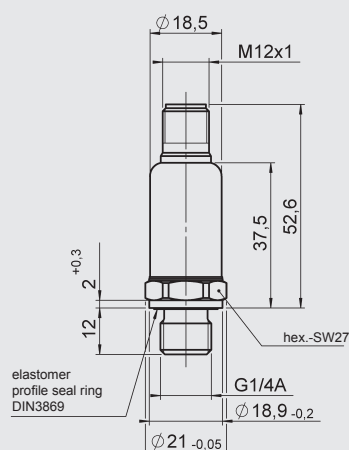
## Pin connections:

M12x1



Pin	HDA 7446-A	HDA 7446-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 or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

**HYDAC ELECTRONIC GMBH**  
Hauptstraße 27, D-66128 Saarbrücken  
Telephone +49 (0)6897 509-01  
Fax +49 (0)6897 509-1726  
E-mail: [electronic@hydac.com](mailto:electronic@hydac.com)  
Internet: [www.hydac.com](http://www.hydac.com)