



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/°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 °C |
| Operating temperature range | -40 .. +85 °C |
| Storage temperature range | -40 .. +100 °C |
| Fluid temperature range | -40 .. +100 °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 |

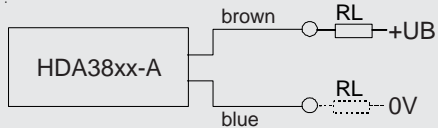
Note: **FS (Full Scale)** = relative to the full measuring range

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

* Other measuring ranges on request

Electrical connection

2-conductor 4 .. 20 mA



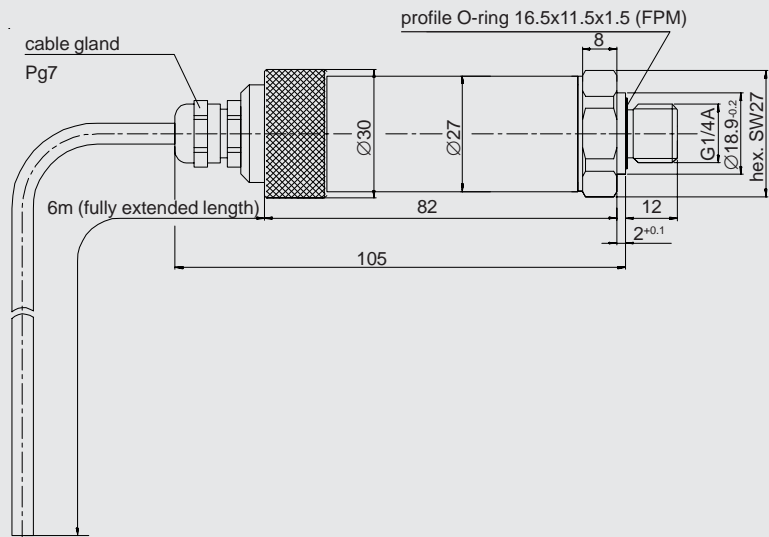
$$R_{Lmax} = \frac{U_B - 10 \text{ V}}{0.02 \text{ A}} \quad [\Omega]$$

Note:

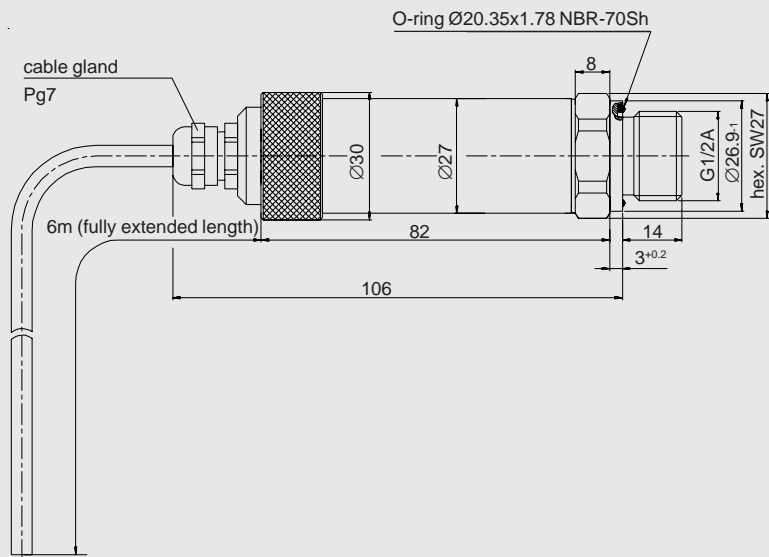
The load resistance R_L is produced by the measuring resistance inside the evaluation unit and the line resistance of the connection line.

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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