



Electronic Pressure Transmitter HDA 4100

Description:

The pressure transmitter series HDA 4100 has a ceramic pressure measurement cell (with a thick-film strain gauge) which has been specially developed for measuring absolute pressure in the low pressure range.

The output signals 4 .. 20 mA or 0 .. 10 V allow for all HYDAC ELECTRONIC measurement and control devices to be connected, 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 $\leq \pm 0.5\%$ 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 bar
Overload pressures	3; 8 bar
Burst pressure	5; 12 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 $R_{Lmax} = (U_B - 10 \text{ V}) / 20 \text{ mA} [\text{k}\Omega]$ 0 .. 10 V, 3 conductor $R_{Lmin} = 2 \text{ k}\Omega$
Accuracy to DIN 16086, Max. setting	$\leq \pm 0.5\%$ FS typ. $\leq \pm 0.1\%$ FS max.
Accuracy at min. setting (B.F.S.L.)	$\leq \pm 0.25\%$ FS typ. $\leq \pm 0.5\%$ FS max.
Temperature compensation Zero point	$\leq \pm 0.02\%$ FS / °C typ. $\leq \pm 0.03\%$ 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	$\leq 1 \text{ ms}$
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	$\leq 20 \text{ g}$
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. 145 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

