HYDAC INTERNATIONAL

Electronic Pressure Transmitter

HDA 3800

for Iron & Steel Works Applications

Description:

This high-precision pressure transmitter has been specially developed and adapted for the sophisticated measurement demands of steelworks technology.

The instrument has a very robust sensor cell with a thin-film strain gauge on a stainless steel membrane. Its outstanding specifications in respect of temperature effect (temperature drift for zero point and range are in each case max. ≤ ± 0.01 % FS / °C) and accuracy (≤ ± 0.15 % FS typ.) make it ideally suited for use in the environmental conditions found in steelworks.

The excellent EMC characteristics guarantee signal stability during the harshest high-frequency, electro-magnetic interference.

Special features:

- Accuracy ≤ ± 0.15 % FS typ.
- Specially designed for use in steelworks and rolling mills
- Highly robust sensor cell
- Very small temperature error
- Excellent EMC characteristics
- Excellent long term stability

Technical specifications:

Input data		
Measuring ranges*	16; 60; 100; 150; 250; 300; 350; 400; 500; 600 bar	
Overload pressures	32; 120; 200; 500; 800; 900; 900; 900; 900; 1000 bar	
Burst pressures	200; 300; 500; 1000; 2000; 2000; 2000; 2000; 2000; 2000 bar	
Mechanical connection	G1/4 A DIN 3852 G1/2 A DIN 3852	
Torque value	20 Nm (G1/4 A) 45 Nm (G1/2 A)	
Parts in contact with medium	Mech. conn.: Seal:	Stainless steel Viton (G1/4 A) NBR O-ring (G1/2 A)
Output data		
Output signal, permitted resistance	4 .. 20 mA, 2 conductor $R_{Lmax.} = (U_B - 10\ V) / 20\ mA\ [k\Omega]$ 0 .. 20 mA, (3 conductor rising) $R_{Lmax.} = (U_B - 7\ V) / 20\ mA\ [k\Omega]$	
Accuracy to DIN 16086 Max. setting	≤ ± 0.15 % FS typ. ≤ ± 0.3 % FS max.	
Accuracy at min. setting (B.F.S.L.)	≤ ± 0.1 % FS typ. ≤ ± 0.15 % FS max.	
Temperature compensation Zero point	≤ ± 0.005 % FS / °C typ. ≤ ± 0.01 % FS / °C max.	
Temperature compensation Over range	≤ ± 0.005 % FS / °C typ. ≤ ± 0.01 % FS / °C max.	
Non-linearity at max. setting to DIN 16086	≤ ± 0.2 % FS max. (from 100 bar ≤ ± 0.15 % FS max.)	
Hysteresis	≤ ± 0.1 % FS max.	
Repeatability	≤ ± 0.05 % FS	
Rise time	≤ 1.5 ms	
Long-term drift	≤ ± 0.1 % FS typ. / year	
Environmental conditions		
Compensated 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 61000-6-1 / 2 / 3 / 4	
Vibration resistance to DIN EN 60068-2-6 at 10 .. 500 Hz	≤ 25 g	
Protection class to DIN 40050	IP 68	
Other data		
Supply voltage 2 conductor	10 .. 30 V DC	
Supply voltage 3 conductor	12 .. 30 V DC	
Residual ripple of supply voltage	≤ 5 %	
Current consumption 3 conductor	approx. 25 mA	
Life expectancy	> 10 million cycles, 0 .. 100 % FS	
Weight	approx. 210 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
* Other measuring ranges on request.

Model code:

HDA 3 8 X 0 – X – XXX – 124 (XXM)

Mechanical connection
0 = G1/2 A DIN 3852 (male)
4 = G1/4 A DIN 3852 (male)

Electrical connection
0 = flying lead (Teflon cable, silicone-free)

Signal
A = 4 .. 20 mA, 2 conductor
E = 0 .. 20 mA, 3 conductor

Pressure ranges in bar
016; 060; 100; 150; 250; 300; 350; 400; 500; 600

Modification number
124 = Iron & steel works

Cable length in metres
06; 10; 15

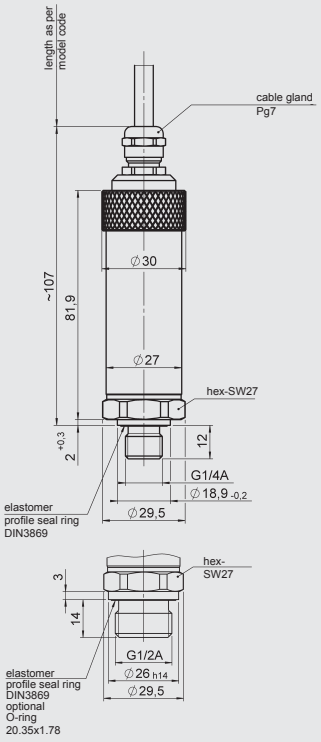
Note:
On instruments with a different modification number, please read the label or the technical amendment details supplied with the instrument.

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

Cable assignment:

Core	HDA 38X0-A	HDA 38X0-E
black	n.c.	$+U_B$
brown	Signal+	Signal
blue	Signal-	0 V
green-yellow	n.c.	n.c.

Dimensions:



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.