PR10

Datasheet Pressure Switch PR10

PERFORMANCE FEATURES

- Simple on-site operation via DIP Switch
- Dry ceramic sensor
- Smallest measuring range: 0…250 mbar
- Largest measuring range: 0…250 bar
- Negative pressure measuring range: up to -1 bar
- Accuracy ≤ 0,5 %
- Compact design
- Analog output: 4…20 mA, 3-Wires
- Contact output: DC PNP, max. 200 mA

AREAS OF APPLICATION

- Gaseous media
- Liquid media
- Abrasive media
- Aggressive media
- Vacuum applications

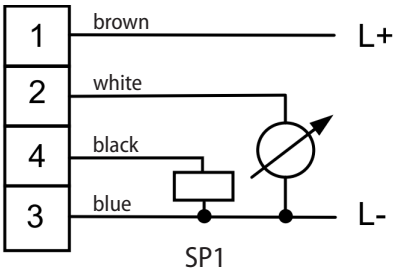
The pressure switch PR10 features a freely adjustable set point in combination with a ceramic sensor. Resistant to aggressive and abrasive media, it offers a wide range of applications. The electrical connection is provided via an integrated clamping strip, while the PG11 cable gland offers IP 67 dust and water protection. Its compact housing is made of high-quality stainless steel 1.4404 and is therefore suitable for almost all media. Our modular design concept provides a wide variety of products. Feel free to contact us if you need a customization that is not listed in this datasheet.

Nöding Messtechnik GmbH • Oldenfelder Bogen 29 • D-22143 Hamburg, Germany • **Tel.:** 040 / 67 58 51 – 0
Fax: 040 / 67 58 51 – 49 • **Internet:** www.noeding-messtechnik.de • **E-mail:** info@noeding-messtechnik.de

TECHNICAL DATA

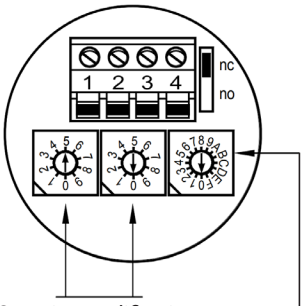
Measuring ranges	
Preassure range	see table "Measuring ranges" others on request
Output	
Analog output	4…20 mA 3-wires
Contact output	DC PNP, max. 200 mA
Power supply	
20 mA output	19…30 V DC
Signal characteristics	
Accuracy	≤ ± 0,5 % FS @ 25 °C
Long term stability	≤ ± 0,5 % FS / Year
Response time	50 ms - others on request
Switch-on time	< 1 s
Temperature coefficient	
Zero	≤ ± 0,03 % FS / Kelvin
Span	≤ ± 0,02 % FS / Kelvin
Temperature ranges	
Medium temperature	-25…100 °C
Surrounding temperature	-25…85 °C
Storage temperature	-40…85 °C
Electrical protections	
Short-circuit resistance	Permanent
Reverse polarity protection	Protection against reverse polarity, but no function
Electromagnetic compatibility	Interference emissions and immunity acc. to EN 61326
Wetted materials	
Process connection	Stainless steel 1.4404
Sensor	Ceramic Al_2O_3
Sensor seal	FPM (Viton), NBR, EPDM, FKKM (Chemraz / Kalrez)
Surroundings	
Protection type	IP 67
Electrical connection	
Type	Cable gland M16x1,5 Connector M12x1, 4-pole
Exemplary weight	
PR10-310-G110-0 (figure p. 1)	Approx. 300 g

ELECTRICAL CONNECTIONS



SETTINGS

nc = normally closed
no = normally open



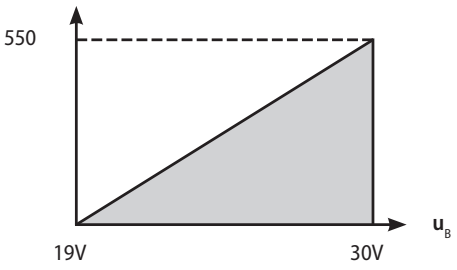
Setpoint modification
in % for example 50%

Hysteresis adjustment

max. Function	min. Function
0 = 0,5 %	8 = 0,5 %
1 = 1 %	9 = 1 %
2 = 2 %	A = 2 %
3 = 3 %	B = 3 %
4 = 4 %	C = 4 %
5 = 6 %	D = 6 %
6 = 8 %	E = 8 %
7 = 10 %	F = 10 %

LOAD

$$R_{B_{max}} = \frac{U_B - 19\ V}{0{,}02\ A}$$



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MEASURING RANGES

Measuring ranges	Relative	Overload (bar)
0…250 mbar / 0…25 kPa *	02	-0,15/1
0…400 mbar / 0…40 kPa	03	-0,15/1
0…500 mbar / 0…50 kPa	B7	-0,2/2
0…600 mbar / 0…60 kPa	04	-0,2/2
0…1 bar / 0…100 kPa	05	-1/4
0…1,6 bar / 0…160 kPa	06	-1/4
0…2 bar / 0…200 kPa	B3	-1/4
0…2,5 bar / 0…250 kPa	07	-1/10
0…4 bar / 0…400 kPa	08	-1/10
0…5 bar / 0…500 kPa	F1	-1/10
0…6 bar / 0…600 kPa	09	-1/20
0…10 bar / 0…1 MPa	10	-1/40
0…16 bar / 0…1,6 MPa	11	-1/40
0…20 bar / 0…2 MPa	B5	-1/40
0…25 bar / 0…2,5 MPa	12	-1/100
0…40 bar / 0…4 MPa	13	-1/100
0…50 bar / 0…5 MPa	F3	-1/100
0…60 bar / 0…6 MPa	14	-1/200
0…100 bar / 0…10 MPa	15	-1/200
0…160 bar / 0…16 MPa	16	-1/400
0…200 bar / 0…20 MPa	F5	-1/400
0…250 bar / 0…25 MPa	17	-1/600
-1…0 bar / -100…0 kPa	D4	-1/4
-1…0,6 bar / -100…60 kPa	D5	-1/4
-1…1 bar / -100…100 kPa	D6	-1/4
-1…1,5 bar / -100…150 kPa	D7	-1/4
-1…3 bar / -100…300 kPa	D8	-1/10
-1…5 bar / -100…500 kPa	D9	-1/10
-1…9 bar / -100…900 kPa	E1	-1/40
-1…15 bar / -100…1500 kPa	E2	-1/40
-1…19 bar / -100…1900 kPa	E3	-1/40

* Accuracy 1%

ORDERING CODE

Output signal
3 4…20 mA 3-wires

Ranges
Measuring ranges see table
99 Non-standard range (on request)

Process connection and material
G G 1/2 A a. 11,6 mm drill hole, ISO 228-1, 1.4404
9 Others (on request)

Sensor seal
1 FPM (Viton), standard
2 NBR (Perbuan)
3 EPDM
5 FFKM (Chemraz / Kalrez)
9 Others (on request)

Material housing
1 Stainless steel 1.4301

Electrical connection
0 Cable gland M16x1,5
A Connector M12x1 4-pole

Options
0 Without potted electronics
1 Potted electronics

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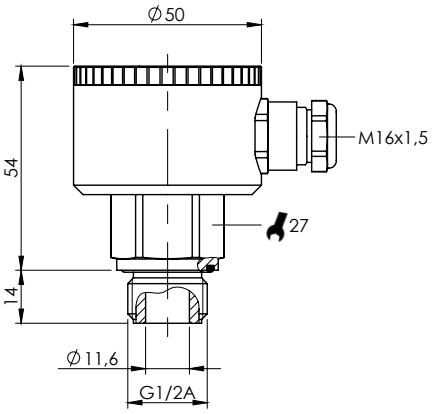
DIMENSIONS



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