



## Electronic Pressure Transmitter HDA 4300

### Description:

The pressure transmitter series HDA 4300 has a ceramic pressure measurement cell (with a thick-film strain gauge) which has been specially developed for use at low pressures.

The output signals 4 .. 20 mA or 0 .. 10 V allow for all HYDAC ELECTRONIC measurement and control devices as well as other standard control and monitoring instruments to be connected.

The main areas of application are low pressure applications in hydraulics and pneumatics, particularly in refrigeration and air conditioning technology, the food and pharmaceutical industries.

### Special features:

- Accuracy  $\leq \pm 0.5$  % FS typ.
- Very small temperature error
- Excellent EMC characteristics
- Very compact design
- Persuasive price / performance ratio

### Technical specifications:

Input data	
Measuring ranges	1; 2.5; 4; 6; 10; 16; 25; 40 bar -1 .. 5; -1 .. 9 bar
Overload pressures	3; 8; 12; 20; 32; 50; 80; 120 bar 20; 32 bar
Burst pressure	5; 12; 18; 30; 48; 75; 120; 180 bar 30; 48 bar
Mechanical connection	G1/4 A DIN 3852; G1/2 B DIN-EN 837
Torque value	20 Nm (G1/4); 45 Nm (G1/2)
Parts in contact with medium	Mech. connection: Stainless steel Sensor cell: Ceramic Seal: copper (G1/2) / FPM / EPDM (as per model code)
Output data	
Output signal, permitted resistance	4 .. 20 mA, 2 conductor $R_{Lmax.} = (U_B - 10 \text{ V}) / 20 \text{ mA}$ [k $\Omega$ ] 0 .. 10 V, 3 conductor $R_{Lmin.} = 2 \text{ k}\Omega$
Accuracy to DIN 16086, Max. setting	$\leq \pm 0.5$ % FS typ. $\leq \pm 1$ % FS max.
Accuracy at min. setting (B.F.S.L.)	$\leq \pm 0.25$ % FS typ. $\leq \pm 0.5$ % FS max.
Temperature compensation	$\leq \pm 0.02$ % FS / °C typ.
Zero point	$\leq \pm 0.03$ % FS / °C max.
Temperature compensation Over range	$\leq \pm 0.02$ % FS / °C typ. $\leq \pm 0.03$ % FS / °C max.
Non-linearity at max. setting to DIN 16086	$\leq \pm 0.5$ % FS max.
Hysteresis	$\leq \pm 0.25$ % FS max.
Repeatability	$\leq \pm 0.1$ % FS
Rise time	$\leq 1$ ms
Long-term drift	$\leq \pm 0.3$ % FS typ. / year
Ambient conditions	
Compensated temperature range	0 .. +80 °C
Operating temperature range	-25 .. +85 °C
Storage temperature range	-40 .. +100 °C
Fluid temperature range	-40 .. +100 °C
CE mark	EN 61000-6-1 / 2 / 3 / 4
Vibration resistance to DIN EN 60068-2-6 at 10 .. 500 Hz	$\leq 20$ g
Protection class to DIN 40050	IP 65 (DIN 43650 and Binder 714 M18) IP 67 (M12x1, when an IP 67 connector is used)
Other data	
Supply voltage 2 conductor	10 .. 30 V DC
Supply voltage 3 conductor	12 .. 30 V DC
Residual ripple of supply voltage	$\leq 5$ %
Current consumption 3 conductor	approx. 25 mA
Life expectancy	> 10 million cycles, 0 .. 100 % FS
Weight	approx. 150 g

Note: Reverse polarity protection of the supply voltage, excess voltage, override, short circuit protection are provided. **FS** (Full Scale) = relative to the complete measuring range  
**B.F.S.L.** = Best Fit Straight Line

## Model code:

HDA 4 3 X X - X - XXXX - 000 - X 1

### Mechanical connection

- 1 = G1/2 B DIN-EN 837 (male)
- 4 = G1/4 A DIN 3852 (male)

### Electrical connection

- 4 = 4 pole Binder series 714 M18 (connector not supplied)
- 5 = 3 pole + PE, DIN 43650 (connector supplied)
- 6 = M12x1, 4 pole (connector not supplied)

### Signal

- A = 4 .. 20 mA, 2 conductor
- B = 0 .. 10 V, 3 conductor

### Pressure ranges in bar

01.0; 02.5; 04.0; 06.0; 0010; 0016; 0025; 0040  
0005 (-1 .. 5); 0009 (-1 .. 9)

### Modification number

000 = Standard

### Seal material (in contact with fluid)

- F = FPM seal (e.g.: for hydraulic oils)
- E = EPDM seal (e.g.: for refrigerants)

### Material of connection (in contact with fluid)

- 1 = stainless steel

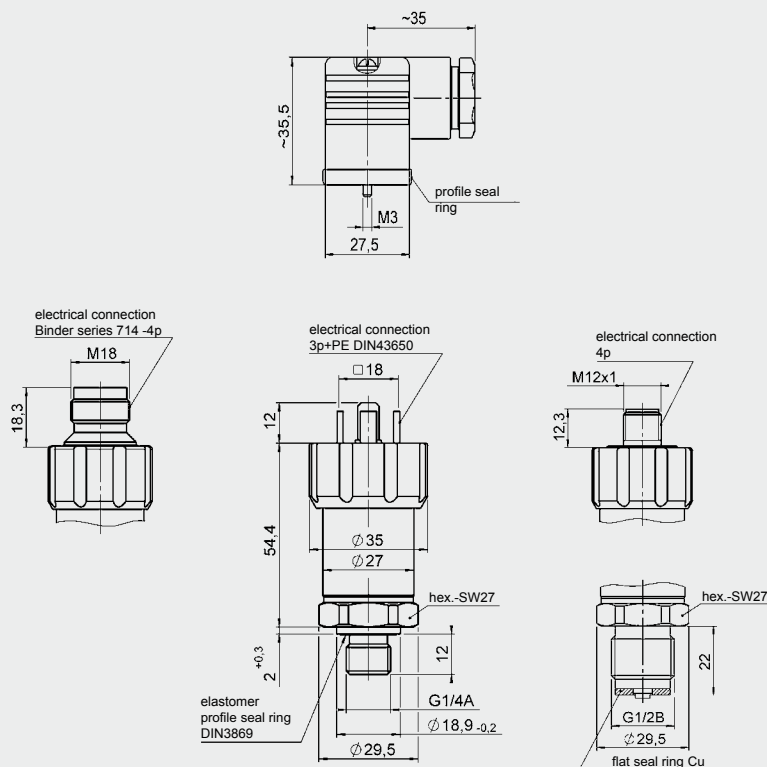
### Note:

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

### Accessories:

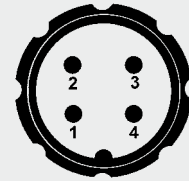
Appropriate accessories, such as electrical connectors can be found in the Accessories section.

## Dimensions:



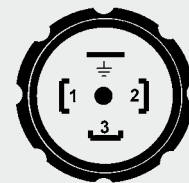
## Pin connections:

Binder series 714 M18



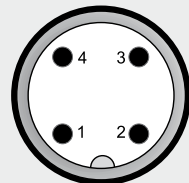
Pin	HDA 43X4-A	HDA 43X4-B
1	n.c.	+U <sub>B</sub>
2	Signal+	Signal
3	Signal-	0 V
4	n.c.	n.c.

DIN 43650



Pin	HDA 43X5-A	HDA 43X5-B
1	Signal+	+U <sub>B</sub>
2	Signal-	0 V
3	n.c.	Signal
⊥	PE	PE

M12x1



Pin	HDA 43X6-A	HDA 43X6-B
1	Signal+	+U <sub>B</sub>
2	n.c.	n.c.
3	Signal-	0 V
4	n.c.	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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