



Pressure Transmitter HDA 7400

Relative pressure

Accuracy 0.5 %



CAN interface

Description:

HDA 7400 with CAN interface 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 or J1939 protocol. The instrument parameters can be viewed and configured by the user using standard CAN software.

This pressure transmitter, which is based on the HDA 7400 series, 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 instruments can be used in a wide range of applications in the mobile and industrial sectors.

Technical data:

Input data

Measuring ranges	bar	40	100	250	400	600
Overload pressure	bar	80	200	500	800	1000
Burst pressure	bar	200	500	1000	2000	2000

Mechanical connection	G1/4 A ISO 1179-2
Tightening torque, recommended	20 Nm
Parts in contact with fluid	Mech. connection: Stainless steel Seal: FKM

Output data

Output signals	CANopen protocol or J1939 protocol, depending on version
Accuracy acc. to DIN 16086, terminal based	≤ ± 0.5 % FS typ. ≤ ± 1.0 % FS max.
Accuracy, B.F.S.L.	≤ ± 0.25 % FS typ. ≤ ± 0.5 % FS max.
Temperature compensation Zero point	≤ ± 0.015 % FS / °C typ. ≤ ± 0.025 % FS / °C max.
Temperature compensation Span	≤ ± 0.015 % FS / °C typ. ≤ ± 0.025 % FS / °C max.
Non-linearity acc. to DIN 16086, terminal based	≤ ± 0.3 % FS max.
Hysteresis	≤ ± 0.4 % FS max.
Repeatability	≤ ± 0.1 % FS max.
Rise time	≤ 2 ms
Long-term drift	≤ ± 0.3 % FS / year typ.

Environmental conditions

Compensated temperature range	-25 .. +85 °C
Operating temperature range ¹⁾	-40 .. +85 °C / -25 .. +85 °C
Storage temperature range	-40 .. +100 °C
Fluid temperature range ¹⁾	-40 .. +100 °C / -25 .. +100 °C
CE mark	EN 61000-6-1 / 2 / 3 / 4
UL US mark ²⁾	Certificate-No.: E318391
Vibration resistance acc. to DIN EN 60068-2-6 at 10 .. 500 Hz	≤ 20 g
Protection class acc. to DIN EN 60529	IP 67

Other data

Supply voltage when applied acc. to UL specifications	9 .. 35 V DC – limited energy – acc. to 9.3 UL 61010; Class 2; UL 1310/1585; LPS UL 60950
Residual ripple of supply voltage	≤ 5 %
Current consumption	≤ 25 mA
Life expectancy	> 10 million cycles (0 .. 100 % FS)
Weight	~ 60 g

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

FS (Full Scale) = relative to complete measuring range

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

¹⁾ -25 °C with FKM seal, -40 °C on request

²⁾ Environmental conditions acc. to 1.4.2 UL 61010-1; C22.2 No. 61010-1

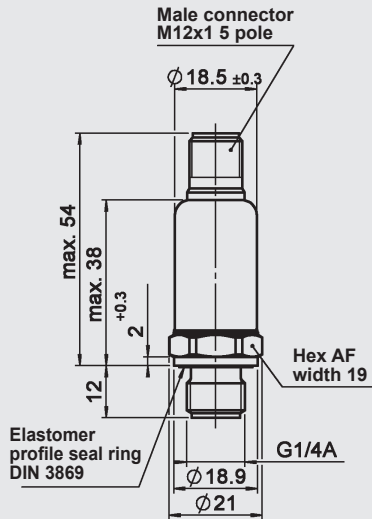
Protocol data for CANopen:

Communication profile	CiA DS 301 V4.2
Device profile	CiA DS 404 V1.3
Layer setting Services and Protocol	CiA DSP 305 V2.2
Automatic bit-rate detection	CiAA N 801
Baud rates	10 kbit .. 1 Mbit corresp. to DS305 V2.2
Transmission services	
- PDO	Measured value as 16/32 bit and float, status synchronous, asynchronous, cyclical, measured value change, exceeding boundaries
- Transfer	
Node ID/baud rate	Can be set via Manufacturer Specific Profile

Protocol data for SAE J1939:

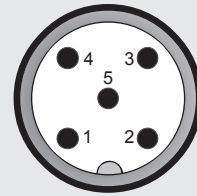
Data Link Layer	SAE J1939-21
Network Layer	SAE J1939-31
Network Management	SAE J1939-81

Dimensions:



Pin connections:

M12x1



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

Model code:

HDA 7 4 4 8 - FXX - XXXX - 000

Mechanical connection

4 = G1/4 A ISO 1179-2

Electrical connection

8 = male M12x1, 5 pole

Signal

F11 = CANopen

F12 = CAN SAE J1939

Measuring ranges in bar

0040; 0100; 0250; 0400; 0600

Modification number

000 = standard

Accessories:

Appropriate accessories, such as mating connectors, can be found in the Accessories brochure.

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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