



Pressure measurement



Type:
Precont TN10

digital pressure switch and pressure transmitter with ceramic membrane - newest generation with great display, analog- and 4 switching outputs

Description

The devices of the series Precont® TN with integrated digital evaluation electronic are compact sensors for measuring and monitoring of pressure levels.

The excellent characteristics like highest strength against pressure and pressure blows, high resistance against chemicals and corrosion, very good insensitiveness against temperature shocks and EM interference, highest accuracy and long term stability and also low influence of temperature makes it possible to use the sensor in all pressureless containers for liquid medium like water, waste water, solvents, oil, sludge, grease, cleaning agents, etc.



Application

- Pressure measurement from vacuum to high pressure
- Volume measurement and calculation in nonlinear container shapes
- Flow measurement through stored formulas for Venturi, V-weir, trapezoidal rectangular flume
- Level and Pressure Data Logger
- Limit transmitter with 4 adjustable switching outputs

Your benefits

- Simple commissioning thanks to *intuitive user guidance*
- Large display - values of great distance readable
- Volume Linear display in all container shapes possible
- Flow measurement with pre-stored formulas
- *Data logger function* for recording of measured values
- Closed smooth surface - no dirt holes
- Excellent display of measured values
- *Plain text operator guidance*



Specials



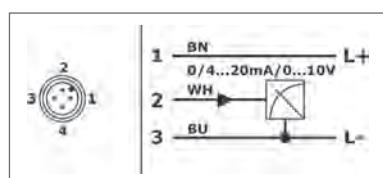
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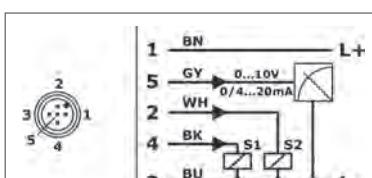
Technical data

Technical data		
power supply:	9...30V DC at output signal 0(4)...20mA 14...30V DC at output signal 0...10V	
supply current:	≤ 130 mA; at Vs 9V ≤ 50 mA; at Vs 30V	Bluetooth ON; PNP-switching outputs in neutral Bluetooth OFF; PNP-switching outputs in neutral
Analog output		
work space:	(0)4...20mA / 0...10V, adjustable	
resolution:	≤ 1 µA	
reaction time:	≤ 15 ms	
PNP-switching output		
amount:	0/2/4 depending on device version	
function:	PNP-switching on +Vs	
output current:	≤ 250 mA	current limited, short circuit protected
reaction time:	≤ 25 ms	
Bluetooth Interface		
version:	Bluetooth 2.1 +EDR	
class:	2	
distance:	≤ 10m	
Electrical connection		
version:	connector M12 4/5/8 pole, depending on the instrument version	
Measurement accuracy		
model:	≤ ±0,05% / 0,1% / 0,2%	
long term drift:	≤ ±0,1% FS	not cumulative
temperature deviation:	≤ ±0,15% FS / 10 K (Zero / Span)	
Materials		
membrane: (medium contact)	ceramics AL2O3 99,9%	
process connection: (medium contact)	steel 1.4404/316L resp. 1.4571/316Ti	
connection housing:	CrNi-steel	
user interface:	PC/PES	
gaskets: (medium contact)	FPM – fluoroelastomer (Viton®) EPDM – Ethylene-propylene-diene monomer CR – chloroprene rubber (Neopren®) FFKM – perfluor elastomere (Kalrez®)	
environmental conditions		
ambient temperature:	-20°C...+50°C	
process temperatures:	- 40°C...+125°C	
process pressure ranges:	- 1 bar ...60 bar	
turn down:	30:1	
protection:	IP68	EN/IEC 60529

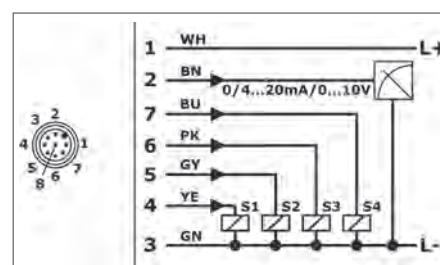
Connection



Signal 0/4...20 mA / 0...10 V
wire colors standard connection cable M12:
BN = brown, WH = white, BU = blue



Signal 0/4...20 mA / 0...10 V
2x PNP switching output
wire colors standard connection cable M12:
BN = brown, WH = white, BU = blue,
BK = black, GY = grey

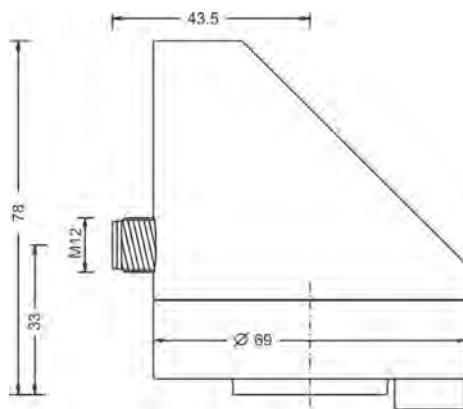


Signal 0/4...20 mA / 0...10 V
4x PNP switching output
wire colors standard connection cable M12:
WH = white, BN = brown, GN = green, YE = yellow,
GY = grey, PK = pink, BU = blue, RD = red

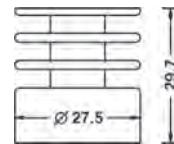
Dimension drawings

Type:
Precont TN10

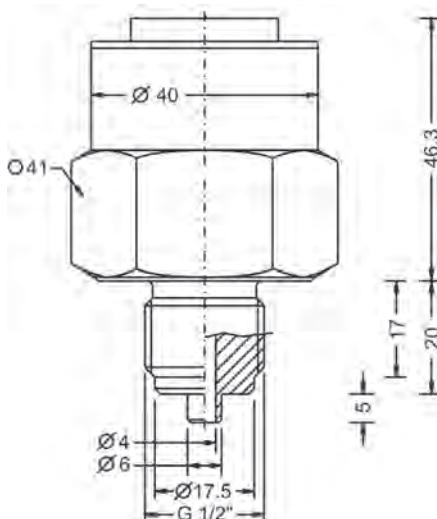
connection housing



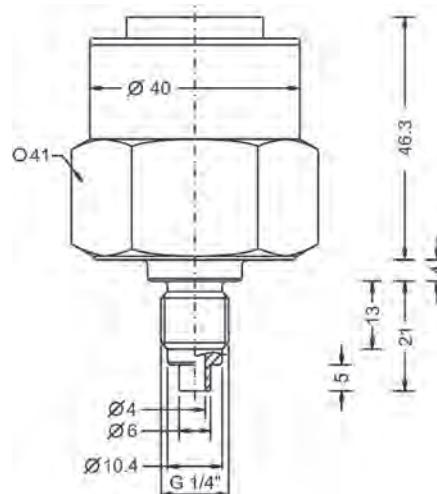
temperature decoupler
for extended temperature range
- 40 °C up to +125 °C



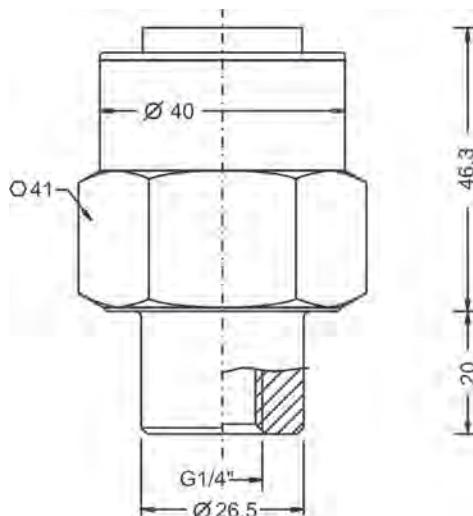
type 0
G 1/2" ISO 228-1 DIN 837-3



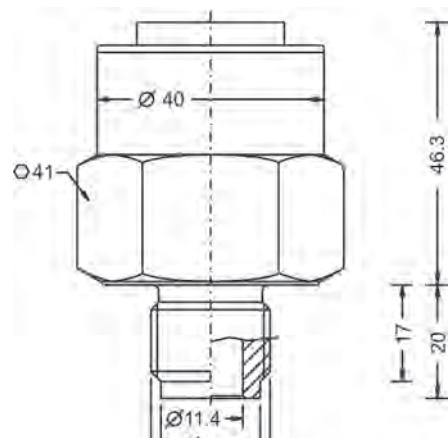
type 1
G 1/4" ISO 228-1 DIN 837-3



type 4
G 1/4" ISO 228-1 internal thread



type 6
G 1/2" ISO 228-1 inner bore 11,4mm



Order code

model				
TN10	standard			
	process connection			
0	G½" A, ISO 228-1, DIN EN 837-3 (DIN 16288) manometer			
6	G½" A, ISO 228-1, inner bore 11,4 mm			
1	G¼" A, ISO 228-1, DIN EN 837-3 (DIN 16288) manometer			
4	G¼" B, ISO 228-1, internal thread			
	electronics - output			
M	3-wire, signal 0/4...20mA - 0...10V, LCD-display, keyboard			
K	3-wire, signal 0/4...20mA - 0...10V, 2x PNP, LCD-display, keyboard			
R	3-wire, signal 0/4...20mA - 0...10V, 4x PNP, LCD-display, keyboard			
	electronics - function			
0	without			
1	Bluetooth-Interface			
Y	others			
	material process connection (process wetted)			
V	steel 1.4404/316L or 1.4571/316Ti			
	material connection housing			
C	CrNi-steel			
	measuring range			
01	0...100 mbar			
02	0...200 mbar			
03	0...400 mbar			
04	0...600 mbar			
05	0...1 bar			
06	0...1,6 bar			
07	0...2,5 bar			
08	0...4 bar			
09	0...6 bar			
10	0...10 bar			
11	0...16 bar			
12	0...20 bar			
13	0...40 bar			
14	0...60 bar			
15	-100...0 mbar			
16	-1...0 bar			
17	-1...+1 bar			
18	-100...+100 mbar			
YY	special measuring range (poss. higher deviation accuracy)			
	material gaskets (process wetted)			
1	FPM - fluoroelastomer (Viton®)			
2	CR - chloroprene rubber (Neopren®)			
3	EPDM - Ethylene-propylene-diene monomer -food applications			
4	FFKM - perfluor elastomere (Kalrez®)			
6	FFKM hd - perfluor elastomere high density - gas applications			
	process temperature			
0	standard, -40°C up to +100°C			
1	advanced, -40°C up to +125°C , temperature decoupler			
	pressure type			
R	gauge pressure			
A	absolute pressure			
	measuring system - accuracy			
1	ceramics 99,9% high purity, capacitive / 0,2%			
3	ceramics 99,9% high purity, capacitive / 0,1%, linearization protocol			
6	Xcellence - ceramics 99,9% high purity, capacitive / 0,05%, linearization protocol			
	electrical connection			
S	plug M12			

Order code

Precont

TN10

V

C

S

Equipment

Ordering information
 LKZ0405PUR-AS
 LKZ0410PUR-AS
 LKZ0505PUR-AS
 LKZ0510PUR-AS
 LKZ0805PUR-AS

Model
 connection cable 5 m, 4-pole, shielded
 connection cable 10 m, 4-pole, shielded
 connection cable 5 m, 5-pole, shielded
 connection cable 10 m, 5-pole, shielded
 connection cable 5 m, 8-pole, shielded