HDA 4300 Series
Low Pressure Transducer

Applications

Description

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

The output signals 4 to 20 mA or 0 to 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 ≤ ±0.5% BFSL
- Very small temperature error
- Excellent EMC characteristics
- Very compact design
- Excellent price / performance ratio

Approvals

CE mark is a mandatory conformity mark on many products placed on the single market in the European Economic Area

Technical Details

Sensor Specifications	
Measuring ranges - psi	-14.5 to 135.5, 15, 50, 100, 150, 250, 500
Overload pressure - psi	450, 45, 150, 290, 450, 725, 1500
Burst pressure - psi	650, 70, 250, 400, 650, 1000, 2500
Mechanical connection	G1/4A DIN 3852 male *(bar ranges only)* 1/4"-18 NPT male *(psi ranges only)* other connections upon request
Tightening torque	G1/4: 15 lb-ft (20 Nm) 1/4" NPT: 30 lb-ft (40 Nm)
Parts in contact with media	Ceramic, FPM or EPDM seal, Stainless steel
Accuracy (B.F.S.L.) including linearity, hysteresis, and repeatability	≤ ±0.5% BFSL
Temperature compensation zero point	≤ ±0.012% / °F typ. ≤ ±0.017% / °F max.
Temperature compensation over range	≤ ±0.012% / °F typ. ≤ ±0.017% / °F max.
Rise time	≤ 1 ms
Long-term drift	≤ ±0.3% FS typ. / year
Life expectancy	10 million load cycles (0 to 100% FS)
Weight	Approximately 145 g
Output signal	4 to 20 mA, 2 wire, R_{Lmax} = (UB - 10V) / 20 mA [kΩ] 0 to 10 V, 3 wire, R_{Lmin} = 2 kΩ
Environmental Condition	
Compensated temperature range	32° to 176°F (0° to 80°C)
Operating temperature range	-13° to 185°F (-25° to 85°C)
Storage temperature range	-40° to 212°F (-40° to 100°C)
Media temperature range	-40° to 212°F (-40° to 100°C)
CE mark	EN 61000-6-1 / 2 / 3 / 4
Vibration resistance to DIN EN 60068-2-6 at 10 to 500 Hz	≤ 20g
Environmental protection	IP 65 *(DIN 43650 and M18x1 connectors)* IP 67 *(ZBE 06 molded cable)*
Electrical Specifications	
Supply voltage, 2-wire	10 to 30 VDC
Supply voltage, 3-wire	12 to 30 VDC
Residual ripple suppy voltage	≤ 5%
Max supply current, 3-wire	approximately 25 mA
Reverse polarity protection of the supply voltage, excess voltage, override and short circuit protection	Standard

Model Code

HDA 4 3 X X - X - XXXX - 000 X1 (PSI)

Mechanical Connection*
4 = G1/4A DIN 3852 male *(bar ranges only)*
8 = 1/4-18 NPT, male *(psi ranges only)*

Electrical Connection*
4 = 4 pole plug M18x1 *(connector not included)*
5 = DIN 43650/ISO 4400 plug, 3 pole + ground *(connector ZBE 01 included)*
6 = M12x1 plug, 4-pole *(connector not included)*

Output Signal*
A = 2 conductor, 4-20 mA
B = 3 conductor, 0-10 VDC

Pressure Range
for HDA 438X only *(1/4-18 NPT)*
0135 (-14.5 to 135.5 psi), 0015, 0030, 0050, 0100, 0150, 0250, 0500 psi

Modification Number
000 = Standard

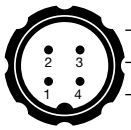
Seal material *(in contact with fluid)*
F1 = FPM-seal *(hydraulic oil)*
E1 = EPDM-seal *(water, coolant, ammonia)*

(psi)
psi version *(leave blank bar version)*

**Other options upon request*

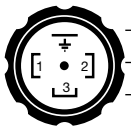
Pin Connections

Binder Series 714 M18



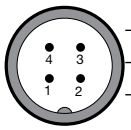
Pin	HDA 43x4-A	HDA 43x4-B
1	nc	$+U_B$
2	Signal +	Signal
3	Signal -	0 V
4	nc	nc

DIN 43650



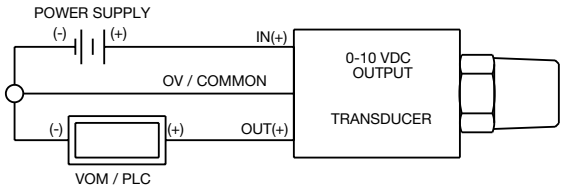
Pin	HDA 43x5-A	HDA 43x5-B
1	Signal +	$+U_B$
2	Signal -	0 V
3	nc	Signal
4	PE	PE

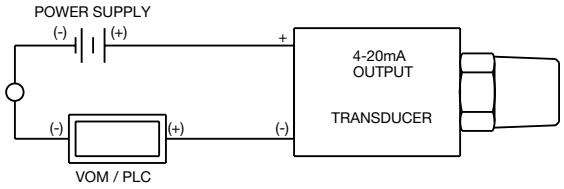
M12x1



Pin	HDA 43x6-A	HDA 43x6-B
1	Signal +	$+U_B$
2	nc	nc
3	Signal -	0 V
4	nc	Signal

Circuit Diagram





Dimensions