

Precont® PU4SE

Universal pressure transmitter / pressure switch
for general industrial applications

Technical information TI04.24



Application

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

Main features

- Measuring ranges from 1 bar up to 100 bar
- Robust ceramic internal diaphragm
- Process temperature range -25°C to +100°C
- Fully welded robust steel enclosure
- High protection class IP69K/IP67
- High accuracy to $\leq 0,5\%$
- Electronic 4...20mA FSK / RS485 Modbus®-RTU / IO-Link®



Description

The device is an electronic pressure transmitter / pressure switch for monitoring, control and continuous measurement of pressures.

A high variety of versions of process connections and electronic types allows the use for a wide range of applications, also for demanding measuring requirements.

Due to its high accuracy and the digital adjustability by FSK, RS485 Modbus®-RTU or IO-Link® the device can be suited to a wide variety of applications.

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.

A LABS- 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 or a factory certificate for drink water suitability.

Customer specific special versions can be realized short-term on request, e.g. special designs for the process connection or other process materials.



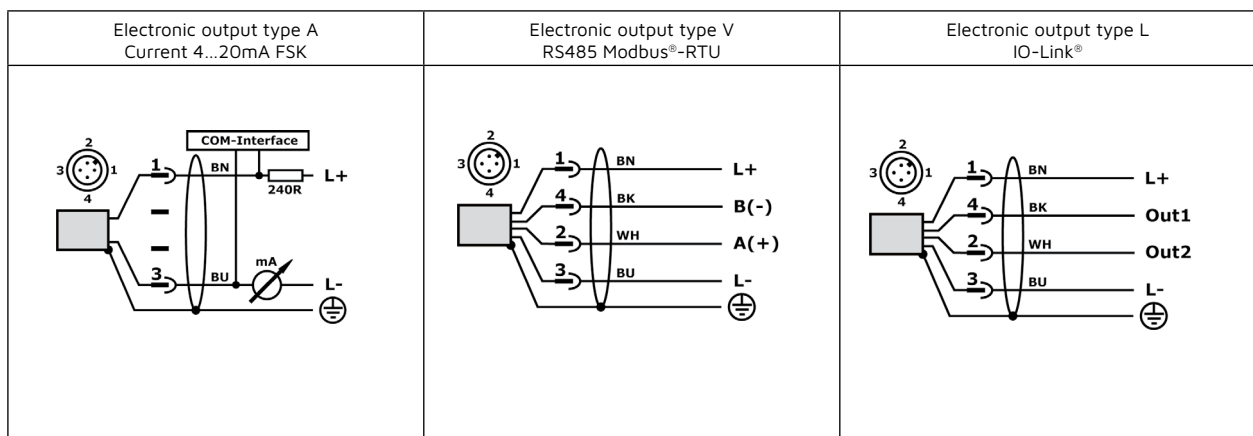
FEEL FREE TO
CONTACT US

Lauterbachstr. 57, D - 84307 Eggenfelden
info@acs-controlsystem.com
www.acs-controlsystem.com
+49 8721-96680

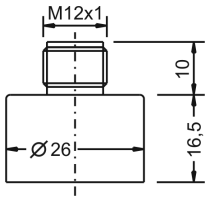
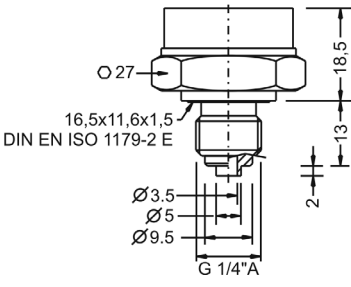
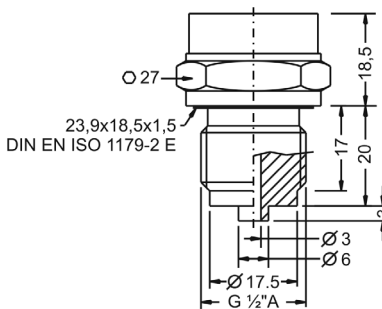
Technical Data

Measuring range										
Nom. pressure PN	[bar]	0...1	0...4	0...10	0...40	0...100	-	-	-	-
Output type A - Current 4...20mA FSK										
Analogue output 4...20mA	3,9...20,5mA / $\geq 3,8\text{mA}$ / $\leq 22\text{mA}$ / $dI \leq 1\mu\text{A}$									
Time behavior	T90 $\leq 5\text{ms}$ ($t_d = 0\text{s}$) / $t_{on} \leq 0,2\text{s}$ ($t_d = 0\text{s}$)									
Interface	FSK / 1200 Bit/s									
Output type V - RS485 Modbus®-RTU										
Interface	RS485, bidirectional / Modbus®-RTU / 9600 Baud (4800...38400 Baud)									
Input resistance	112k Ω									
Time behavior	T90 $\leq 2\text{ms}$ ($t_d = 0\text{s}$) / $t_{on} \leq 0,1\text{s}$ ($t_d = 0\text{s}$)									
Output type L - IO-Link®										
Interface	IO-Link® V1.1 / Com2 (38400 Baud)									
Analogue output	0...20mA: 0...20,5mA / $\leq 0,05\text{mA}$ / $\leq 22\text{mA}$ / $dI \leq 1\mu\text{A}$ 4...20mA: 3,8...20,5mA / $\geq 3,6\text{mA}$ / $\leq 22\text{mA}$ / $dI \leq 1\mu\text{A}$									
Switch output	2x PP (Push-Pull), switch to +L/-L									
Time behavior	T90 $\leq 2\text{ms}$ ($t_d = 0\text{s}$) / $t_{on} \leq 0,1\text{s}$ ($t_d = 0\text{s}$) / $t_{rise} < 30\mu\text{s}$ ($R_L < 3\text{k}\Omega$ / $I_{Out} > 4,5\text{mA}$)									
Auxiliary power										
Supply voltage U_s polarity protected Residual ripple voltage Supply current	Type A - 4...20mA FSK: 9...35VDC / $\leq 2\text{Vpp}$ / $\leq 22\text{mA}$ Type V - RS485 Modbus®-RTU: 6...35VDC / $\leq 2\text{Vpp}$ / $\leq 10\text{mA}$ (no load) Type L - IO-Link®: 9...35VDC, without IO-Link® / $\leq 2\text{Vpp}$ / $\leq 20\text{mA}$ (no load) Type L - IO-Link®: 18...30VDC, with IO-Link® / $\leq 2\text{Vpp}$ / $\leq 20\text{mA}$ (no load)									
Measuring accuracy										
Characteristic deviation	$\leq \pm 0,5\%\text{FSO}$ (TD=1)									
Long term drift	$\leq \pm 0,2\%\text{FSO}/\text{year}$ (TD=1)									
Temperature deviation	Tk Zero+Span (TD=1) $\leq \pm 0,05\%\text{FSO}/\text{K}$									
Process conditions										
Process temperature	-25°C...+100°C									
Pressure cycles	≥ 10 Mio. (1,2xPN)									
Environmental conditions										
Environmental temperature	-25°C...+100°C									
Protection level	IP69K/IP67 (EN/IEC 60529)									
MTTF	463 years									

Electrical connection



Dimensions (mm)

<p>Terminal enclosure</p> 		
<p>Process connection type 6 Thread G 1/4" A, EN 837</p> 	<p>Process connection type 1 Thread G 1/2" A, EN 837</p> 	

Order code

Type
PU4S Standard

Measuring system – material diaphragm (process wetted) / sensor type
E Ceramic Al2O3 96% / strain gauge

Approval
S Standard

Process connection
6 Thread ISO 228-1 – G¼"A, EN 837 manometer
1 Thread ISO 228-1 – G½"A, EN 837 manometer
Y others

Material process gaskets (process wetted)
1 FPM – fluorelastomere (e.g. Viton®)
Y others

Material process connection (process wetted)
V CrNi-steel

Material terminal enclosure
C CrNi-steel

Measuring range
05 0...1 bar
08 0...4 bar
10 0...10 bar
13 0...40 bar
19 0...100 bar
YY Special measuring range

Electronic – output
A Current 4...20mA, FSK, 2-wire
V RS485 Modbus®-RTU, 4-wire
L IO-Link®, 1x current 0/4...20mA / 2x switch, 4-wire

Electronic – function
S Standard

Process temperature
0 Standard –25°C...+100°C

Pressure type
R Gauge pressure

Measuring system – accuracy
4 0,5%

Electrical connection
S Plug M12x1

Additional options
-SF LABS-free, silicone-free / paint compatible version
-ML Measurement point designation / TAG – Laser marking
-MZ Material test certificate – EN10204 3.1
-KF Configuration / Preset
-WK Factory calibration – calibration certificate

Precont® PU4S

E S V C S O R 4 S