



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

In brief

- 4...20mA
2x PNP
- up to
1000
bar
pressure
- 385.2**
helle LED
Anzeige
- flush
mounted
- process
temperature
125°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 400 mbar up to 1000 bar
- Wide process temperature range -40°C to +125°C
- High protection class IP65 / IP67
- Wide environmental temperature range -40°C to +85°C
- Metallic 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

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

The operational reliability of the device is ensured only at the intended use. Due to the device construction with measuring ranges from -1 bar to 1000 bar (gauge), measuring ranges from 0 bar to 1000 bar (absolute), measuring spans from 400 mbar to 1000 bar, process temperatures from -40°C to +125°C, process material CrNi-steel as well as the availability of industrial standard process connections like, thread ISO 228-1 (EN 837 manometer) and thread 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 front-flush diaphragm has been specifically designed for the measurement of viscous, paste-like, adhesive, crystallizing, particle-laden and contaminated media, which would clog the pressure channel of conventional process connections. 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.

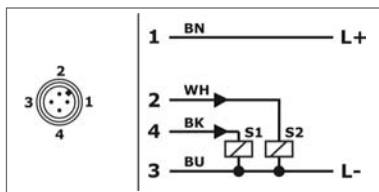
A captive laser marking of the type label ensures the identifiability throughout the entire lifetime of the device.

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.

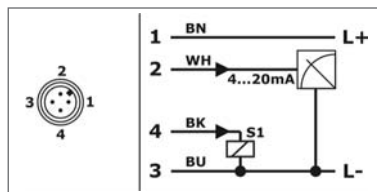
A LABS-free resp. silicone-free version, a factory calibration with calibration certificate and a customer specific configuration resp. preset is also optionally available like factory certifications for drink water resp. food suitability.

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
Measuring accuracy	
Characteristic deviation:	≤ ± 0,5% FS
Long term drift:	≤ ± 0,2% FS / year not cumulative
Temperature deviation	Measuring range ≤ 25 bar: ≤ ±0,02% FS / K (0...80°C) / ≤ ±0,03% FS / K (-40...0°C / +80...+125°C) Measuring range ≥ 40 bar: ≤ ±0,02% FS / K (-40...100°C) / ≤ ±0,03% FS / K (+100...+125°C)
Materials	
Diaphragm: (process wetted)	Process connection type 0 / type 5 - front-flush / Process connection type 1 / type 6 - EN 837 / ≤ 25 bar: Steel 1.4571/316Ti Process connection type 1 / type 6 - EN 837 / ≥ 40 bar: Steel 1.4542/630 / Steel 1.4534/SI13800
Process connection: (process wetted)	Steel 1.4571/316Ti
Terminal enclosure:	CrNi-steel
Gaskets: (process wetted)	NBR – nitrile-butadiene-rubber FPM – fluorelastomere (Viton®) EPDM – ethylene-propylene-dienmonomere
Environmental conditions	
Environmental temperature:	- 40°C...+85°C
Process temperature:	-40°C...+100°C (Expansion: -40°C...+125°C)
Process pressure:	-1 bar ...1000 bar (depending on process connection)
Protection:	IP65/IP67 EN/IEC 60529

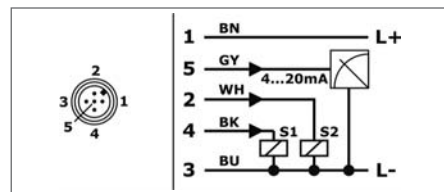
Electrical connection



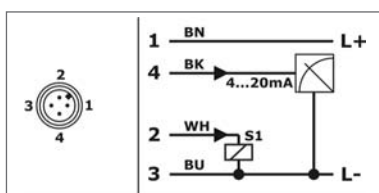
Signal 2x PNP
Conductor color standard connection cable M12
- A-coded: BN = brown, WH = white, BU = blue, BK = black



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

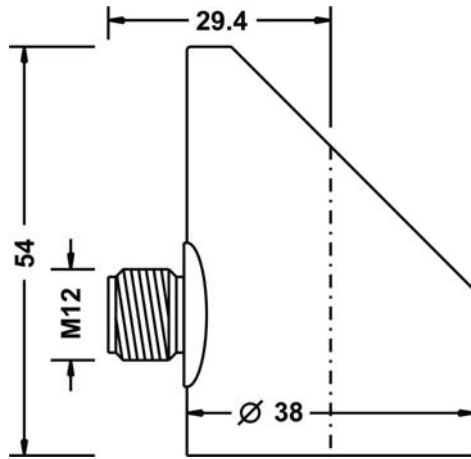


Signal 4...20 mA / 2x PNP
Conductor color standard connection cable M12 - A-coded:
BN = brau brown n, WH = white, BU = blue, BK = black, GY = grau

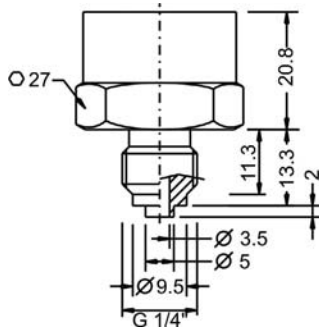


Signal 4...20 mA / 1x PNP / Desina
Conductor color standard connection cable M12
- A-coded: BN = brown, WH = white, BU = blue, BK = black

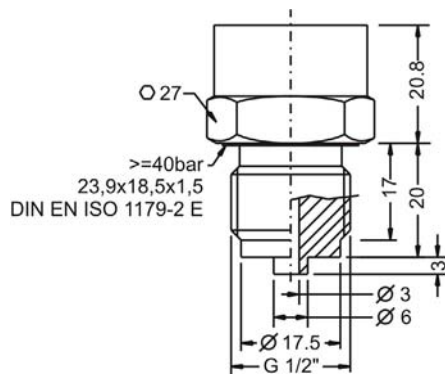
Terminal enclosure



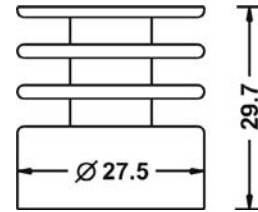
Type 6 – Thread ISO 228-1 – G $\frac{1}{4}$ "B, EN 837



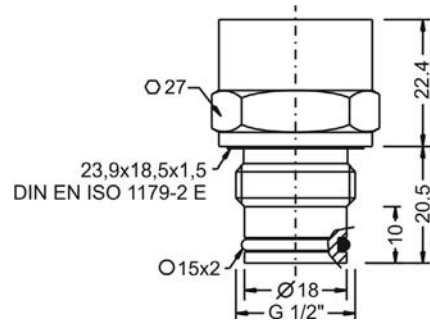
Type 1 – Thread ISO 228-1 – G $\frac{1}{2}$ "B, EN 837



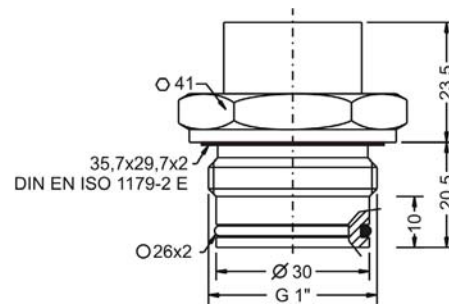
Temperature decoupler



Type 0 – Thread ISO 228-1 – G $\frac{1}{2}$ "B, front-flush



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



<p>PS4S</p> <p>M</p> <p>S</p> <p>V</p> <p>C</p> <p>S</p> <p>4</p> <p>S</p>	<p>Type Standard</p> <p>Measuring system – material diaphragm (process wetted) / sensor type CrNi-steel / strain gauge</p> <p>Approval Standard</p> <p>Process connection 6 Thread ISO 228-1 – G¼”B, EN 837 manometer (without process gasket) 1 Thread ISO 228-1 – G½”B, EN 837 manometer (≥ 40 bar without process gasket) 0 Thread ISO 228-1 – G½”B, front-flush, O-ring gasket not for measuring ranges 0...400 mbar / 0...1 bar / -1...0 bar / 0...1000 bar 5 Thread ISO 228-1 – G1”B, front-flush, O-ring gasket for measuring ranges 0...400 mbar / 0...1 bar / -1...0 bar Y others</p> <p>Material process gaskets (process wetted) 0 without / NBR – nitrile-butadiene-rubber 1 FPM – fluorelastomere (e.g. Viton®) 3 EPDM – ethylene-propylene-dienmonomere, FDA-listed Y others</p> <p>Material process connection (process wetted) V CrNi-steel</p> <p>Material terminal enclosure C CrNi-steel</p> <p>Measuring range 03 0...400 mbar 05 0...1 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 25 0...1000 bar, only for process connection type 1, 6 – G½”B, G¼”B EN 837 16 -1...0 bar 17 -1...+1 bar YY Special measuring range</p> <p>Electronic – output A 2x switch PNP, supply 24VDC B 1x switch PNP, 1x signal 4...20mA, supply 24VDC C 2x switch PNP, 1x signal 4...20mA, supply 24VDC D 1x switch PNP, 1x signal 4...20mA, supply 24VDC, Desina</p> <p>Electronic – function S Standard</p> <p>Process temperature 0 Standard -40°C...+100°C 1 Extended -40°C...+125°C, temperature decoupler</p> <p>Pressure type R Gauge pressure A Absolute pressure, (≤ 25 bar)</p> <p>Measuring system – accuracy 4 0,5%</p> <p>Electrical connection S Plug M12x1</p>
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Order code

Precont®	PS4S	M	S	V	C	S	4	S
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Zubehör

Bestellbezeichnung
BKZ0412-VA
BKZ0512-VA
LKZ0405PUR-AS
LKZ0410PUR-AS
LKZ0505PUR-AS
LKZ0510PUR-AS

Ausführung
Passende Kabeldose, VA-Mutter
Passende Kabeldose, VA-Mutter (bei 0...10 V)
Anschlusskabel 5 m, 4-polig
Anschlusskabel 10 m, 4-polig
Anschlusskabel 5 m, 5-polig
Anschlusskabel 10 m, 5-polig

REMO12
REMO10
BEFK12

Einschweißmuffe, für Anschluss 2
Einschweißmuffe, für Anschluss 5
Einschweißmuffe, für Anschluss 0