Pressure Transmitter
HDA 4400

Relative pressure | **Accuracy 0.5 %**

Flush membrane

Description:

Pressure Transmitter HDA 4400 with a flush membrane was designed specifically for applications in which a standard pressure port could become blocked, clogged or frozen by the particular medium used. Further applications include processes where the medium changes regularly and any residues could cause mixing or contamination of the media.

Like the standard model, the HDA 4400 with flush membrane has a pressure measurement cell with a thin-film strain gauge on a stainless steel membrane for relative pressure measurement in the high pressure range.

The pressure port is achieved with a fully-sealed stainless steel front membrane filled internally with a pressure transfer fluid. The process pressure is transmitted hydrostatically to the measurement cell via the pressure transfer fluid.

The 4 .. 20 mA or 0 .. 10 V output signals permit connection to all HYDAC measuring and control devices, as well as connection to standard evaluation systems (e.g. PLC controls).

Technical data:

Input data													
Measuring ranges	bar	2.5	4	6	10	16	25	40	100	250	400	600	-1 .. 3
Overload pressures	bar	8	8	12	20	32	50	80	200	500	800	1000	8
Burst pressure [1]	bar	20	20	30	50	80	125	200	500	1000	2000	2000	20
Mechanical connection		G1/2 A ISO 1179-2 G1/4 A ISO 1179-2 G1/2 with additional front O-ring seal G1/4 with additional front O-ring seal G1/2 with add. front O-ring seal and cooling body											
Pressure transfer fluid		Silicone-free oil											
Tightening torque, recommended		45 Nm for G1/2, G1/2 A 20 Nm for G1/4											
Parts in contact with fluid [2]		Mech. connection: Stainless steel Seal: FKM O-ring: FKM											
Output data													
Output signal, permitted load resistance		4 .. 20 mA, 2-conductor; $R_{L max.} = (U_B - 8\ V) / 20\ mA\ [k\Omega]$ 0 .. 10 V, 3-conductor; $R_{L min.} = 2\ k\Omega$											
Accuracy acc. to DIN 16086, terminal based		≤ ± 0.5 % FS typ. ≤ ± 1 % 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		≤ 1 ms											
Long-term drift		≤ ± 0.3 % FS / year typ.											
Environmental conditions													
Compensated temperature range		-25 .. +85 °C											
Operating temperature range		-25 .. +85 °C											
Storage temperature range		-40 .. +100 °C											
Fluid temperature range [3]		-30 .. +100 °C / -25 .. +100 °C -30 .. +150 °C / -25 .. +150 °C for G1/2 with cooling section											
CE mark		EN 61000-6-1 / 2 / 3 / 4											
cULus mark [4]		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 [5]		IP 65 (male connector EN175301-803) IP 67 (M12x1 male connector)											
Other data													
Supply voltage when applied acc. to UL specifications		8 .. 30 V DC 2-conductor 12 .. 30 V DC 3-conductor - 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		~ 150 g											

Note: Reverse polarity protection of the supply voltage, excess voltage, override and short circuit protection are provided.
FS (**F**ull **S**cale) = relative to complete measuring range, **B.F.S.L.** = **B**est **F**it **S**traight **L**ine

[1] For G1/2 with additional front O-ring seal max. 1500 bar
[2] Other seal materials on request
[3] -25 °C with FKM seal, -30 °C on request
[4] Environmental conditions acc. to 1.4.2 UL 61010-1; C22.2 No. 61010-1
[5] With mounted mating connector in corresponding protection class

Model code:

HDA 4 4 Z X – X – XXXX – XXX – 000

Mechanical process connection
Z = flush membrane

Electrical connection
5 = male, EN175301-803, 3 pole + PE
(mating connector supplied)
6 = male M12x1, 4 pole
(mating connector not supplied)

Output signal
A = 4 .. 20 mA, 2-conductor
B = 0 .. 10 V, 3 conductor

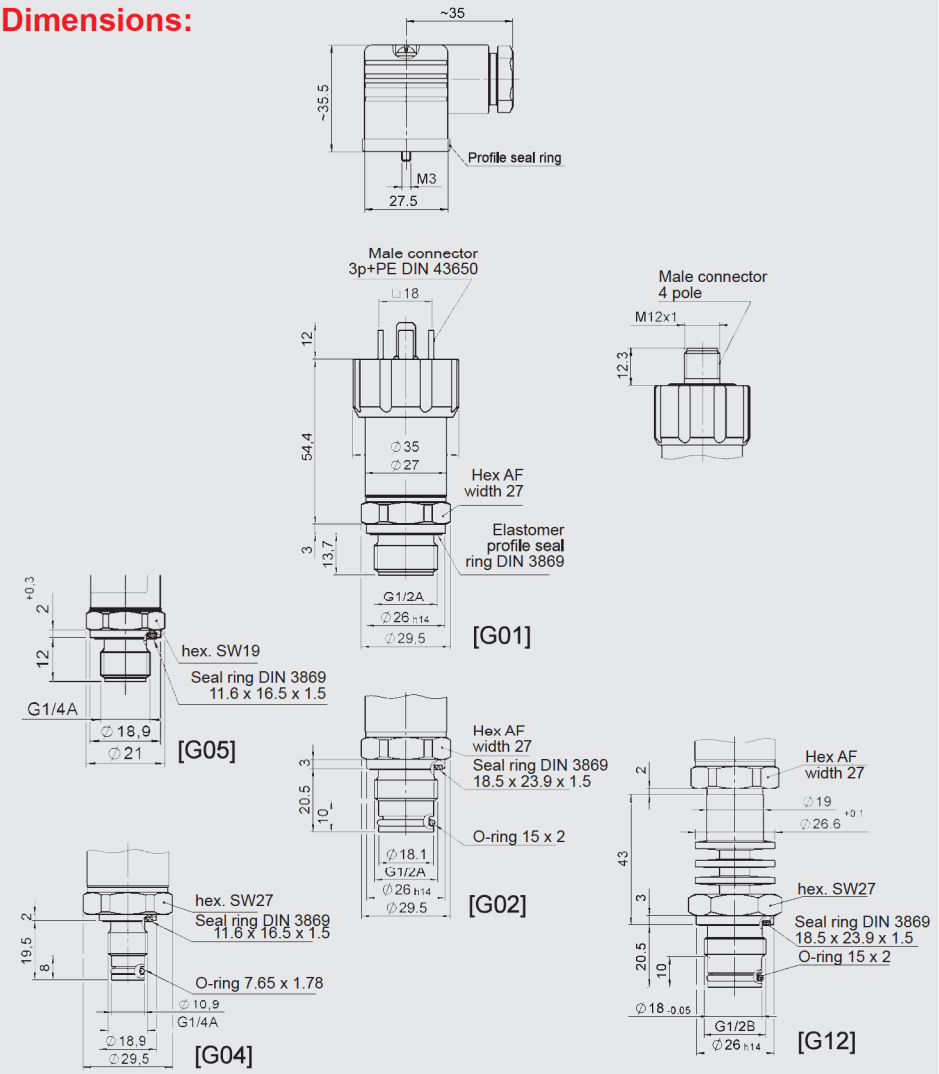
Measuring ranges in bar
02.5; 0004; 0006; 0010; 0016; 0025; 0040; 0100; 0250; 0400; 0600; -1 .. 3

Mechanical connection
G01 = G1/2 A, ISO 1179-2
G02 = G1/2 with additional front O-ring seal
G04 = G1/4 with additional front O-ring seal (only for measuring ranges ≥ 40 bar)
G05 = G1/4 A ISO 1179-2 (only for measuring ranges ≥ 40 bar)
G12 = G1/2 with additional front O-ring seal and cooling section

Modification number
000 = standard

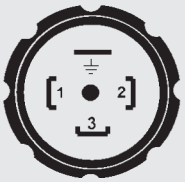
Accessories:
Appropriate accessories, such as mating connectors, can be found in the Accessories brochure.

Dimensions:



Pin connections:

EN175301-803



Pin	HDA 44Z5-A	HDA 44Z5-B
1	Signal +	$+U_B$
2	Signal -	0 V
3	n.c.	Signal
^	Housing	Housing

M12x1

Pin	HDA 44Z6-A	HDA 44Z6-B
1	Signal +	+UB
2	n.c.	n.c.
3	Signal -	0 V
4	n.c.	Signal

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.