



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

### In brief

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4...20mA  
2x PNP
- 

fast  
response time
- 

385.2  
helle LED  
Anzeige
- 

closed  
operating  
interface
- 

process  
temperature  
135°C
- 

display and  
housing  
rotatable

### Application

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

### 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 IP65 / IP67
- Wide environmental temperature range -40°C to +85°C
- Ceramic front-flush or internal diaphragm
- High accuracy – characteristic deviation ≤ 0,5% of measuring range
- Integrated evaluation electronic: Digital display, function LED's, keyboard / 2x PNP switch output / 1x current output 4...20mA / Connector plug M12
- *High operating comfort*: enclosure and display rotatable for *optimal operability* in each installation position
- Robust high brightness LED display for *best readability*
- 3-key operation without additional assistance with tactile feedback

### Description

Due to the device construction with measuring ranges from -1 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 and 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) and thread connection ISO 228-1 (front-flush) 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 device is suitable for demanding measuring requirements. Due to its high accuracy and the high flexibility of configuration, the device can be suited 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 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.



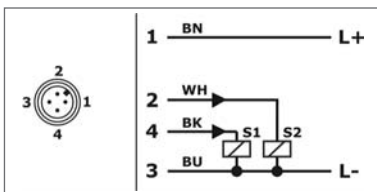
A LABS-free resp. silicone-free version, a factory calibration with calibration certificate and a customer specific configuration resp. preset is also optionally available like a material test certificate EN10204 3.1 or factory certifications for drink water resp. food suitability.



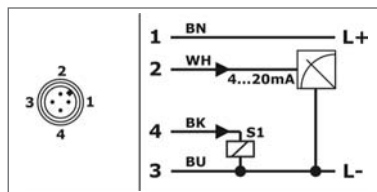
# Technical Data

Technical Data	
Supply voltage:	10,5...35VDC, reverse polarity protected
Supply current:	≤ 60mA Analogue output max. 22,5mA Switch output with no load
Switch output S1 / S2	
Function:	PNP switch to +L
Output current:	0... ≤ 200mA current limited, short circuit protected
Analogue output 4...20mA	
Operating range:	3,9...21mA, min. 3,8mA, max. 22mA
Permitted load:	≤ (US - 10,5V) / 22mA
Start-up time:	≤ 1 s
Measurement accuracy	
Characteristic deviation:	≤ ± 0,5% FS
Long term drift:	≤ ± 0,2% FS / year not cumulative
Temperature deviation	Measuring range 0...250 mbar to 0...2,5 bar: ≤ ±0,05% FS / K Measuring range 0...4 bar to 0...600 bar: ≤ ±0,04% FS / K
Materials	
Diaphragm: (process wetted)	Ceramic aluminum oxide Al <sub>2</sub> O <sub>3</sub> – 96%
Process connection: (process wetted)	Steel 1.4404/316L / Steel 1.4571/316Ti
Terminal enclosure:	CrNi-steel
Gaskets: (process wetted)	FPM – fluorelastomere (Viton®) EPDM – ethylene-propylene-dienmonomere, FDA-listed
Environmental conditions	
Environmental temperature:	– 40°C...+85°C
Process temperature:	– 40...+100°C (extended -40...+135°C)
Process pressure:	0 bar ...600 bar (depending on process connection)
Protection:	IP65/IP67 EN/IEC 60529

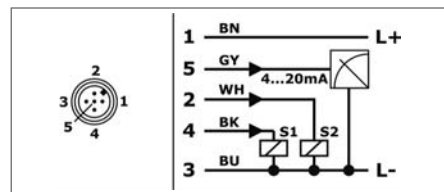
## Electrical connection



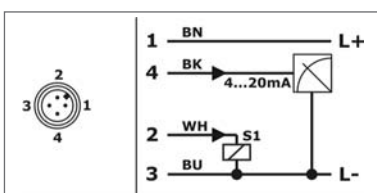
Signal 2x PNP  
Conductor color standard connection cable M12  
– A-coded: BN = brown, WH = white, BU = blue, BK = black



Signal 4...20 mA / 1x PNP  
Conductor color standard connection cable M12  
– A-coded: BN = brown, WH = white, BU = blue, BK = black

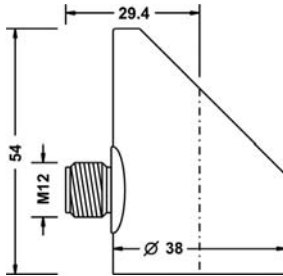


Signal 4...20 mA / 2x PNP  
Conductor color standard connection cable M12 – A-coded:  
BN = brau brown n, WH = white, BU = blue, BK = black, GY = grau

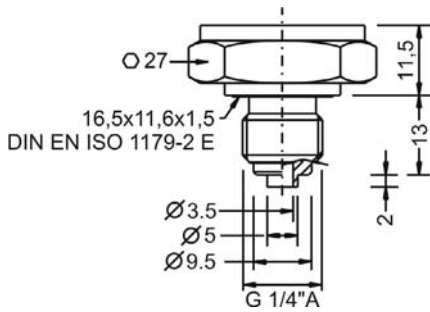


Signal 4...20 mA / 1x PNP / Desina  
Conductor color standard connection cable M12  
– A-coded: BN = brown, WH = white, BU = blue, BK = black

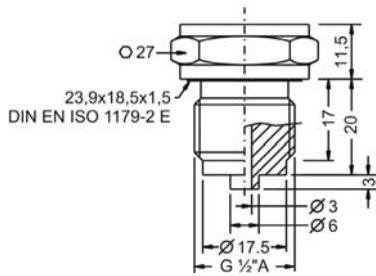
## Anschlussgehäuse



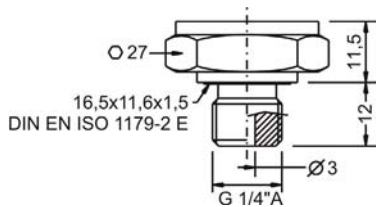
Type 6 – Thread ISO 228-1 – G $\frac{1}{4}$ "A, EN 837



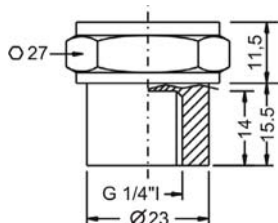
Type 1 – Thread ISO 228-1 – G $\frac{1}{2}$ "A, EN 837



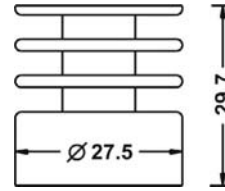
Type 3 – Thread ISO 228-1 – G $\frac{1}{4}$ "A, DIN EN ISO 1179-2 E2 E



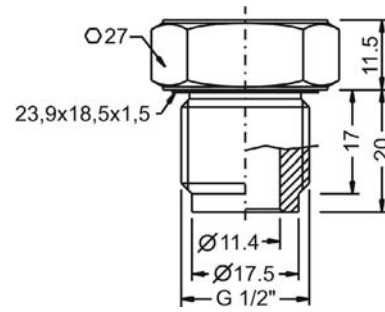
Type 4 – Thread ISO 228-1 – G $\frac{1}{4}$ " I, inner thread



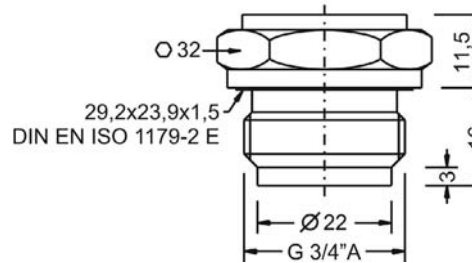
## Temperatrentkoppler



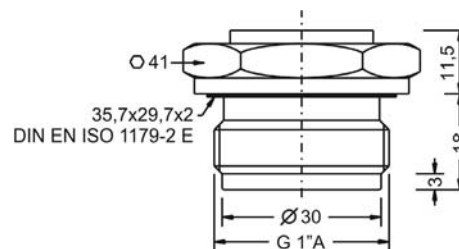
Type 2 – Thread ISO 228-1 – G $\frac{1}{2}$ "B, inner bore



Type 8 – Thread ISO 228-1 – G $\frac{3}{4}$ "A, front-flush



Type 5 – Thread ISO 228-1 – G1"A, front-flush



<p>PS4S</p> <p>K</p> <p>S</p> <p>V</p> <p>C</p> <p>S</p> <p>4</p> <p>S</p>	<p><b>Type</b> Standard</p> <p><b>Measuring system – material diaphragm (process wetted) / sensor type</b> Ceramic Al2O3 96% / strain gauge</p> <p><b>Approval</b> Standard</p> <p><b>Process connection</b> 6 Thread ISO 228-1 – G¼"A, EN 837 manometer 1 Thread ISO 228-1 – G½"A, EN 837 manometer 3 Thread ISO 228-1 – G¼"A, DIN EN ISO 1179-2 E 4 Thread ISO 228-1 – G¼"I, inner thread 2 Thread ISO 228-1 – G½"B, inner bore 8 Thread ISO 228-1 – G¾"A, front-flush, ≤ 10 bar 5 Thread ISO 228-1 – G1"A, front-flush, ≤ 1 bar Y others</p> <p><b>Material process gaskets (process wetted)</b> 1 FPM – fluorelastomere (e.g. Viton®) 3 EPDM – ethylene-propylene-dienmonomere, FDA-listed Y andere</p> <p><b>Material process connection (process wetted)</b> V CrNi-steel</p> <p><b>Material terminal enclosure</b> C CrNi-steel</p> <p><b>Measuring range</b> 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 16 -1...0 bar 17 -1...+1 bar YY Special measuring range</p> <p><b>Electronic – output</b> A 4-wire, 2x switch PNP B 4-wire, 1x switch PNP, 1x signal 4...20mA C 5-wire, 2x switch PNP, 1x signal 4...20mA D 4-wire, 1x switch PNP, 1x signal 4...20mA, Desina</p> <p><b>Electronic – function</b> S Standard</p> <p><b>Process temperature</b> 0 Standard -40°C...+100°C 1 Extended -40°C...+135°C, temperature decoupler</p> <p><b>Pressure type</b> R Gauge pressure A Absolute pressure, ≥ 1bar ... ≤ 40bar</p> <p><b>Measuring system – accuracy</b> 4 0,5%</p> <p><b>Electrical connection</b> S Plug M12x1</p>
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Order code

<b>Precont®</b>	PS4S	K	S	V	C	S	4	S
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## Equipment

*Ordering information*  
BKZ0412-VA  
BKZ0512-VA  
LKZ0405PUR-AS  
LKZ0410PUR-AS  
LKZ0505PUR-AS  
LKZ0510PUR-AS

*Model*  
matching cable socket, VA-nut  
matching cable socket, VA-nut (with electronics „C“ 4-20mA, 2xPNP)  
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