



## Electronic Pressure Transmitter HDA 4300 with Approvals for Shipping

### 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 analogue signal of 4 .. 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:

- American Bureau of Shipping



- Lloyds Register of Shipping



- Det Norske Veritas



- Germanischer Lloyd



- Bureau Veritas



Other approvals on request

### Technical specifications:

#### Input data

Measuring ranges	1; 2.5; 4; 6; 10; 16; 25; 40 bar -1 .. 5; -1 .. 9 bar
Overload pressures	3; 8; 12; 20; 32; 50; 80; 120 bar 20; 32 bar
Burst pressure	5; 12; 18; 30; 48; 75; 120; 180 bar 30; 48 bar
Mechanical connection	G1/4 A DIN 3852
Torque value	20 Nm
Parts in contact with medium	Mech. connection: Stainless steel Sensor cell: Ceramic Seal: FPM / EPDM (as per model code)

#### Output data

Output signal, permitted resistance	4 .. 20 mA, 2 conductor $R_{Lmax.} = (U_B - 10 V) / 20 mA [k\Omega]$
Accuracy to DIN 16086, Max. setting	$\leq \pm 0.5 \% FS$ typ. $\leq \pm 1 \% FS$ max.
Accuracy at min. setting (B.F.S.L.)	$\leq \pm 0.25 \% FS$ typ. $\leq \pm 0.5 \% FS$ max.
Temperature compensation Zero point	$\leq \pm 0.02 \% FS / ^\circ C$ typ. $\leq \pm 0.03 \% FS / ^\circ C$ max.
Temperature compensation Over range	$\leq \pm 0.02 \% FS / ^\circ C$ typ. $\leq \pm 0.03 \% FS / ^\circ C$ max.
Non-linearity at max. setting to DIN 16086	$\leq \pm 0.5 \% FS$ max.
Hysteresis	$\leq \pm 0.25 \% FS$ max.
Repeatability	$\leq \pm 0.1 \% FS$
Rise time	$\leq 1 ms$
Long-term drift	$\leq \pm 0.3 \% FS$ typ. / year

#### Ambient conditions

Compensated temperature range	0 .. +80 °C
Operating temperature range	-25 .. +85 °C *
Storage temperature range	-30 .. +100 °C
Fluid temperature range	-25 .. +100 °C *
CE mark	EN 61000-6-1 / 2 / 3 / 4
Vibration resistance to DIN EN 60068-2-6 at 10 .. 500 Hz	$\leq 20 g$
Protection class to DIN 40050	IP 65 (DIN 43650) IP 67 (M12x1, when an IP 67 connector is used)

#### Other data

Supply voltage	10 .. 32 V DC
Residual ripple of supply voltage	$\leq 5 \%$
Life expectancy	> 10 million cycles 0 .. 100 % FS
Weight	approx. 150 g

Note: Reverse polarity protection of the supply voltage, excess voltage, override, short circuit protection are provided.

FS (Full Scale) = relative to the complete measuring range

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

\* Optional to -30 °C (depending on the seal material)

## Model code:

HDA 4 3 X X - X - XXXX - S00 - X 1

### Mechanical connection

4 = G1/4 A DIN 3852 (male)

### Electrical connection

5 = 3 pole + PE, DIN 43650  
(connector supplied)

6 = M12x1, 4 pole  
(connector not supplied)

### Signal

A = 4 .. 20 mA, 2 conductor

### Pressure ranges in bar

01.0; 02.5; 04.0; 06.0; 0010; 0016; 0025; 0040  
0005 (-1 .. 5); 0009 (-1 .. 9)

### Modification number

S00 = with approvals for shipping

### Seal material (in contact with fluid)

F = FPM seal (e.g.: for hydraulic oils)

E = EPDM seal (e.g.: for refrigerants)

### Material of connection (in contact with fluid)

1 = stainless steel

### Note:

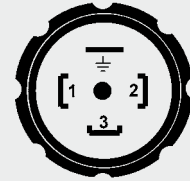
On units with a different modification number, please read the label or the technical amendment details supplied with the unit.

### Accessories:

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

## Pin connections:

DIN 43650



Pin HDA 4345-A

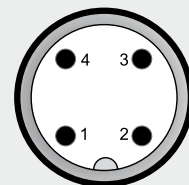
1 Signal+

2 Signal-

3 n.c.

⊥ PE

M12x1



Pin HDA 4346-A

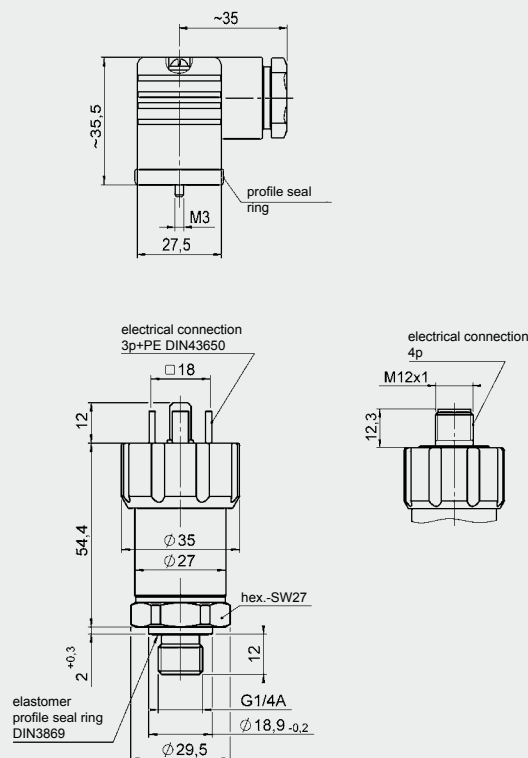
1 Signal+

2 n.c.

3 Signal-

4 n.c.

## 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.

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