



Pressure Transmitter HDA 8400

Relative pressure

Accuracy 0.5 %

For the medium hydrogen
Tested to EC 79
(Minimum order quantity 500 units)



Description:

The pressure transmitter series HDA 8400 has been specially developed for use with hydrogen and for series applications, e.g. in the mobile sector. Like most of our pressure transmitter series, the HDA 8400 is based on a robust and long-life thin-film sensor.

All of the parts in contact with the fluid (sensor and pressure port) are made of stainless steel and are welded together. This means that there are no sealing points in the interior of the sensor. The possibility of leakage is excluded.

Due to the specially selected material, this HDA 8400 is suited especially for the use in hydrogen applications.

Component testing for type approval acc. to EC 79-2009 / V0 406-2010 has been concluded successfully.

Technical data:

Input data

Measuring ranges	bar	900
Nominal operating pressure ¹⁾	bar	700 ¹⁾
Maximum permitted operating pressure ¹⁾	bar	875 ¹⁾
Burst pressure	bar	3000
Mechanical connection (Tightening torque, recommended)	SF250CX20, autoclave (7/16-20 UNF 2B) (20 Nm) G 1/4 B DIN EN 837 (20 Nm) 9/16-18 UNF 2A (ISO 8434-3) (25 Nm)	
Parts in contact with fluid	Stainless steel 1.4435 (Ni content ≥ 13%) Seal: Copper (Cu-DHP) (G 1/4 B); Zurcon®22 (polyurethane) (9/16-18 UNF 2A)	

Output data

Output signal	4 .. 20 mA, ratiometric, others available on request	
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	≤ ± 0.015 % FS / °C typ.	
Zero point	≤ ± 0.025 % FS / °C max.	
Temperature compensation	≤ ± 0.015 % FS / °C typ.	
Span	≤ ± 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	
Rise time	≤ 2 ms	
Long-term drift	≤ ± 0.3 % FS typ. / year	

Environmental conditions

Compensated temperature range	-25 .. +85 °C
Operating temperature range	-40 .. +100 °C
Storage temperature range	-40 .. +100 °C
Fluid temperature range	-40 .. +100 °C
CE mark	EN 61000-6-1 / 2 / 3 / 4
Vibration resistance acc. to DIN EN 60068-2-6 at 5 .. 2000 Hz	≤ 25 g
Shock resistance acc. to DIN EN 60068-2-27	100 g / 6 ms / half-sine 500 g / 1 ms / half-sine
Protection class acc. to DIN EN 60529 ²⁾ ISO 20653	IP 67 IP 6K9K

Other data

Electrical connection	M12x1, 4 pole, available in plastic or metal (solid version); Metri-Pack series 150, 3 pole
Supply voltage when applied acc. to UL specifications	8 .. 30 V DC; 5 V DC ± 5 % (ratiometric) - limited energy - acc. to 9.3 UL 61010; Class 2; UL 1310/1585; LPS UL 60950
Residual ripple of supply voltage	≤ 5 %
Life expectancy	> 1 million cycles (0 .. 100 % FS)
Weight	~ 55 g

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

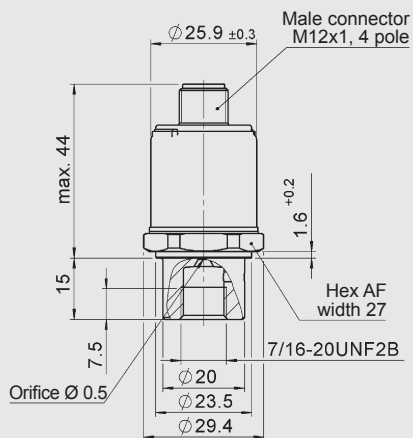
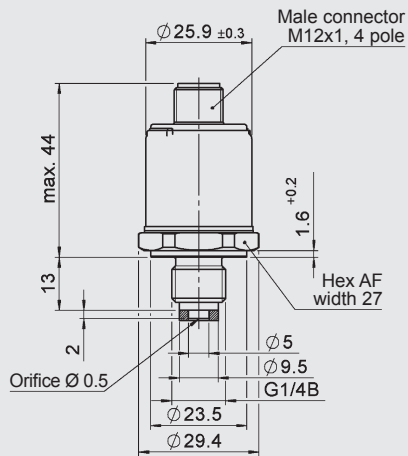
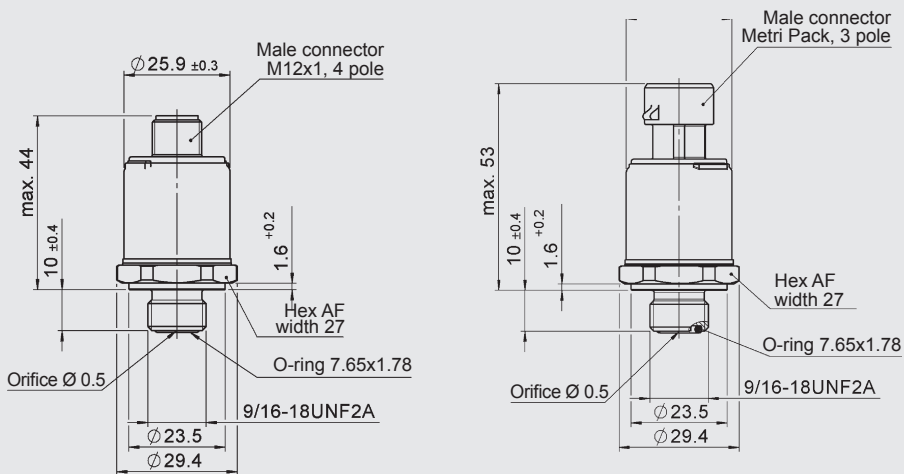
FS (Full Scale) = relative to complete measuring range

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

¹⁾ Tested/validated acc. to EC 79/2009, nominal operation pressure 700 bar at reference temperature 20 °C, max. permitted operating pressure 875 bar

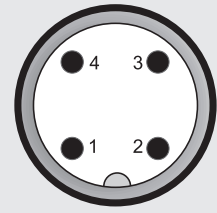
²⁾ With mounted mating connector in corresponding protection class

Dimensions:



Pin connections:

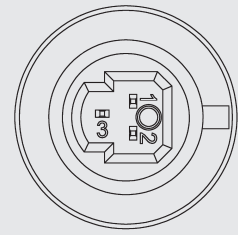
M12x1, 4 pole



Pin

1	Signal +
2	n.c.
3	Signal -
4	n.c.

Metri-Pack, 3 pole



Pin

1	Signal -
2	Signal +
3	n.c.

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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