



Pressure Transmitter for Steel Works Applications

Description:

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

The unit has a very robust sensor cell with a thin-film strain gauge which is applied to a stainless steel membrane.

Its outstanding specifications with reference to temperature effect (temperature drift for zero point and range are at maximum $\leq \pm 0.01\%$ FS/ $^{\circ}$ C each) and accuracy ($\leq \pm 0.15\%$ FS typ.) makes it ideally suited for use in the ambient 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
- Very robust sensor cell
- Small temperature error
- Excellent EMC characteristics
- Good long-term stability

Technical specifications

Input data	HDA 3800
Measuring ranges in bar	16, 100, 150, 250, 300, 350, 400, 500, 600*
Overload pressures in bar	32, 200, 500, 800, 900, 900, 900, 900, 900
Burst pressures in bar	200, 500, 1000, 2000, 2000, 2000, 2000, 2000, 2000
Mechanical connection	G1/4 A DIN 3852 or G1/2 A DIN 3852
Tightening torque	approx. 20 Nm for G1/4 A, approx. 45 Nm for G1/2 A
Parts in contact with media	Stainless steel, Viton seal (G1/4 A) NBR O-ring (G1/2 A)
Output data	
Output signals 2-conductor	4 .. 20 mA
Curve deviation at max. setting to DIN16086 (accuracy class)	$\leq \pm 0.15\%$ FS typ. $\leq \pm 0.3\%$ FS max.
Curve deviation at min. setting (B.F.S.L.)	$\leq \pm 0.1\%$ FS typ. $\leq \pm 0.15\%$ FS max.
Temperature compensation zero point	$\leq \pm 0.05\%$ FS/10K typ. $\leq \pm 0.1\%$ FS/10K max.
Temperature compensation over range	$\leq \pm 0.05\%$ FS/10K typ. $\leq \pm 0.1\%$ FS/10K max.
Linearity at max. setting to DIN 16086	$\leq \pm 0.2\%$ 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
Ambient conditions	
Nominal temperature range	-25 .. +85 $^{\circ}$ C
Operating temperature range	-40 .. +85 $^{\circ}$ C
Storage temperature range	-40 .. +100 $^{\circ}$ C
Fluid temperature range	-40 .. +100 $^{\circ}$ C
CE -mark	EN 50081-1 and -2 EN 50082-1 and -2
Vibration resistance to IEC 68-2-6 at 10 ..500Hz	≤ 25 g
Protection class to DIN 40050	IP 68
Other data	
Supply voltage 2-conductor	10 .. 30 V
Electrical connection	PG gland with 6m Teflon cable, silicone-free
Residual ripple supply voltage	$\leq 5\%$
Current consumption	approx. 25 mA
Reverse polarity protection of the supply voltage, excess voltage, override and short circuit protection	available
Life expectancy	>10 million cycles, 0 .. 100 %FS
Weight	approx. 210 g

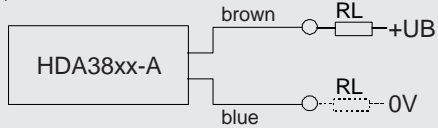
Note: **FS** (Full Scale) = relative to the full measuring range

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

* Other measuring ranges on request

Electrical connection

2-conductor 4 .. 20 mA



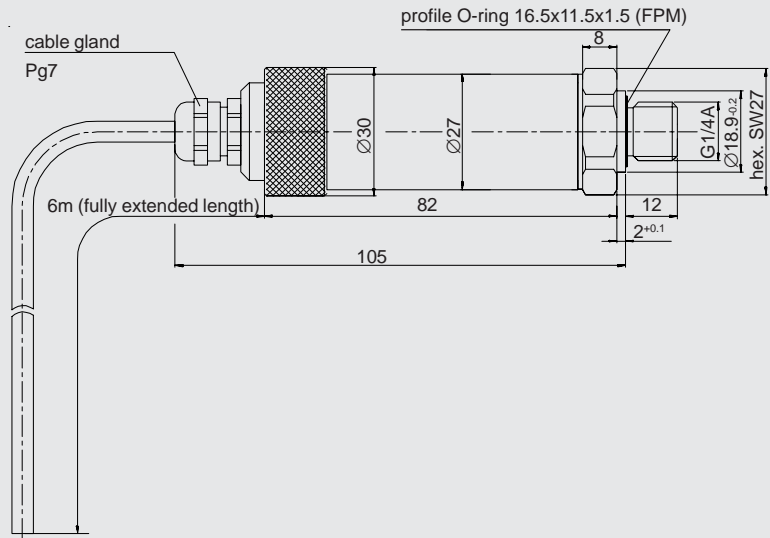
$$R_{Lmax} = \frac{U_B - 10 V}{0.02 A} \quad [\Omega]$$

Note:

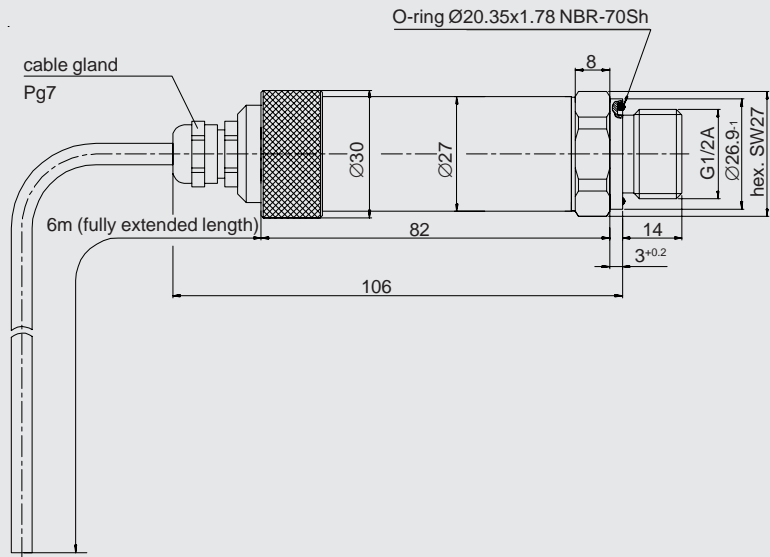
The load resistance R_L is produced by the measuring resistance inside the evaluation unit and the line resistance of the connection line.

Dimensions

with threaded connection G1/4 A



with threaded connection G1/2 A



Model code

HDA 3 8 X 0 - A - XXX - 124 (XXM)

Type of connection

0 = G1/2 A male thread
4 = G1/4 A male thread

Type of connection, electrical

0 = flying lead 6m (Teflon cable, silicone-free)

Signal technology

A = 2-conductor, 4 .. 20 mA

Pressure ranges in bar

016, 100, 150, 250, 300, 350, 400, 500, 600

Modification number

124 (determined by manufacturer)

Cable length

6, 10, 15 metres flying lead

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.



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