



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. $\leq \pm 0.01$ % FS / °C) and accuracy ($\leq \pm 0.15$ % 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 $\leq \pm 0.15$ % 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; 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 $R_{Lmax} = (U_B - 10 V) / 20 \text{ mA}$ [kΩ] 0 .. 20 mA, (3 conductor rising) $R_{Lmax} = (U_B - 10 V) / 20 \text{ mA}$ [kΩ]
Accuracy to DIN 16086	$\leq \pm 0.15$ % FS typ.
Max. setting	$\leq \pm 0.3$ % FS max.
Accuracy at min. setting (B.F.S.L.)	$\leq \pm 0.1$ % FS typ. $\leq \pm 0.15$ % FS max.
Temperature compensation	$\leq \pm 0.005$ % FS / °C typ.
Zero point	$\leq \pm 0.01$ % FS / °C max.
Temperature compensation Over range	$\leq \pm 0.005$ % FS / °C typ. $\leq \pm 0.01$ % FS / °C max.
Non-linearity at max. setting to DIN 16086	$\leq \pm 0.2$ % FS max. (from 100 bar $\leq \pm 0.15$ % FS max.)
Hysteresis	$\leq \pm 0.1$ % FS max.
Repeatability	$\leq \pm 0.05$ % FS
Rise time	≤ 1.5 ms
Long-term drift	$\leq \pm 0.1$ % 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 (Full Scale) = relative to complete measuring range

B.F.S.L. = Best Fit Straight Line

¹⁾ Other measuring ranges on request

²⁾ -25 °C with FPM seal, -40 °C 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

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.

Cable assignment:

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

Cable type:

Ölfon cable 3 x 0.75 mm² shielded.

Outer sheath FEP black

Outer diameter 5.9 ± 0.15mm

Dimensions:

