

Pressure Sensors for Highest Pressures

Accuracy 0.5%

Standard output: 4...20 mA - 2-wire system

or 0...10 VDC - 3-wire system



Description

Pressure sensors for highest pressures are top of the range among pressure sensors. They are impressive due to the flexible construction of both their electrical and their mechanical connections and in the field of highest pressure measurement they provide the user with the perfect solution to the measuring task in hand.

Long-term stability, peak pressure resistance, corrosion-resistance and a high level of mechanical safety make them suitable for these demanding measuring tasks.

The graduated measuring ranges cover from 0 ... 1600 bar up to the high pressure range of 0 ... 15000 bar. The case and wetted parts are made from stainless steel and are thus resistant to chemically aggressive media.

The measuring cell clamped to the pressure connection by means of a sealing cone guarantees a very high loading capacity. A relief bore ensures a defined escape for the media in the direction of the pressure connection in the event of damage.

Optionally available are a replaceable process connection and a cavitation module for highly dynamic measuring tasks.

Shape A DIN EN 175301-803 plugs with junction box, round connectors M12 x 1 (4-pin) or a cable outlet are provided to pick up the electrical output signals.

Pressure sensors for highest pressures meet electromagnetic compatibility requirements in accordance with EN 61326.

Features

- O High peak pressure resistance
- O High alternating load resistance
- High long-term stability
- o Mechanical safety design
- O Corrosion-resistant stainless steel design
- o Optional cavitation module
- O Replaceable process connection

Measuring ranges

Gauge pressure

positive 0...1600 bar to 0...15000 bar

Applications

Autofrettage

Highest pressure cleaning

Highest pressure pasteurisation

Hydroforming

LDPE systems

Testing systems for bursting pressure

Water-jet cutting device

Model: P3298

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Technical Data

Model range	P3298	Option	
Type of pressure	Positive gauge pressure	·	
Output signal	420 mA - 2-wire system	Others on request	
	010 VDC - 3-wire system	·	
Accuracy	0.5 % of FS ¹)	0.5 % of FS on request	
Measuring ranges to EN	0 1600 bar		
	0 2500 bar		
	0 4000 bar		
	0 5000 bar		
	0 6000 bar		
	0 7000 bar	40000 h	
	0 8000 bar	>10000 bar	
Canaca alamant	0 10000 bar	on request	
Sensor element	thin film	_	
Reproducibility	≤±0.05 % of FS	_	
Stability per year	≤ ± 0.1 % of FS in rated conditions		
Housing	stainless steel		
Wetted parts	stainless steel		
RoHS conformity	on request		
Overload limit	≤ 5000 bar 1.2-fold; > 5000 bar 1.1-fold;		
Electr. connection	plug to DIN EN 175301-803 shape A with junction box	Cable outlet with	
	round connectors M12x1 (4-pin)	1.5 m cable	
Power supply	1430 VDC, (1030 VDC for output 4 20 mA)		
Isolation voltage	500 VDC		
Load	D [0] . (II D (I 40) () (0 00 A		
- 420 mA	$R_A[\Omega] \le (U_B[V]-10V)/0.02A$		
- 05 V	> 5 kΩ		
_ 010 V	> 10 kΩ		
Temperature comp. range	0 80°C		
Temperature influence	≤ 1% typical , max. 2.5% in compensated range		
Zero point controllability	± 5% (by means of potentiometer on device)		
Response time	≤ 1 ms (within 10% to 90% of FS)		
Protection type	IP65 for plug DIN EN 175301-803 shape A	IP 67 for cable outlet	
(to IEC 60 529)	IP67 for round connector M12x1		
CE conformity	07/00/50		
Pressure vessels directive	97/23/EC		
 EMC directive 	2004/108/EC, EN 61326 Emission (Group 1, Class B) and		
Shock resistance	Interference (industrial area) 100g (2.4ms) to IEC 60068-2-27	\dashv	
Vibration resistance	0.35 (10 55Hz) to IEC 60068-2-6	\dashv	
Electr. protection types	polarity, overvoltage and short-circuit protection	\dashv	
Temperature ranges	polarity, overvoitage and short-circuit protection	\dashv	
- storage	-40 85 °C		
– storage – media	0 80 °C		
- media - ambient	-20 80 °C		
	approx. 0.3 kg	\dashv	
Weight	appius. U.3 kg		

of FS = of full scale value

¹⁾ Terminal point adjustment includes non-linearity, hysteresis, zero point and limit value deviation.

²⁾ Declaration of Conformity on request

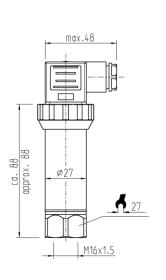
Dimensions (mm)

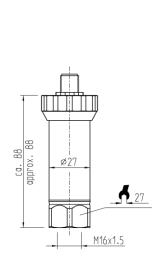
Housing

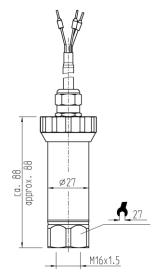
Plug module DIN EN 175301-803 shape A Round connector M12 x 1

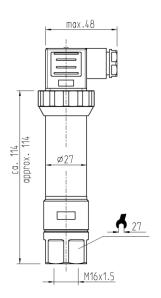
Cable outlet with 1.5 m long (PUR)

with optional cavitation and pressure peak protection







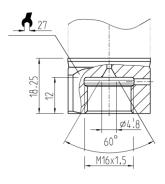


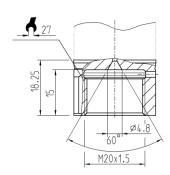
Pressure connections

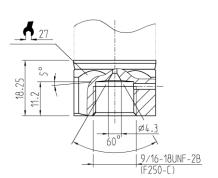
M16 x 1.5 internal with sealing cone, (up to 7000 bar)

M20 x 1.5 internal with sealing cone

9/16-18 UNF internal, F250-C (up to 7000 bar)







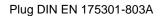
Installation and safety notes are provided in the Operating Instructions for this product.

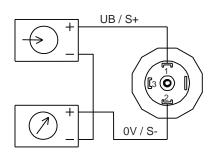
Please take the values applicable for torque and maximum pressure from the documents provided by your high-pressure pipe supplier.

Please pay attention to the max. permissible pressure for the high-pressure pipes you are using (see information provided by the high-pressure pipe producer)

Electrical connection

Two-wire system

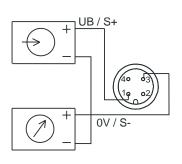




E-001

E-002

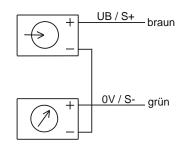
Round connector M12x1



E-033

E-034

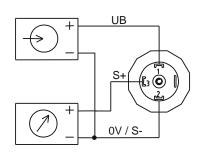
Cable outlet



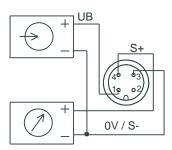
E-015

Three-wire system

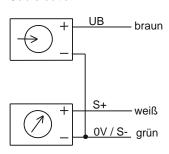
Plug DIN EN 175301-803A



Round connector M12x1



Cable outlet



E-017

Connection table for plug or cable outlet

		420 mA (2-wire)			010VDC (3-wire)		
	Plug M12x1	DIN plug	Cable outlet	Plug M12x1	DIN plug	Cable outlet	
Supply: UB+	1	1	brown	1	1	brown	
Supply: 0V	3	2	green	3	2	green	
Signal: S+		-	-	4	3	white	
Signal: S-		-	-	3	2	green	

Order details

- 1. Model
- 2. Measuring range
- 3. Output signal