

## HDA 4400 Series High Pressure Transducer, Medium 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)<br>SAE 6 9/16-18 UNF 2A (standard for psi ranges only)<br>other connections upon request |
| Tightening torque  | 15 lb-ft (20 Nm)  |
| Parts in contact with media  | Stainless Steel, FPM seal   |
| Accuracy (B.F.S.L.) including linearity, hysteresis, and repeatability                                   | ≤ ±0.5% BFSL  |
| Temperature compensation zero point  | ≤ ±0.0085%/°F typ.<br>≤ ±0.014%/°F max.   |
| Temperature compensation over range  | ≤ ±0.0085%/°F typ.<br>≤ ±0.014%/°F max.   |
| Rise time  | ≤ 1 ms  |
| Long-term drift  | ≤ ±0.3% 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)<br>IP 67 (ZBE 06 molded cable)   |
| Electrical Specifications  |   |
| Supply voltage, 2-conductor  | 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 4 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 447X only (SAE 6 9/16-18 UNF2A)  
0150, 0500, 0750, 1000, 1500, 3000, 5000, 6000, 9000 psi

### Modification Number

- S00 = with Shipbuilding approvals

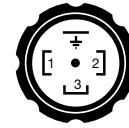
### (psi)

psi version (leave blank for bar version)

\*Other options available upon request

## Pin Connections

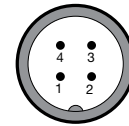
### DIN 43650



#### Pin HDA 44X5-A

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

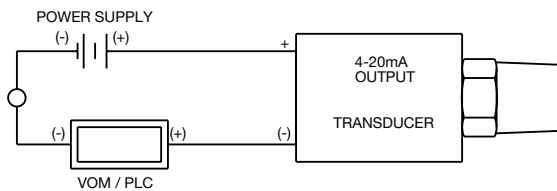
### M12x1



#### Pin HDA 44X6-A

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

## Circuit Diagram



## Dimensions

