

HDA 4700 Series High Pressure Transducer, High Accuracy Shipbuilding & Offshore



Applications



Description

This pressure transmitter has been specially developed for the shipbuilding industry and is based on the HDA 4000 series.

With its stainless steel measurement cell and thin-film strain gauge, the HDA 4400 is designed to measure relative pressures in the high pressure range. The evaluation electronics converts the measured pressure into a proportional analog signal of 4 to 20 mA.

The electronic module is completely potted to protect it against humidity, vibrations and shock, and is enclosed in a solid stainless steel housing.

For use in the shipping industry, these pressure transmitters have been approved by the following organisations.

Approvals

CE CE mark is a mandatory conformity mark on many products placed on the single market in the European Economic Area

ABS American Bureau of Shipping

GL German Lloyd - GL

Bureau Veritas

Lloyds Register of Shipping - LRS

Det Norske Veritas - DNV

Technical Details

| Sensor Specifications | |
|--|---|
| Measuring ranges - psi | 150, 500, 750, 1000, 1500, 3000, 6000, 9000 |
| Overload pressure - psi | 290, 1160, 1160, 2900, 2900, 7250, 11600, 14500 |
| Burst pressure - psi | 1450, 2900, 2900, 7250, 7250, 14500, 29000, 29000 |
| Mechanical connection | G1/4A DIN 3852 male (standard for bar ranges only) SAE 6 9/16-18 UNF 2A (standard for psi ranges only) |
| Tightening torque | 15 lb-ft (20 Nm) |
| Parts in contact with media | Stainless Steel |
| Accuracy (B.F.S.L.) including linearity, hysteresis, and repeatability | ≤ ±0.25% BFSL |
| Temperature compensation zero point | ≤ ±0.0045%/°F typ. ≤ ±0.0085%/°F max. |
| Temperature compensation over range | ≤ ±0.0045%/°F typ. ≤ ±0.0085%/°F max. |
| Rise time | ≤ 1 ms |
| Long-term drift | ≤ ±0.1% FS typ./year |
| Life expectancy | 10 million load cycles (0 to 100% FS) |
| Weight | Approximately 150 g |
| Output signal | 4 to 20 mA, 2 wire, $R_{Lmax} = (UB - 10V) / 20 \text{ mA}$ [kΩ] |
| Environmental Condition | |
| Compensated temperature range | -13° to 185°F (-25° to 85°C) |
| Operating temperature range | -13° to 185°F (-25° to 85°C) |
| Storage temperature range | -40° to 212°F (-40° to 100°C) |
| Media temperature range | -13° to 212°F (-25° to 100°C) |
| CE mark | EN 61000-6-1 / 2 / 3 / 4 |
| Vibration resistance to DIN EN 60068-2-6 at 10 to 500 Hz | ≤ 20g |
| Environmental protection | IP 65 (DIN 43650 connectors) IP 67 (ZBE 06 molded cable) |
| Electrical Specifications | |
| Supply voltage, 2-wire | 10 to 30 VDC |
| Residual ripple supply voltage | ≤ 5% |
| Reverse polarity protection of the supply voltage, excess voltage, override and short circuit protection | Standard |

Model Code

HDA 4 7 X X - X - XXXX - S00 (PSI)

Mechanical Connection*

- 4 = G1/4A DIN 3852 male (*bar ranges only*)
- 7 = SAE 6 9/16-18 UNF2A (*psi ranges only*)

Electrical Connection*

- 5 = DIN 43650 / ISO plug, 3 pole + ground (*connector ZBE 01 included*)
- 6 = M12x1 plug, 4 pole (*connector not included*)

Output Signal

- A = 4-20mA, 2-wire

Pressure Range

For HDA 477X only (SAE 6 9/16-18 UNF2A)
0150, 0500, 0750, 1000, 1500, 3000, 5000, 6000, 9000 psi

Modification Number

- S00 = with Shipbuilding approvals

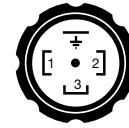
(psi)

psi version (*leave blank for bar version*)

*Other options available upon request

Pin Connections

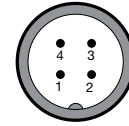
DIN 43650



Pin HDA 47X5-A

- | | |
|---|----------|
| 1 | Signal + |
| 2 | Signal - |
| 3 | nc |
| 4 | PE |

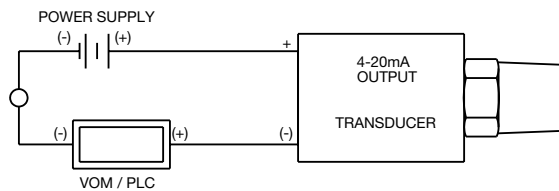
M12x1



Pin HDA 47X6-A

- | | |
|---|----------|
| 1 | Signal + |
| 2 | nc |
| 3 | Signal - |
| 4 | nc |

Circuit Diagram



Dimensions

