



Pressure Transmitter HDA 4700 CAN

Description

The HDA 4700 CAN is a digital pressure transmitter which is used to measure relative pressures in hydraulics and pneumatics. The measured pressure value is digitised and made available to the CAN field bus system via the CANopen protocol. The unit parameters can be viewed and configured by the user via the CANopen object directory using commercially available CAN software.

This pressure transmitter, which is based on the HDA 4700, has a very accurate and robust sensor cell with a thin-film strain gauge on a stainless steel membrane.

Due to their outstanding temperature and EMC characteristics, together with their compact dimensions, these units can be used in a wide range of applications in the mobile and industrial sectors.

Special features

- CANopen interface
- Accuracy $\leq \pm 0.25\%$ FS typ.
- Robust thin film cell
- Excellent EMC characteristics
- Compact design

Technical specifications

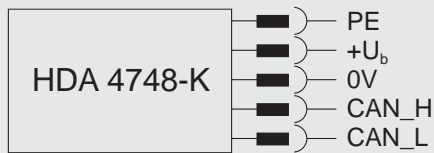
Input data	
Measuring ranges	40; 100; 250; 400; 600 bar
Overload pressure	80; 200; 500; 800; 900 bar
Burst pressure	200; 500; 1000; 2000; 2000 bar
Mechanical connection	G1/4 A DIN 3852
Torque value	20 Nm
Parts in contact with media	stainless steel, Viton seal
Output data	
Curve deviation at max. setting to DIN 16086 (accuracy class)	$\leq \pm 0.25\%$ FS typ. $\leq \pm 0.5\%$ FS max.
Curve deviation at min. setting (B.F.S.L.)	$\leq \pm 0.15\%$ FS typ. $\leq \pm 0.25\%$ FS max.
Temperature compensation	$\leq \pm 0.08\%$ /10K typ.
Zero point	$\leq \pm 0.15\%$ /10K max.
Temperature compensation	$\leq \pm 0.08\%$ /10K typ.
Over range	$\leq \pm 0.15\%$ /10K max.
Linearity at max. setting to DIN 16086	$\leq \pm 0.3\%$ FS max.
Hysteresis	$\leq \pm 0.15\%$ FS max.
Repeatability	$\leq \pm 0.08\%$ FS
Rise time	2 ms
Long-term drift	$\leq \pm 0.1\%$ FS typ. per year
Ambient conditions	
Nominal temperature range	-25 .. +85 °C
Operating temperature range	-25 .. +85 °C
Storage temperature range	-40 .. +100 °C
Fluid temperature range	-40 .. +100 °C
CE mark	EN 61000-6-1. EN 61000-6-2 EN 61000-6-3. EN 61000-6-4
Vibration resistance to IEC 68-2-6 at 10 .. 500Hz	≤ 20 g (196.2 m/s ²)
Protection class to DIN 40050	IP 67
Other data	
Supply voltage	10 .. 35 VDC
Residual ripple supply voltage	$\leq 5\%$
Current consumption	approx. 25 mA
Reverse polarity protection of the supply voltage, excess voltage protection	provided
Electrical connection	Pin 1: PE, housing
Connector M12x1	Pin 2: +U _b Pin 3: 0V
Assignment according to CIA-DR-303-1	Pin 4: CAN_H Pin 5: CAN_L
Life expectancy	> 10 million cycles 0 .. 100 %FS
Weight	approx. 150 g

Note: **F.S.** (Full Scale) = relative to the complete measuring range.

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

Other models available on request

Electrical connection



Pin connections (HDA 4748)

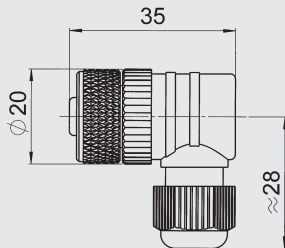


Pin 1	Signal	Description
1	PE	shield/housing
2	+U _b	supply +
3	0V	supply -
4	CAN_H	bus line dominant high
5	CAN_L	bus line dominant low

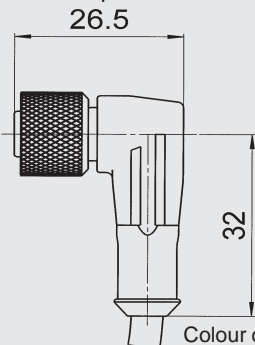
Electrical accessories

ZBE 08 (5 pole)

right-angle connector, M12x1



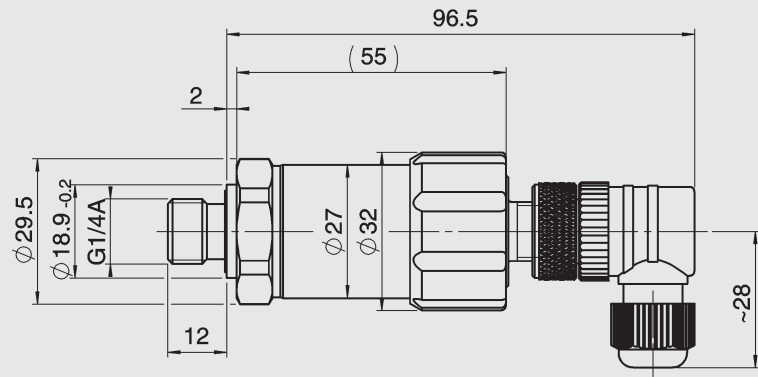
- ZBE 08-02** right-angle connector with 2m cable, 5 pole M12x1
- ZBE 08S-02** right-angle connector with 2m screened cable, 5 pole M12x1
- ZBE 08-05** right-angle connector with 5m cable, 5 pole M12x1
- ZBE 08S-05** right-angle connector with 5m screened cable, 5 pole M12x1



Colour coding:
 Pin 1: brown
 Pin 2: white
 Pin 3: blue
 Pin 4: black
 Pin 5: grey

Dimensions

HDA 4748, shown with ZBE 08



Protocol data for CANopen

Communication profile	DS301 V4.02
Device profile	DS404 V1.2
Baud rate	10kbit .. 1Mbit according to DS 305 V1.1
Transmission services	- PDO - Transfer
	measured value as 16/32 bit, status synchronous, asynchronous, cyclical, measured value change, exceeding boundaries
Node Id/Baud rate	can be set via Manufacturer Specific Profile

Model code

HDA 4 7 4 8 - K - XXXX - 000

Type (technology)

7 = thin film DMS relative 0.25% typ.

Type of connection, mechanical

4 = G 1/4 A DIN 3852 male thread

Type of connection, electrical

8 = M12x1, 5 pole (without connector)

Signal technology

K = CAN OPEN

Pressure ranges in bar

0040; 0100; 0250; 0400; 0600 bar

Modification number

000 standard (Baud rate: 250k Node Id: 1)

Note: 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.



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