

HYDAC INTERNATIONAL



Pressure Transmitter HDA 7446

Relative pressure

Accuracy 0.5 %



Features

- Accuracy $\leq \pm 0.5$ % FS typ.
- Extremely small and compact design
- Exceptional temperature and EMC properties

Description

The pressure transmitter series HDA 7400 for the measurement of relative pressures in the high-pressure range has a stainless steel sensor cell with a thin-film strain gauge, which forms the basis for a robust and long-life pressure transmitter.

The device series combines excellent technical data with a very small and compact design.

Various pressure ranges between 0 .. 40 bar and 0 .. 1000 bar can be supplied to suit the particular application.

For the implementation of controls (e.g. PLC) the analogue signals 4 .. 20 mA or 0 .. 10 V are available.

Further pressure ranges and output signals are available on request.

Fields of application

The HDA 7446 pressure transmitter series has been specially designed for series use, particularly where space is limited.

Technical data

Input data								
Measuring ranges	bar	40	60	100	250	400	600	1000
Overload pressures	bar	80	120	200	500	800	1000	1600
Burst pressure	bar	200	300	500	1250	2000	2000	3000
Mechanical connection	G1/4 A ISO 1179-2							
Tightening torque, recommended	20 Nm							
Parts in contact with fluid	Connector: Stainless steel Seal: FKM							
Output data								
Output signal, permitted load resistance	4 .. 20 mA, 2-conductor $R_{Lmax} = (U_B - 8 \text{ V}) / 20 \text{ mA}$ [kΩ] 0 .. 10 V, 3-conductor $R_{Lmin} = 2 \text{ kΩ}$							
Accuracy acc. to DIN 16086, Terminal based ¹⁾	≤ ± 0.5 % FS typ. ≤ ± 1.0 % FS max.							
Accuracy at minimum value setting (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.							
Rise time	≤ 2 ms							
Long-term drift	≤ ± 0.3 % FS typ. / year							
Environmental conditions / Approvals / Tests								
Compensated temperature range	-25 .. +85 °C							
Operating temperature range ²⁾	-40 .. +85 °C / -25 .. +85 °C							
Storage temperature range	-40 .. +100 °C							
Fluid temperature range ²⁾	-40 .. +100 °C / -25 .. +100 °C							
EMC	2014/30/EU EN 61006-6-1 / 2 / 3 / 4							
Vibration resistance	DIN EN 60068-2-6					≤ 200 m/s² (10 .. 500 Hz)		
Shock resistance	DIN EN 60068-2-27					100 g / 6 ms		
Protection type ³⁾	DIN EN 60529					IP 67		
CE / UKCA conformity	Provided							
eULUS approval ⁴⁾	Provided							
Other data								
Supply voltage	8 .. 30 V DC 2-conductor 12 .. 30 V DC 3-conductor							
when applied acc. to UL specifications	-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 ⁵⁾	> 10 million load 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⁾ Including non-linearity, hysteresis, offset and final value deviation

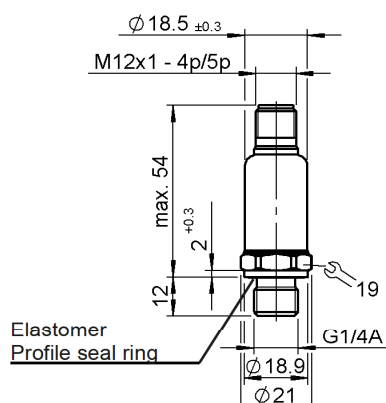
²⁾ In the standard up to -25 °C with FKM seal, -40 °C on request

³⁾ With mounted mating connector in corresponding protection type

⁴⁾ Environmental conditions acc. to 1.4.2 UL 61010-1; C22.2 no. 61010-1

⁵⁾ Measuring ranges ≥ 1000 bar: > 1 million load cycles (0 .. 100 % FS)

Dimensions



Pin connections

M12x1, 4 pole	Pin	Output signal A	Output signal B
	1	Signal +	+U _B
	2	n.c.	n.c.
	3	Signal -	0 V
	4	n.c.	Signal

Model code

HDA 7 4 4 6 - X - XXX - 000

Mechanical connection

4 = G1/4 A ISO 1179-2

Electrical connection

6 = Plug connector M12x1, 4 pole (without mating connector)

Output signal

A = 4 .. 20 mA, 2-conductor

B = 0 .. 10 V, 3-conductor

Measuring ranges in bar

040; 060; 100; 250; 400; 600; 1000

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 and/or operating conditions not described please contact the relevant technical department.
Subject to technical modifications.

EN 18.326.4/01.24

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