



Electronic Pressure Transmitter HDA 7400 with Flush Membrane

Description:

Pressure transmitter HDA 7400 with a flush membrane was designed specifically for applications in which a standard pressure connection could become blocked, clogged or frozen by the particular medium used. Further applications include processes where the medium changes regularly and any residues could cause mixing or contamination of the media.

Like the standard model, the HDA 7400 with flush membrane has a stainless steel measurement cell with a thin-film strain gauge for relative pressure measurement in the high pressure range.

The pressure connection is achieved with a fully-sealed stainless steel front membrane filled internally with a pressure transfer fluid. The process pressure is transmitted hydrostatically to the measurement cell via the pressure transfer fluid.

The output signals 4 .. 20 mA or 0 .. 10 V permit connection to all HYDAC measuring and control devices, as well as connection to standard evaluation systems (e.g. PLC controls).

Special features:

- Pressure connection has a flush membrane
- Accuracy $\leq 0.5\%$ FS B.F.S.L.
- Highly robust sensor cell
- Very compact design
- Very small temperature error
- Excellent EMC characteristics

Technical data:

| Input data | |
|--|--|
| Measuring ranges | 300, 500, 750, 1000, 1500, 3000, 6000, 9000 psi |
| Overload pressures | 1160, 1160, 1740, 2900, 2900, 7250, 11600, 13050 psi |
| Burst pressures | 2900, 2900, 4350, 7250, 14500, 29000, 29000 psi |
| Mechanical connection | G1/4 A DIN 3852 G1/4 with additional front O-ring seal |
| Pressure transfer fluid | Silicone-free oil |
| Torque value | 15lb-ft (20Nm) |
| Parts in contact with fluid ¹⁾ | Connection part: Stainless steel Seal: FPM O-ring: FPM |
| Output data | |
| Output signals, permitted load resistance | 4 .. 20 mA, 2 conductor $R_{Lmax} = (U_B - 8 V) / 20 \text{ mA} \text{ [k}\Omega\text{]}$ 0 .. 10 V, 3 conductor $R_{Lmin} = 2 \text{ k}\Omega$ |
| Accuracy to DIN 16086, max. setting | $\leq \pm 0.5\%$ FS typ. $\leq \pm 1.0\%$ FS max. |
| Accuracy at minimum setting (B.F.S.L.) | $\leq \pm 0.25\%$ FS typ. $\leq \pm 0.5\%$ FS max. |
| Temperature compensation zero point | $\leq \pm 0.0085\%$ FS/°F typ. $\leq \pm 0.017\%$ FS/°F max. |
| Temperature compensation over range | $\leq \pm 0.0085\%$ FS/°F typ. $\leq \pm 0.017\%$ FS/°F max. |
| Non-linearity at max. setting to DIN 16086 | $\leq \pm 0.3\%$ FS max. |
| Hysteresis | $\leq \pm 0.4\%$ FS max. |
| Repeatability | $\leq \pm 0.1\%$ FS max. |
| Rise time | $\leq 2 \text{ ms}$ |
| Long term drift | $\leq \pm 0.3\%$ FS / year typ. |
| Environmental conditions | |
| Compensated temperature range | -13..+185°F |
| Operating temperature range | -13..+185°F |
| Storage temperature range | -40..+212°F |
| Fluid temperature range ²⁾ | -40..+212°F/-13..+212°F |
| CE mark | EN 61000-6-1 / 2 / 3 / 4 |
| UL mark ³⁾ | Certificate No.: E318391 |
| Vibration resistance according to DIN EN 60068-2-6 at 10 .. 500 Hz | $\leq 20 \text{ g}$ |
| Protection class to IEC 60529 | IP 67 (when an IP 67 female connector is used) |
| Other data | |
| Supply voltage | 8 .. 30 V DC 2 conductor 12 .. 30 V DC 3 conductor |
| when applied according to UL specifications | – limited energy – according to 9.3 UL 61010; Class 2; UL 1310/1585; LPS UL 60950 |
| Residual ripple of supply voltage | $\leq 5\%$ |
| Current consumption | $\leq 25 \text{ mA}$ |
| Life expectancy | > 10 million cycles (0 .. 100 % FS) |
| Weight | ~ 80 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 seal materials on request

²⁾ -13 °F with FPM seal, -40 °F on request

³⁾ Environmental conditions according to 1.4.2 UL 61010-1; C22.2 No. 61010-1

Model code:

HDA 7 4 Z 6 - X-XXXX - XXX - 000 - PSI

Mechanical process connection

Z = Flush membrane

Electrical connection

6 = Male M12x1, 4 pole
(female connector not supplied)

Signal

A = 4 .. 20 mA, 2 conductor

B = 0 .. 10 V, 3 conductor

Pressure ranges in psi

0300, 0500, 0750, 1000, 1500, 3000, 5000, 6000, 9000

Mechanical connection

G04 = G1/4 with additional front O-ring seal

G05 = G1/4 A DIN 3852

Modification number

000 = Standard

Version

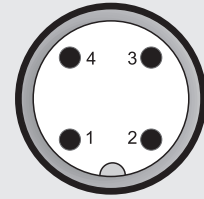
PSI = Pounds per square inch

Accessories:

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

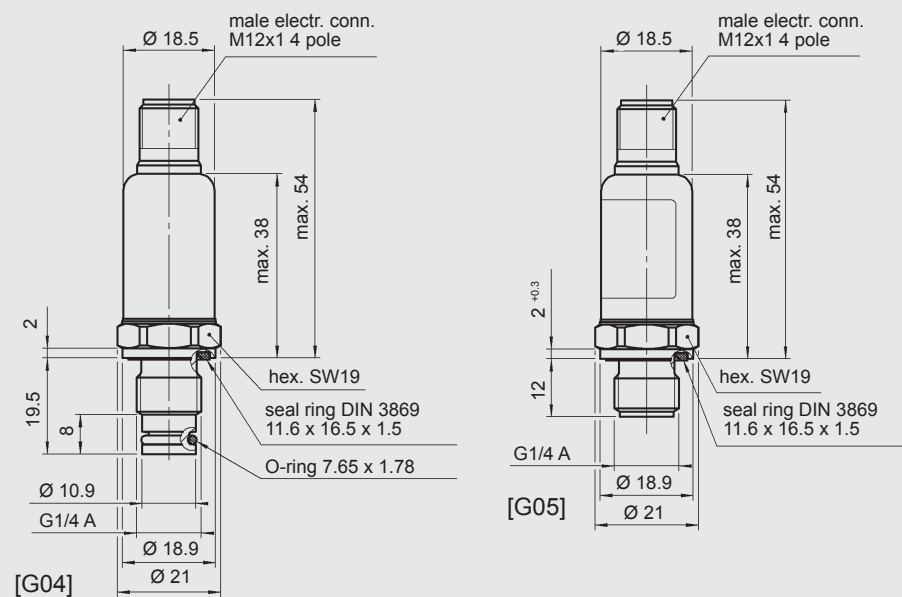
Pin connections:

M12x1



| Pin | HDA 74Z6-A | HDA 74Z6-B |
|-----|------------|-----------------|
| 1 | Signal+ | +U _B |
| 2 | n.c. | n.c. |
| 3 | Signal- | 0 V |
| 4 | n.c. | Signal |

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.

For bar ranges see European Catalog

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