Electronic Pressure Transmitter HDA 3800 for Iron & Steel Works Applications

Description:

This high-precision pressure transmitter was 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 data:

Input data	
Measurement ranges[1)]	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.: Stainless steel Seal: FPM (G1/4 A) NBR O-ring (G1/2 A)
Output data	
Output signal, permitted load resistance	4 .. 20 mA, 2 conductor $R_{Lmax.} = (U_B - 10\ V) / 20\ mA\ [k\Omega]$ 0 .. 20 mA, (3 conductor rising) $R_{Lmax.} = (U_B - 10\ V) / 20\ mA\ [k\Omega]$
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[2)]	-40 .. +85°C / -25 .. +85 °C
Storage temperature range	-40 .. +100 °C
Fluid temperature range[2)]	-40 .. +100 °C / -25 .. +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 IEC 60529	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	~ 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
[1)] Other measuring ranges on request
[2)] -25 °C with FPM seal, -40 °C on request

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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

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

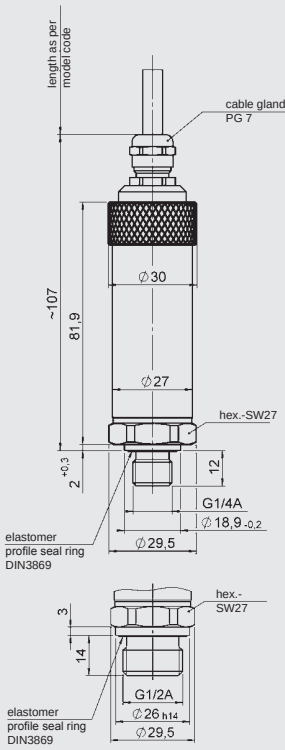
Pressure ranges in bar
016; 060; 100; 150; 250; 300; 350; 400; 500; 600

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.

Dimensions:



Cable assignment:

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

Cable type:

Ölflon cable 3 x 0.75 mm² shielded.
Outer sheath FEP black
Outer diameter 5.9 ± 0.15mm

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.

HYDAC ELECTRONIC GMBH
Hauptstraße 27, D-66128 Saarbrücken
Telephone +49 (0)6897 509-01
Fax +49 (0)6897 509-1726
E-mail: electronic@hydac.com
Internet: www.hydac.com