

## HDA 4300 Series Low Pressure Transducer 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 ceramic measurement cell (*with thick-film strain gauge*) the HDA 4300 is designed to measure relative pressures in the low 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	15, 30, 50, 100, 150, 250, 500
Overload pressure - psi	45, 100, 150, 290, 450, 725, 1500
Burst pressure - psi	70, 150, 250, 400, 650, 1000, 2500
Mechanical connection	G1/4A DIN 3852 male ( <i>standard for bar ranges only</i> ) 1/4"-18 NPT male ( <i>standard for psi ranges only</i> ) other connections upon request
Tightening torque	G1/4: 15 lb-ft (20 Nm) 1/4" NPT: 30 lb-ft (40 Nm)
Parts in contact with media	Ceramic, FPM or EPDM seal, Stainless Steel
Accuracy (B.F.S.L.) including linearity, hysteresis, and repeatability	≤ ±0.5% BFSL
Temperature compensation zero point	≤ ±0.012%/°F typ. ≤ ±0.017%/°F max.
Temperature compensation over range	≤ ±0.012%/°F typ. ≤ ±0.017%/°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	32° to 176°F (0° to 80°C)
Operating temperature range	-13° to 185°F (-25° to 85°C)
Storage temperature range	-22° to 212°F (-30° 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 ( <i>DIN 43650 connectors</i> ) IP 67 ( <i>ZBE 06 molded cable</i> )
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 3 X X - X - XXXX - S00 X1 (PSI)

### Mechanical Connection\*

- 4 = G1/4A DIN 3852 male (bar ranges only)
- 8 = 1/4"-18 NPT (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 438X only (1/4"-18 NPT)  
0015, 0030, 0050, 0100, 0150, 0250, 0500 psi

### Modification Number

- S00 = with Shipbuilding approvals

### Seal Material

- F1 = FPM Seal (hydraulic oil)
- E1 = EPDM Seal (coolant, ammonia, water)

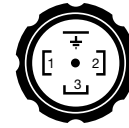
### (psi)

psi version (leave blank for bar version)

\*Other options available upon request

## Pin Connections

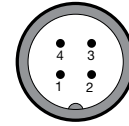
### DIN 43650



#### Pin HDA 43X5-A

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

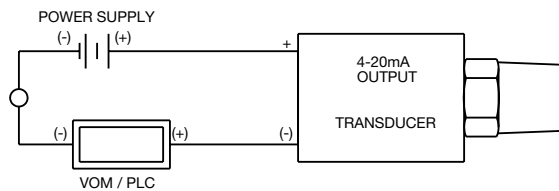
### M12x1



#### Pin HDA 43X6-A

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

## Circuit Diagram



## Dimensions

