



Pressure Transmitter HDA 4400

Description:

The pressure transmitter series HDA 4400 has a pressure measurement cell with strain gauge on a stainless steel membrane. The output signals 4 .. 20 mA or 0 .. 10 V enable connection to all measurement and control units from HYDAC ELECTRONIC GmbH, and can be linked to commercially available evaluation systems (e.g.: PLC controls). The main areas of application are in the mobile or industrial sectors of hydraulics and pneumatics, particularly in applications with restricted installation dimensions.

Special features:

- Accuracy $\leq \pm 0.5\%$ FS typ.
- Very robust sensor cell
- Small temperature error
- Excellent EMC characteristics
- Small, compact design
- Competitive price / performance ratio

Technical Specifications:

Input data	HDA 4400
Measuring ranges	16; 60; 100; 250; 400; 600 bar
Overload pressure	150 % FS
Burst pressure	300 % FS
Mechanical connection	G1/4 A DIN 3852
Torque rating	20 Nm
Parts in contact with media	Stainless steel, seal: FPM
Output data	
Curve deviation at max. setting to DIN16086 (accuracy class)	$\leq \pm 0.5\%$ FS typ. $\leq \pm 1\%$ FS max.
Curve deviation at min. setting (B.F.S.L.)	$\leq \pm 0.25\%$ FS typ. $\leq \pm 0.5\%$ FS max.
Temperature compensation zero point	$\leq \pm 0.15\%$ FS/10K typ. $\leq \pm 0.25\%$ FS/10K max.
Temperature compensation over range	$\leq \pm 0.15\%$ FS/10K typ. $\leq \pm 0.25\%$ FS/10K max.
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	approx. 2 ms
Long-term drift	$\leq \pm 0.3\%$ FS typ. / year
Ambient conditions	
Nominal temperature range	0 .. +70 °C
Operating temperature range	-25 .. +85 °C
Storage temperature range	-40 .. +100 °C
Fluid temperature range	-40 .. +100 °C
CE-mark	EN 50081-1 and EN 50081-2 EN 50082-1 and EN 50082-2
Vibration resistance to IEC 68-2-6 at 10 .. 500Hz	≤ 20 g (196.2 m/s ²)
Protection class to DIN 40050	IP 65
Other data	
Supply voltage 2-conductor	10 .. 30 V
Supply voltage 3-conductor	12 .. 30 V
Residual ripple supply voltage	$\leq 5\%$
Current consumption 3-conductor	approx. 25 mA
Reverse polarity protection of the supply voltage, excess voltage, override and short circuit protection	available
Life expectancy	>10 million load cycles 0 .. 100 %FS
Weight	approx. 145 g

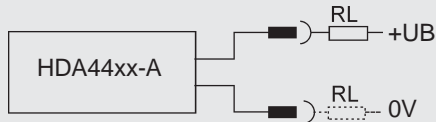
Note: **FS (Full Scale)** = relative to the full measuring range

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

Special models on request

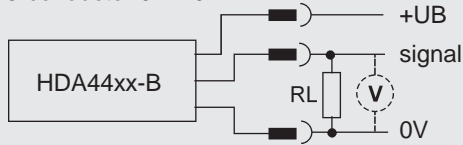
Electrical connection:

2-conductor 4 .. 20 mA



$$R_{Lmax.} = \frac{U_B - 10 \text{ V}}{0.02 \text{ A}} \quad [\Omega]$$

3-conductor 0 .. 10 V



$$R_{Lmin.} = 2 \text{ k}\Omega$$

Note

The load resistance RL is produced by the measuring resistance inside the evaluation unit and the line resistance of the connection line.

Pin connections: (HDA 4400)

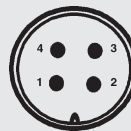
HDA 4444



HDA 4445



HDA 4446

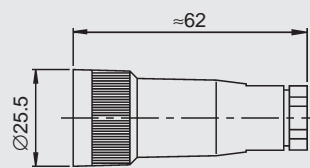
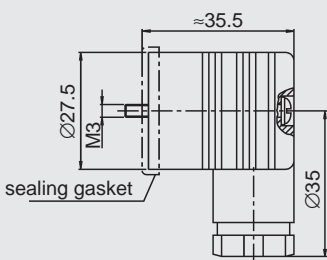


	Pin 1	Pin 2	Pin 3	Pin 4
HDA 4444-A	free	+UB	0V	free
HDA 4444-B	+UB	signal	0V	free
HDA 4445-A	+UB	0V	free	⏏
HDA 4445-B	+UB	0V	signal	⏏
HDA 4446-A	+UB	free	0V	free
HDA 4446-B	+UB	free	0V	signal

Electrical accessories:

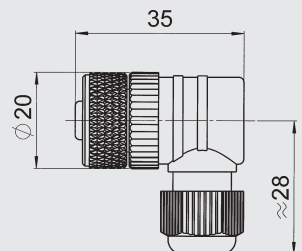
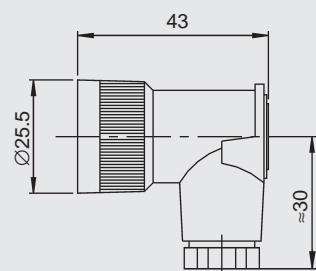
ZBE 01 right-angled connector,
3-pole+earth
DIN 43650/ISO 4400

ZBE 02 Binder connector,
4-pole Binder series
714M18



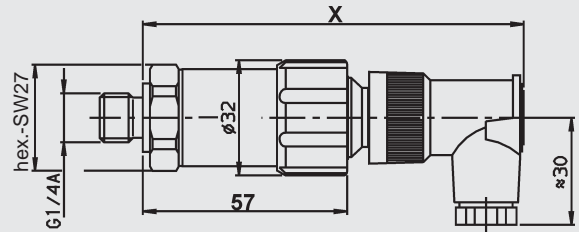
ZBE 03 right-angled connector,
4-pole Binder series 714M18

ZBE 06 right-angled connector,
4-pole, M12 x 1



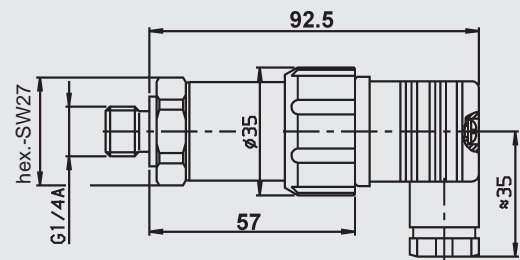
Dimensions

HDA 4444, shown with ZBE 03

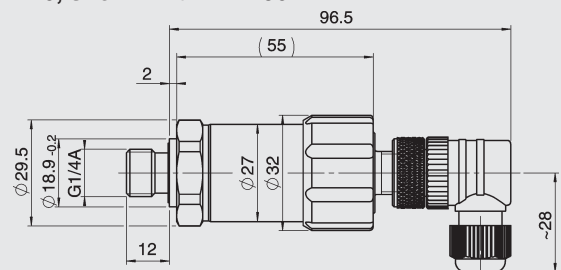


Dimension X with right-angled connector ZBE 03: 108 mm
Dimension X with Binder connector ZBE 02: ≈ 127 mm

HDA 4445, shown with ZBE 01



HDA 4446, shown with ZBE 06



Model code:

HDA 4 4 4 X - X - XXX - 000

Type of connection, mechanical

4 = G1/4 male thread

Type of connection, electrical

4 = 4-pole Binder 714 M18 (without connector)
*connector ZBE 02 or ZBE 03
must be ordered separately*

5 = 3-pole+earth, DIN 43650/ ISO 4400
connector ZBE 01 is included

6 = M12 x 1, 4-pole (without connector)
ZBE 06 connector must be ordered separately

Signal technology

A = 2-conductor, 4 .. 20 mA

B = 3-conductor, 0 .. 10 V

Pressure ranges in bar

016; 060; 100; 250; 400; 600

Modification number

000 standard

104 for use on the HMG 1000 and HMG 2020

Important: The standard version is not suitable for measuring in conjunction with the Portable Data Recorder HMG 1000 and HMG 2020; for these we are supplying the modification 104. On units with a different modification number, please read the label or technical amendment details supplied with the unit.

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.



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