



Electronic Pressure Transmitter HDA 4400 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 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 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	6; 16; 40; 60; 100; 250; 400; 600 bar
Overload pressures	15; 32; 80; 120; 200; 500; 800; 1000 bar
Burst pressure	100; 200; 300; 300; 500; 1000; 2000; 2000 bar
Mechanical connection	G1/4 A DIN 3852
Torque value	20 Nm
Parts in contact with medium	Mech. connection: Stainless steel Seal: FPM

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	$\leq \pm 0.015 \% FS / ^\circ C$ typ.
Zero point	$\leq \pm 0.025 \% FS / ^\circ C$ max.
Temperature compensation	$\leq \pm 0.015 \% FS / ^\circ C$ typ.
Over range	$\leq \pm 0.025 \% FS / ^\circ C$ max.
Non-linearity at max. setting to DIN 16086	$\leq \pm 0.3 \% FS$ max.
Hysteresis	$\leq \pm 0.4 \% FS$ max.
Repeatability	$\leq \pm 0.1 \% FS$
Rise time	$\leq 1 ms$
Long-term drift	$\leq \pm 0.3 \% FS$ typ. / year

Ambient conditions

Compensated temperature range	-25 .. +85 °C
Operating temperature range	-25 .. +85 °C *
Storage temperature range	-40 .. +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 -40 °C (depending on the seal material)

