Type:
Precont® KT

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 250 mbar up to 600 bar
- Wide process temperature range –40°C to +135°C
- Wide variety of process connections
- High protection class IP69K/IP67
- Wide environmental temperature range –40°C to +85°C
- Certification ATEX II 1 G Ex ia IIB/IIC Tx Ga
- Ceramic front-flush or internal diaphragm
- High accuracy – characteristic deviation to ≤ 0,5% 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

A LABS-free resp. silicone-free version, a factory calibration with calibration certificate and a customer specific configuration resp. preset is also optionally available like a material test certificate EN10204 3.1.

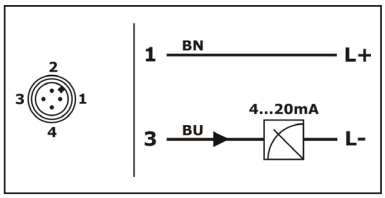
Description

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 0 bar to 600 bar (gauge), measuring ranges from 1 bar to 40 bar (absolute), measuring spans from 250 mbar to 600 bar, process temperatures from –40°C to +135°C, environmental temperatures from –40°C to +85°C, process materials Al2O3-ceramic / CrNi-steel as well as the availability of industrial standard process connections like thread connection ISO 228-1 (EN 837 manometer), thread connection ISO 228-1 (inner thread), thread connection ISO 228-1 (EN 1179-2 E), thread connection ISO 228-1 (inner bore) 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 and facility and building automation.
The pressure transmitter is suitable for cost sensitive as well as demanding measuring requirements.
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.

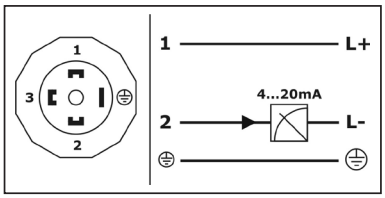
Technical Data

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:	≤ ±0,5% FS
Long term drift:	≤ ±0,2% FS / year not cumulative
Temperature deviation:	Zero+ Span: ≤ ±0,05% FS / K
Material	
Membrane (medium contact):	Ceramic aluminum oxide Al_2O_3 – 96%
Process connection (medium contact):	Steel 1.4404/316L
Terminal enclosure:	CrNi-steel
Gaskets (medium contact):	FPM – fluorelastomere (e.g. Viton®) EPDM – ethylene-propylene-dienmonomere, FDA-listed
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. 135°C
Process pressure ranges:	– 1 bar ...600 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)

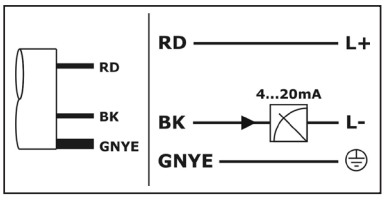
Electrical connection



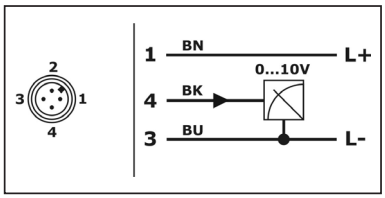
Electronic output – 2-wire, current 4...20mA
Plug M12: Conductor color standard connection cable M12 – A-coded: BN = brown, BU = blue



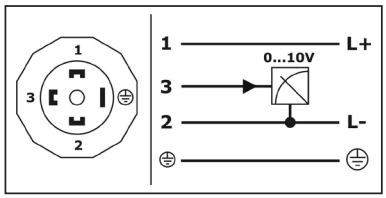
Electronic output – 2-wire, current 4...20mA
Plug EN 175-301-803



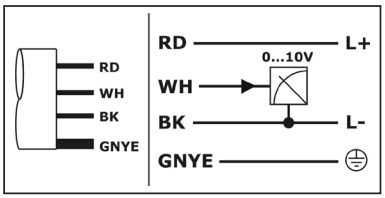
Electronic output – 2-wire, current 4...20mA
Cable
Conductor color cable: RD = red, BK = black, GNYE = greenyellow



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

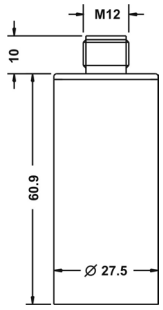


Electronic output – 3-wire, voltage 0...10V
Cable
Conductor color cable: RD = red, BK = black, WH = white, GNYE = greenyellow

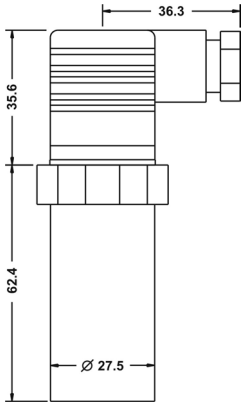
Dimension drawings

Type:
Precont® KT

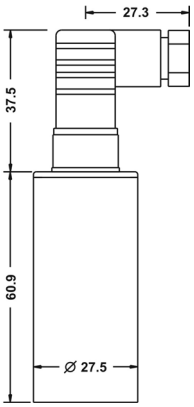
Terminal enclosure
Electrical connection type V - Plug M12



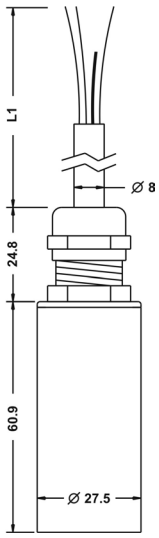
Terminal enclosure
Electrical connection type T - Plug EN 175-301-803-A



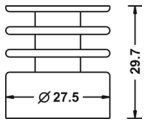
Terminal enclosure
Electrical connection type S - Plug EN 175-301-803-C



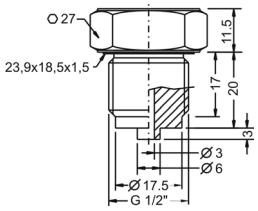
Terminal enclosure
Electrical connection type K - Cable



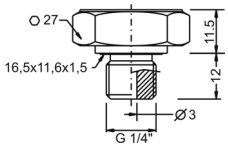
Temperature decoupler



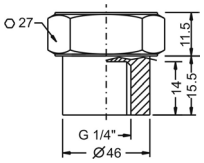
Process connection
Type 1 – Thread ISO 228-1 – G½"B, EN 837



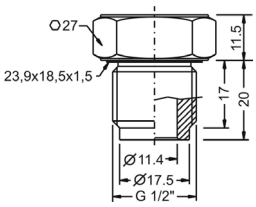
Process connection
Type 3 – Thread ISO 228-1 – G¼"B, DIN EN ISO 1179-2 E



Process connection
Type 4 – Thread ISO 228-1 – G¼" I, inner thread



Process connection
Type 2 – Thread ISO 228-1 – G½"B, inner bore



Order code

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

Measuring system – material diaphragm (process wetted) / sensor type
KT Ceramic Al_2O_3 96% / strain gauge

Process connection
1 Thread ISO 228-1 – G½"B, EN 837 manometer
3 Thread ISO 228-1 – G¼"B, DIN EN ISO 1179-2 E
4 Thread ISO 228-1 – G¼"I, inner thread
2 Thread ISO 228-1 – G½"B, inner bore
Y others

Material process gaskets (process wetted)
1 FPM – fluorelastomere (e.g. Viton®)
3 EPDM – ethylene-propylene-dienmonomere, FDA-listed
Y others

Material process connection (process wetted)
V CrNi-steel
L Aluminum (measuring range ≤ 0..16 bar)

Material terminal enclosure
C CrNi-steel

Measuring range
02 0...250 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...25 bar
13 0...40 bar
14 0...60 bar
19 0...100 bar
20 0...160 bar
21 0...250 bar
22 0...320 bar
23 0...400 bar
24 0...600 bar
YY Special measuring range

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

Process temperature
0 Standard –40°C...+100°C
1 Extended –40°C...+125°C, temperature decoupler

Pressure type
R Gauge pressure
A Absolute pressure (≤ 25 bar)

Measuring system – accuracy
4 0,5%

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

Order code

Precont®	KT			V	C					4	

Equipment

Order information	*Model*
BKZ0412-VA	Matching cable socket, VA-nut
LKZ0405PUR-AS	Connection cable 5 m, 4-pole, shielded
LKZ0410PUR-AS	Connection cable 10 m, 4-pole

Stand 07/2017