



## Pressure Transmitter HDA 4700

### Description:

The pressure transmitter series HDA 4700 has a very accurate and robust sensor cell with a thin-film strain gauge on a stainless steel membrane. Its excellent technical specifications and small, compact design make this series of units suitable for a wide range of applications in the mobile and industrial sectors. Since the accuracy of a pressure transmitter fluctuates greatly with the temperature of the measurement fluid, the unit offers outstanding features in precisely this area. The output signals 4 .. 20 mA or 0 .. 10 V are available as standard.

### Special features:

- Accuracy  $\leq \pm 0.25\%$ FS typ.
- Very robust sensor cell
- Very small temperature error
- Excellent EMC characteristics
- Good long-term stability
- Small, compact design

### Technical specifications:

Input data	HDA 4700
Measuring ranges	6; 16; 60; 100; 250; 400; 600 bar
Overload pressures	15; 32; 200; 200; 400; 800; 900 bar
Burst pressures	100; 200; 500; 500; 1000; 2000; 2000 bar
Mechanical connection	G1/4 A DIN 3852
Torque rating	20 Nm
Parts in contact with media	stainless steel, FPM seal
Output data	
Curve deviation at max. setting to DIN16086 (accuracy class)	$\leq \pm 0.25\%$ FS typ. $\leq \pm 0.5\%$ FS max.
Curve deviation at min. setting (B.F.S.L.)	$\leq \pm 0.15\%$ FS typ. $\leq \pm 0.25\%$ FS max.
Temperature compensation zero point	$\leq \pm 0.08\%$ FS/10K typ. $\leq \pm 0.15\%$ FS/10K max.
Temperature compensation over range	$\leq \pm 0.08\%$ FS/10K typ. $\leq \pm 0.15\%$ FS/10K max.
Linearity at max. setting to DIN 16086	$\leq \pm 0.3\%$ FS max.
Hysteresis	$\leq \pm 0.1\%$ FS max.
Repeatability	$\leq \pm 0.05\%$ FS
Rise time	approx. 2 ms
Long-term drift	$\leq \pm 0.1\%$ FS typ. / year
Ambient conditions	
Nominal temperature range	-25 .. +85 °C
Operating temperature range	-40 .. +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	$\leq 20$ g (196.2 m/s <sup>2</sup> )
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 cycles 0 .. 100 %FS
Weight	approx. 145 g

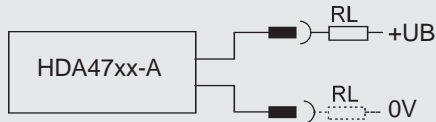
Note.: **FS** (Full Scale) = relative to the full measuring range

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

Special models on request

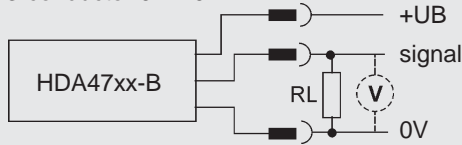
## Electrical connection:

2-conductor 4 .. 20 mA



$$RL_{max.} = \frac{UB - 10 V}{0.02 A} \quad [\Omega]$$

3-conductor 0 .. 10 V



$RL_{min.} = 2K\Omega$

### 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 4700)

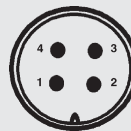
HDA 4744



HDA 4745



HDA 4746

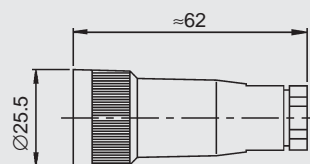
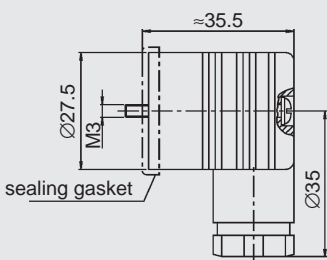


	Pin 1	Pin 2	Pin 3	Pin 4
HDA 4744-A	free	+UB	0V	free
HDA 4744-B	+UB	signal	0V	free
HDA 4745-A	+UB	0V	free	⏏
HDA 4745-B	+UB	0V	signal	⏏
HDA 4746-A	+UB	free	0V	free
HDA 4746-B	+UB	free	0V	signal

## Electrical accessories:

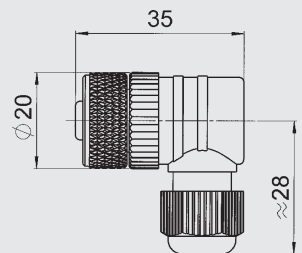
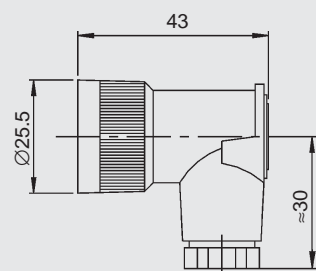
ZBE 01 right-angled connector,  
3-pole+earth  
DIN 43650/ISO 4400

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



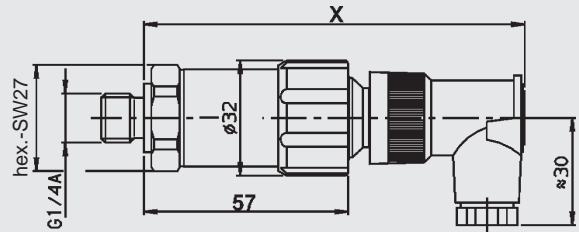
ZBE 03 right-angled connector,  
4-pole Binder series 714M18

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



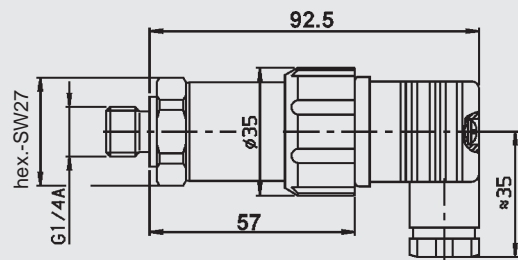
## Dimensions

HDA 4744, shown with ZBE 03

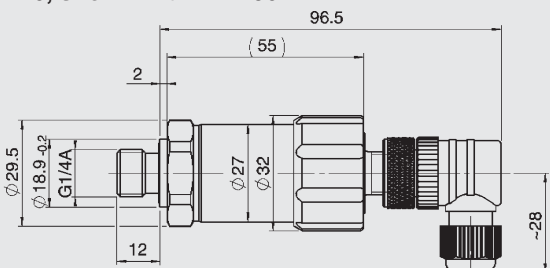


Dimension X with right-angled connector ZBE 03: 108 mm  
Dimension X with Binder connector ZBE 02: ≈127 mm

HDA 4745, shown with ZBE 01



HDA 4746, shown with ZBE 06



## Model code:

**HDA 4 7 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

### CPressure 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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