



Pressure measurement



Type:
Precont® CT

*Pressure transmitter for general applications
Monitoring of absolute or relative pressure
in gases, vapors, liquids and dust*

In brief



Application

- General applications in
 - Machinery and plant engineering
 - Air-conditioning and refrigeration plant engineering
 - Hydraulic and pneumatic systems
 - Process industry
 - Environmental technology
 - Facility and building automation

Your benefits

- Wide range of applications
- Finely graded measuring ranges from 100 mbar up to 16 bar
- Wide process temperature range -40°C to $+125^{\circ}\text{C}$
- Wide variety of process connections
- High protection class IP69K/IP67
- Wide environmental temperature range -40°C to $+85^{\circ}\text{C}$
- Certification ATEX II 1 G Ex ia IIB/IIC Tx Ga
- Ceramic front-flush diaphragm
- High accuracy – characteristic deviation to $\leq 0,1\%$ of measuring range
- Integrated evaluation electronic: current output 4...20mA / Voltage output 0...10V / connector plug M12 / connector plug EN 175-301-803-C / -A / connection cable with integrated reference air capillary

Description

The device is an electronic pressure transmitter for monitoring, control as well as continuous measurement of pressures in gases, vapors, liquids and dusts.

Due to the device construction with measuring ranges from -1 bar to 16 bar (gauge), measuring ranges from 0 bar to 16 bar (absolute), measuring spans from 100 mbar to 16 bar, process temperatures from -40°C to $+125^{\circ}\text{C}$, environmental temperatures from -40°C to $+85^{\circ}\text{C}$, process materials Al₂O₃-ceramic / CrNi-steel as well as the availability of industrial standard process connections like thread ISO 228-1 the device is especially suitable for the use for machinery and plant engineering, air-conditioning and refrigeration plant engineering, hydraulic and pneumatic systems, process industry, environmental technology, facility and building automation.

The device is suitable for demanding measuring requirements. Through its optimized design, the

front-flush process connection enables the cleanability of the wetted diaphragm to be integrated into the process.

The device is suitable for the use at SIP cleaning processes.

Low-maintenance and trouble-free pressure measurement is thus also guaranteed in critical applications with frequently changing media.

The certification acc. to ATEX II 1 G Ex ia IIB/IIC Tx Ga allows the use in explosion hazardous areas.

The robust design and the high-quality workmanship turns the device into a very high quality product, which even the most adverse environmental conditions cannot affect, whether the lowest temperatures when used outdoors, extreme shock and vibration stress or aggressive media.

A captive laser marking of the type label ensures the identifiability throughout the entire lifetime of the device.

Obviously is the optional marking of a measurement point designation resp.



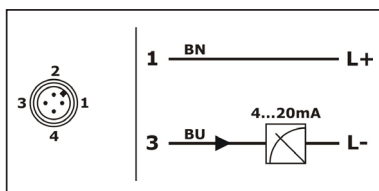
TAG, a customer label or of a neutral type label, of course also per laser marking.



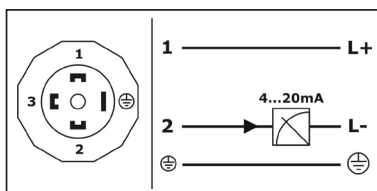
Technical Data

Technical data	
Power supply:	Type A – 2-wire, current 4...20mA: 10...30VDC, reverse polarity protected Type B – 3-wire, voltage 0...10V: 14...30VDC, reverse polarity protected
Supply current:	Type A – 2-wire, current 4...20mA: ≤ 30mA Type B – 3-wire, voltage 0...10V: ≤ 6mA
Measurement accuracy	
Characteristics deviation:	≤ ±0,1% / ±0,25% FS
Long term drift:	≤ ±0,15% FS / year not cumulative
Temperature deviation:	Zero: ≤ ±0,015% FS / K / max. ±0,75 % (-20°C...+80°C) Span: ≤ ±0,015% FS / K / max. ±0,5 % (-20°C...+80°C / > 0,4 bar) / max. ±0,8 % (-20°C...+80°C / ≤ 0,4 bar)
Material	
Membrane (medium contact):	Measuring range ≤ 1bar: Ceramic Al ₂ O ₃ – 99,7% (SIP suitable) Measuring range ≥ 1,6bar: Ceramic Al ₂ O ₃ – 96% (SIP suitable)
Process connection (medium contact):	Steel 1.4404/316L / Steel 1.4571/316Ti
Terminal enclosure:	CrNi-steel
Gaskets: (medium contact)	FPM – fluorelastomere (e.g. Viton®) EPDM – ethylene-propylene-dienmonomere, FDA-listed FFKM – perfluorelastomere (e.g. Kalrez®) FFKM hd – perfluorelastomere high density
Electrical connection part:	Electrical connection type V – Plug M12: Device plug PUR Electrical connection type S/T – Plug EN 175-301-803: Device plug PA / Gasket NBR Electrical connection type K – Cable: Cable gland PA / Gasket CR / NBR / Cable sheath PE
Environmental conditions	
Ambient temperature:	– 40°C...+85°C
Process temperatures:	– 40°C...+100°C resp. 125°C
Process pressure ranges:	– 1 bar ...16 bar (depending on type)
Protection:	Electrical connection type V – Plug M12: IP69K/IP67 (EN/IEC 60529) Electrical connection type S/T – Plug EN 175-301-803: IP65 (EN/IEC 60529) Electrical connection type K – Cable: IP69K (EN/IEC 60529) / IP68 [≤ 10 mwc] (EN/IEC 60529)

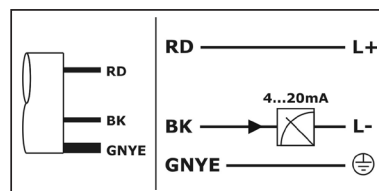
Electrical connection



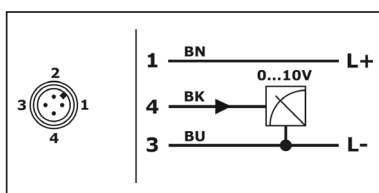
Electronic output – 2-wire, current 4...20mA
Plug M12: Conductor color standard connection cable M12 – A-coded: BN = brown, BU = blue



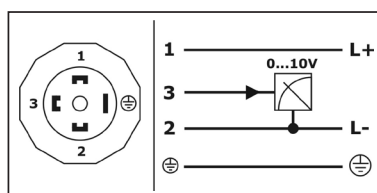
Electronic output – 2-wire, current 4...20mA
Plug EN 175-301-803



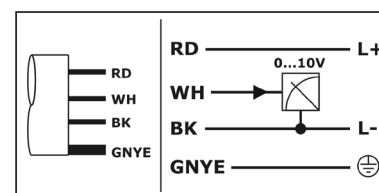
Electronic output – 2-wire, current 4...20mA
Cable
Conductor color cable: RD = red, BK = black, GNYE = greenyellow



Electronic output – 3-wire, voltage 0...10V
Plug M12
Conductor color standard connection cable M12 – A-coded: BN = brown, BU = blue, BK = black

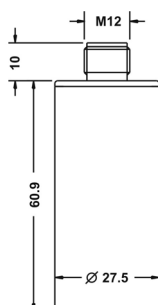


Electronic output – 3-wire, voltage 0...10V
Plug EN 175-301-803

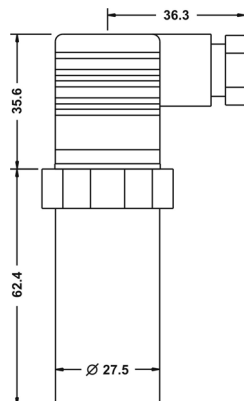


Electronic output – 3-wire, voltage 0...10V
Cable
Conductor color cable: RD = red, BK = black, WH = white, GNYE = greenyellow

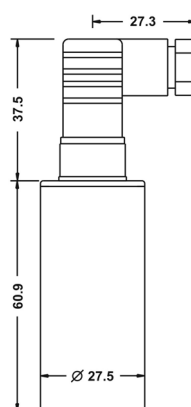
Terminal enclosure
Electrical connection type V -
Plug M12



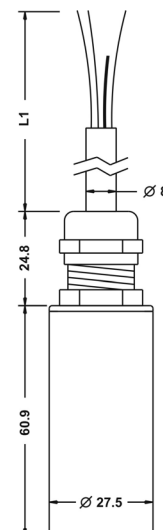
Terminal enclosure
Electrical connection type T -
Plug EN 175-301-803-A



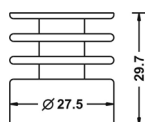
Terminal enclosure
Electrical connection type S -
Plug EN 175-301-803-C



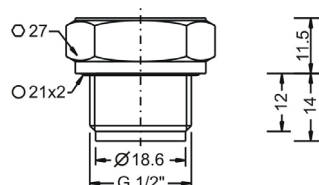
Terminal enclosure
Electrical connection type K -
Cable



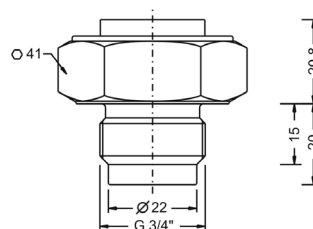
Temperature decoupler



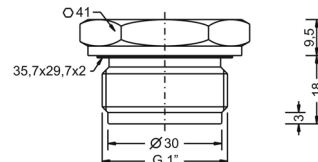
Process connection
Type 0 - Thread ISO 228-1 -
G 1/2" B, front-flush



Process connection
Type 8 - Thread ISO 228-1 -
G 3/4" A, front-flush



Process connection
Type 5 - Thread ISO 228-1 -
G 1" A, front-flush



0

Ex

CT

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S

T

K

Type
Standard
ATEX II 1 G Ex ia IIB/IIC Tx Ga

Measuring system – material diaphragm (process wetted) / sensor type
Ceramic Al₂O₃ 96%/99,7% / capacitive

Process connection
Thread ISO 228-1 – G½" B, front-flush
Thread ISO 228-1 – G¾" A, front-flush
Thread ISO 228-1 – G1" A, front-flush
others

Material process gaskets (process wetted)
FPM – fluorelastomere (e.g. Viton®)
EPDM – ethylene-propylene-dienmonomere, FDA-listed
FFKM – perfluorelastomere (e.g. Kalrez®)
FFKM hd – perfluorelastomere high density - gas applications
others

Material process connection (process wetted)
CrNi-steel

Material terminal enclosure
CrNi-steel

Measuring range
0...100 mbar
0...250 mbar
0...400 mbar
0...600 mbar
0...1 bar
0...1,6 bar
0...2,5 bar
0...4 bar
0...6 bar
0...10 bar
0...16 bar
-100...+100 mbar
-1...+1 bar
Special measuring range

Electronic – output
2-wire, current 4...20mA
3-wire, voltage 0...10V

Process temperature
Standard -40°C...+100°C
Extended -40°C...+125°C, temperature decoupler

Pressure type
Gauge pressure
Absolute pressure (≤ 25 bar)

Measuring system – accuracy
0,25%
0,1%, linearization protocol

Electrical connection
Plug M12x1
Plug EN 175-301-803-C (DIN 43650-C)
Plug EN 175-301-803-A (DIN 43650-A)
Kabel, L1 ≥ 2m

Bestellschlüssel

Precont®

CT

V

C

Equipment

Order information

BKZ0412-VA

LKZ0405PUR-AS

LKZ0410PUR-AS

Model

Matching cable socket, VA-nut

Connection cable 5 m, 4-pole, shielded

Connection cable 10 m, 4-pole