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 measuring relative pressure in the low pressure range.

The output signals 4 .. 20 mA or 0 .. 10 V allow connection of all HYDAC ELECTRONIC GMBH measurement and control devices as well as industry standard control and monitoring instruments.

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 ≤ ± 0.5 % FS typ.
- Very small temperature error
- Excellent EMC characteristics
- Very compact design
- Persuasive price / performance ratio

Technical data:

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 pressures	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 load resistance	4 .. 20 mA, 2 conductor $R_{Lmax.} = (U_B - 8\ V) / 20\ mA\ [k\Omega]$ 0 ..10 V, 3 conductor $R_{Lmin} = 2\ k\Omega$
Accuracy to DIN 16086 Max. setting	≤ ± 0.5 % FS typ. ≤ ± 1 % FS max.
Accuracy at min. setting (B.F.S.L.)	≤ ± 0.25 % FS typ. ≤ ± 0.5 % FS max.
Temperature compensation Zero point	≤ ± 0.02 % FS / °C typ. ≤ ± 0.03 % FS / °C max.
Temperature compensation Over range	≤ ± 0.02 % FS / °C typ. ≤ ± 0.03 % FS / °C max.
Non-linearity at max. setting to DIN 16086	≤ ± 0.5 % FS max.
Hysteresis	≤ ± 0.4 % FS max.
Repeatability	≤ ± 0.1 % FS
Rise time	≤ 1 ms
Long-term drift	≤ ± 0.3 % FS typ. / year
Environmental conditions	
Compensated temperature range	-25 .. +85 °C
Operating temperature range	-25 .. +85 °C
Storage temperature range	-40 .. +100 °C
Fluid temperature range[1)]	-40 .. +100 °C / -25 .. +100 °C
CE mark	EN 61000-6-1 / 2 / 3 / 4
cULus mark[2)]	Certificate No. E318391
Vibration resistance to DIN EN 60068-2-6 at 10 .. 500 Hz	≤ 20 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 for use acc. to UL spec.	8 .. 30 V DC 2 conductor 12 .. 30 V DC 3 conductor - limited energy - according to 9.3 UL 61010; Class 2; UL 1310/1585; LPS UL 60950
Residual ripple of supply voltage	≤ 5 %
Current consumption	≤ 25 mA
Life expectancy	> 10 million cycles, 0 .. 100 % FS
Weight	~ 150 g

Note: Reverse polarity protection of the supply voltage, excess voltage, override and short circuit protection are provided.
FS (**F**ull **S**cale) = relative to complete measuring range
B.F.S.L.= **B**est **F**it **S**traight **L**ine
[1)] -25 °C with FPM or EDPM seal, -40 °C on request
[2)] Environmental conditions according to 1.4.2 UL 61010-1; C22.2 No 61010-1

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 = Male, 4 pole Binder series 714 M18 (connector not supplied)
5 = Male, 3 pole + PE, DIN 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

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

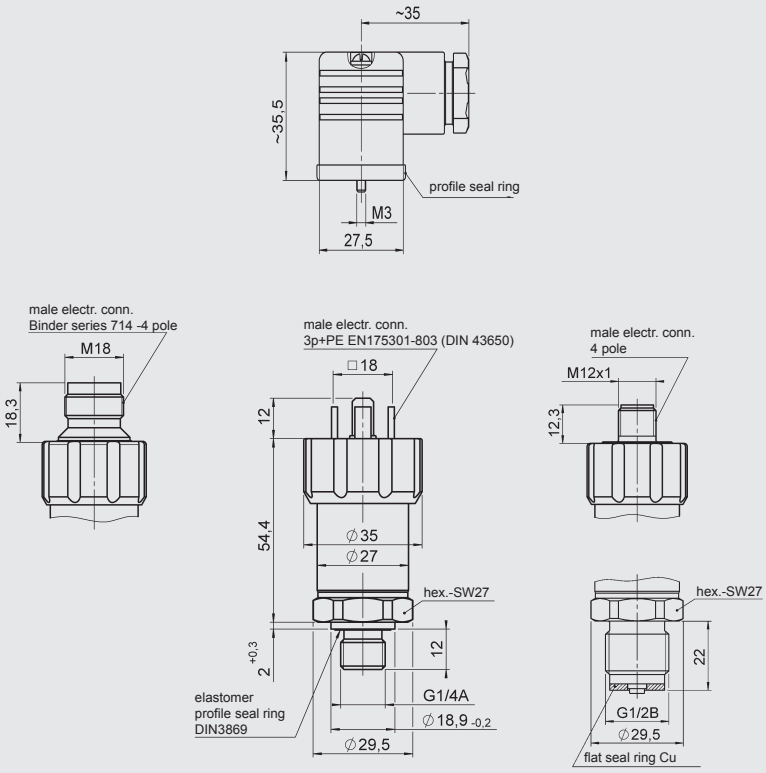
Seal material (in contact with fluid)
F = FPM seal (e.g.: for hydraulic oils)
E = EPDM seal (e.g.: for refrigerants)

Material of connection (in contact with fluid)
1 = Stainless steel

Note:
On 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:

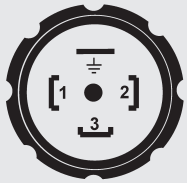


Pin connections:

Binder series 714 M18

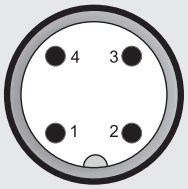
Pin	HDA 43X4-A	HDA 43X4-B
1	n.c.	$+U_B$
2	Signal+	Signal
3	Signal-	0 V
4	n.c.	n.c.

EN175301-803 (DIN 43650)



Pin	HDA 43X5-A	HDA 43X5-B
1	Signal+	$+U_B$
2	Signal-	0 V
3	n.c.	Signal
⊥	Housing	Housing

M12x1



Pin	HDA 43X6-A	HDA 43X6-B
1	Signal+	$+U_B$
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 or operating conditions not described, please contact the relevant technical department.
Subject to technical modifications.

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