

Technical specifications

Operating principle	
Measuring range < 1 bar	Piezoresistive with stainless steel diaphragm
Measuring range ≥ 1 bar	Piezoresistive with ceramic diaphragm

Input		
Input measured variable	Input relative and absolute pressure	
<i>a) Measuring range for relative pressure</i>	<i>Perm. operating pressure</i>	<i>Burst pressure</i>
• 0 ... 100 mbar g	-0,6 ... 0.6 bar g	1 bar g
• 0 ... 160 mbar g	-0,6 ... 0.6 bar g	1 bar g
• 0 ... 250 mbar g	-1 ... 1 bar g	1.7 bar g
• 0 ... 400 mbar g	-1 ... 1 bar g	1.7 bar g
• 0 ... 600 mbar g	-1 ... 3 bar g	5 bar g
• 0 ... 1 bar g	-0,4 ... 2 bar g	5 bar g
• 0 ... 1.6 bar g	-0,4 ... 3.2 bar g	5 bar g
• 0 ... 2.5 bar g	-0,8 ... 5 bar g	12 bar g
• 0 ... 4 bar g	-0,8 ... 8 bar g	12 bar g
• 0 ... 6 bar g	-1 ... 12 bar g	25 bar g
• 0 ... 10 bar g	-1 ... 20 bar g	50 bar g
• 0 ... 16 bar g	-1 ... 32 bar g	50 bar g
• 0 ... 25 bar g	-1 ... 50 bar g	120 bar g
• 0 ... 40 bar g	-1 ... 80 bar g	120 bar g
• 0 ... 60 bar g	-1 ... 120 bar g	250 bar g
• 0 ... 100 bar g	-1 ... 200 bar g	450 bar g
• 0 ... 160 bar g	-1 ... 320 bar g	450 bar g
• 0 ... 250 bar g	-1 ... 500 bar g	650 bar g
• 0 ... 400 bar g	-1 ... 600 bar g	650 bar g
<i>b) Measuring ranges for relative pressure (only for US market)</i>	<i>Perm. operating pressure</i>	<i>Burst pressure</i>
• 0 ... 10 psi g	-3 ... 20 psi g	60 psi g
• 0 ... 15 psi g	-5,8 ... 30 psi g	72 psi g
• 3 ... 15 psi g	-5,8 ... 30 psi g	72 psi g

Input		
• 0 ... 20 psi g	-5,8 ... 40 psi g	72 psi g
• 0 ... 30 psi g	-5,8 ... 60 psi g	72 psi g
• 0 ... 60 psi g	-11,5 ... 120 psi g	175 psi g
• 0 ... 100 psi g	-14,5 ... 200 psi g	360 psi g
• 0 ... 150 psi g	-14,5 ... 300 psi g	725 psi g
• 0 ... 200 psi g	-14,5 ... 400 psi g	725 psi g
• 0 ... 300 psi g	-14,5 ... 600 psi g	1750 psi g
• 0 ... 500 psi g	-14,5 ... 1000 psi g	1750 psi g
• 0 ... 750 psi g	-14,5 ... 1500 psi g	3600 psi g
• 0 ... 1000 psi g	-14,5 ... 2000 psi g	3600 psi g
• 0 ... 1500 psi g	-14,5 ... 3000 psi g	6525 psi g
• 0 ... 2000 psi g	-14,5 ... 4000 psi g	6525 psi g
• 0 ... 3000 psi g	-14,5 ... 6000 psi g	9425 psi g
• 0 ... 5000 psi g	-14,5 ... 8700 psi g	9425 psi g
• 0 ... 6000 psi g	-14,5 ... 8700 psi g	9425 psi g
<i>c) Measuring ranges for absolute pressure (only for US market)</i>	<i>Perm. operating pressure</i>	<i>Burst pressure</i>
• 0 ... 10 psi a	0 ... 20 psi a	60 psi a
• 0 ... 15 psi a	0 ... 30 psi a	72 psi a
• 0 ... 20 psi a	0 ... 40 psi a	72 psi a
• 0 ... 30 psi a	0 ... 60 psi a	72 psi a
• 0 ... 60 psi a	0 ... 120 psi a	175 psi a
• 0 ... 100 psi a	0 ... 200 psi a	360 psi a
• 0 ... 150 psi a	0 ... 300 psi a	725 psi a
• 0 ... 200 psi a	0 ... 400 psi a	725 psi a
• 0 ... 300 psi a	0 ... 600 psi a	1750 psi a
<i>d) Measuring range for absolute pressure</i>	<i>Perm. operating pressure</i>	<i>Burst pressure</i>
• 0 ... 600 mbar a	0 ... 3 bar a	5 bar a
• 0 ... 1 bar a	0 ... 2 bar a	5 bar a
• 0 ... 1.6 bar a	0 ... 3.2 bar a	5 bar a
• 0 ... 2.5 bar a	0 ... 5 bar a	12 bar a
• 0 ... 4 bar a	0 ... 8 bar a	12 bar a

Input		
• 0 ... 6 bar a	0 ... 12 bar a	25 bar a
• 0 ... 10 bar a	0 ... 20 bar a	50 bar a
• 0 ... 16 bar a	0 ... 32 bar a	50 bar a

Output	
<i>Current signal</i>	4 ... 20 mA
• Load	$(U_H - 10 \text{ V})/0.02 \text{ A}$
• Auxiliary power U_H	DC 10 ... 36 V (10 ... 30 V for Ex)
<i>Voltage signal</i>	DC 0 ... 10 V
• Load	$\geq 10 \text{ k}\Omega$
• Auxiliary power U_H	DC 15 ... 36 V
• Power consumption	$< 7 \text{ mA}$ at 10 k Ω
<i>Characteristic</i>	Linear rising

Measuring accuracy	
Error in measurement at 25 °C (77 °F), including conformity error, hysteresis and repeatability	<ul style="list-style-type: none"> • Typical: 0.25 % of full scale value • Maximum: 0,5 % of full scale value
Setting time T_{99}	$< 0.1 \text{ s}$
<i>Long-term drift</i>	
• Lower range value and measuring span	0.25 % of full scale value/year
<i>Ambient temperature influence</i>	
• Lower range value and measuring span	<ul style="list-style-type: none"> • 0.25 %/10 K of full scale value • 0.5 %/10 K of full scale value for a measuring range of 100 to 400 mbar
• Influence of vibration (per IEC 60068-2-6)	0.005 %/g to 500 Hz in all directions
• Power supply influence	0.005 %/V
<i>Operating conditions</i>	
• Process temperature	-30 to +120 °C (-22 to +248 °F)
• Ambient temperature	-25 to +85 °C (-13 to +185 °F)
• Storage temperature	-50 to +100 °C (-58 to +212 °F)

Measuring accuracy	
<ul style="list-style-type: none"> Degree of protection (as per EN 60529) 	<ul style="list-style-type: none"> IP65 with plug per EN 175301-803-A IP67 with plug M12 IP68 with cable
<i>Electromagnetic compatibility per EN 61326; NAMUR NE 21</i>	
<ul style="list-style-type: none"> Measurement error 	≤ 1 % of full scale value. Cable screen is not connected to ground connection.
Design	
Weight	Approx. 0,25 kg (0.55 lb)
Process connections	<u>Dimension Drawings</u>
Electrical connections	<ul style="list-style-type: none"> Plug per EN 175301-803-A form A with cable inlet M16x1.5 or ½-14NPT or Pg 11 Plug M12 (mating connector as option) 2- or 3-wire (0.5 mm²) screened lead (Ø 8.3 mm) with vent pipe
<i>Material of the wetted parts</i>	
<ul style="list-style-type: none"> Measuring cell 	Al2O3 - 96 % or stainless steel (SST 316 L)
<ul style="list-style-type: none"> Process connection 	Stainless steel, mat. no. 1.4571 (SST 316 Ti)
<ul style="list-style-type: none"> Sealing ring 	<ul style="list-style-type: none"> FPM -15 ... +125 °C (+5 ... +257 °F) Neoprene -35 ... +100 °C; < 100 bar (-31 ... +212 °F; < 1450 psi) Perbunan -20 ... +100 °C (-4 ... +212 °F) EPDM -40 ... +145 °C; < 100 bar (-40 ... +293 °F; < 1450 psi) usable for drinking water
<i>Material of parts not in contact with the medium</i>	
<ul style="list-style-type: none"> Housing 	Stainless steel, mat. no. 1.4571 (SST 316 Ti)
<ul style="list-style-type: none"> Connector housing 	<ul style="list-style-type: none"> Plastic (plug per EN 175301-803-A) CuZn, nickel-plated (plug M12)
<ul style="list-style-type: none"> Cable 	<ul style="list-style-type: none"> PE

Certificates and approvals	
Classification according to Pressure Equipment Directive (PED 97/23/EC)	For gases of fluid group 1 and liquids of fluid group 1; fulfills the requirements according to article 3, paragraph 3 (good engineering practice)
Explosion protection	
<ul style="list-style-type: none"> Intrinsic safety "i" (with current output only) 	Ex II 1/2 G Ex ia IIC T4

Certificates and approvals	
• EC type examination certificate	TÜV 02 ATEX 1953 X (E1, E2)
• Connection to certified intrinsically safe circuits with maximum values	$U_i = DC 30 DC$; $I_i = 100 \text{ mA}$; $P_i = 0.75 \text{ W}$
• Effective internal inductance and capacity for versions with plugs per EN 175301-803-A and M12	$L_i = 2.2 \text{ nH}$; $C_i = 4.9 \text{ nF}$
• Effective internal inductance and capacity for version with cable	$L_i = 2.2 \text{ nH} + 1.5 \text{ } \mu\text{H/m}$; $C_i = 4.9 \text{ nF} + 0.25 \text{ nF/m}$
Lloyds Register of Shipping (LR)	05/20049(E1)
Germanischer Lloyds Register of Shipping (GL)	33 229-06 HH
American Bureau of Shipping (ABS)	06-HG205130-PDA
Bureau Veritas (BV)	19113/A0 BV
Det Norske Veritas (DNV)	A -10351
Drinking water approval (ACS)	07 ACC NY 195