

HYDAC INTERNATIONAL



Electronic Pressure Transmitter

For shipbuilding and offshore
HDA 3400

Description:

This pressure transmitter, which has been specially developed for shipbuilding and offshore applications, is based on a very robust DMS sensor cell.

All parts in contact with the fluid are in stainless steel, and are welded together. Since no seals are required in the sensor chamber, leakage is eliminated.

The 4 .. 20 mA output signal in two conductor technique enables connection to the relevant evaluation electronics.

Areas of application are pressure monitoring on marine transmissions, diesel engines, pumps and general hydraulic and pneumatic systems.

Technical Specifications:

| Input data | HDA 3400 |
|--|--|
| Measuring ranges | 16; 60; 100; 250; 400; 600 bar |
| Overload pressure | 200 % FS, max. 900 bar |
| Burst pressure | 400 % FS |
| Mechanical connection | G1/4 A DIN 3852 |
| Torque rating | approx. 20 Nm |
| Parts in contact with media | Stainless steel, Seal: FPM |
| Output data | |
| Curve deviation at max. setting to DIN16086 (accuracy class) | ≤ ±0.5 %FS typ. ≤ ±1 %FS max. |
| Curve deviation at min. setting (B.F.S.L.) | ≤ ±0.25 %FS typ. ≤ ±0.5 %FS max. |
| Temperature compensation zero point | ≤ ±0.15 %FS/10K typ. ≤ ±0.25 %FS/10K max. |
| Temperature compensation over range | ≤ ±0.15 %FS/10K typ. ≤ ±0.25 %FS/10K max. |
| Linearity at max. setting to DIN 16086 | ≤ ±0.15 %FS typ. ≤ ±0.3 %FS max. |
| Hysteresis | ≤ ±0.2 %FS typ. ≤ ±0.4 %FS max. |
| Repeatability | ≤ ±0.1 %FS |
| Rise time | approx. 1 ms |
| Long-term drift | ≤ ±0.3 %FS typ. / year |
| Ambient conditions | |
| Nominal temperature range | 0 .. +70 °C |
| Operating temperature range | -25 .. +85 °C |
| Storage temperature range | -40 .. +100 °C |
| Fluid temperature range | -40 .. +100 °C |
| CE mark | EN 50081-1 and EN 50081-2 EN 50082-1 and EN 50082-2 |
| Vibration resistance | 5 .. 25 Hz: 3.2 mm 25 .. 100 Hz: 4g |
| Safety type to DIN 40050 | IP 65 |
| Other data | |
| Supply voltage | 10 .. 30 V |
| Residual ripple supply voltage | ≤ 5 % |
| Reverse polarity protection of the supply voltage, excess voltage, override and short circuit protection | available |
| Life expectancy | > 10 million cycles 0 .. 100 %FS |
| Weight | approx. 145 g |

Note: **FS** (Full Scale) = relative to the full measuring range
B.F.S.L. = Best Fit Straight Line
Special models on request.

Approvals:

- American Bureau of Shipping
No.: 00-ES19976-X



- Lloyds Register of Shipping
No.: 00/20049



- Det Norske Veritas
No.: A-7711 (892.10)



- Germanischer Lloyd
No.: 15520-00HH



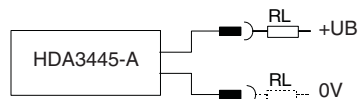
- Bureau Veritas



Other approvals on request.

Electrical connection:

2-conductor technique 4 .. 20 mA



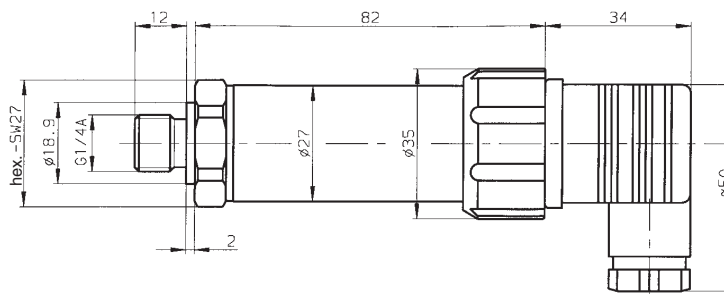
$$RL_{max.} = \frac{UB - 10 V}{0.02 A} \quad [\Omega]$$

Note

The load resistance RL is produced by the measuring resistance inside the evaluation unit and the line resistance of the connection line.

Dimensions:

HDA 3445, illustrated with ZBE 01



Pin connections (HDA 3445):

HDA 3445

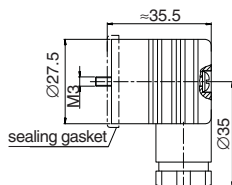


- Pin 1: +UB
- Pin 2: 0V
- Pin 3: free
- Pin 4: \perp

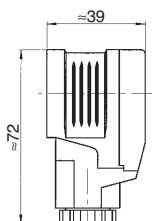
Electrical accessories:

Plug connectors, right-angled 3-pole + earth
DIN 43650/ISO 4400

ZBE 01 (Hirschmann GDM 3009)



ZBE 09 (Hirschmann GDME 311)



Model code:

HDA 3 4 4 5 - A - XXX - S00

Type of connection, mechanical

4 = G1/4 A male thread

Type of connection, electrical

5 = appliance plug 3-pole + earth, DIN 43650/ISO 4400
plug connection ZBE 01 is included

Signal technology

A = 2-conductor, 4 .. 20 mA

Measuring ranges in bar

016; 060; 100; 250; 400; 600

Modification number

S00 standard

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

Note:

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department. Subject to technical modifications.