



## Datasheet Digital Pressure Gauge PDM 80-1

### PERFORMANCE FEATURES

- 4 digit LED display
- 2 relays 250V AC / 125V DC
- Dry capacitive ceramic sensor
- Smallest measuring range: 0...25 mbar
- Largest measuring range: 0...250 bar
- Negative measuring range: up to -1 bar
- Accuracy  $\leq 0,2\%$
- Analog output: 4...20 mA, 3-wires  
0...10 V, 3-wires  
0... 20 mA, 3-wires

### AREAS OF APPLICATION

- Industrial water applications
- Gaseous media
- Abrasive media
- Aggressive media

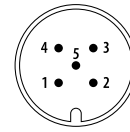
The model PDM80-1 features a large, bright display. The transmitter can still be easily read from a distance and therefore allows a quick assessment of the process pressure. An analog output and 2 relays widen the range of applications. The electrical connection is done via an integrated terminal strip, the PG11 cable gland provides IP 65 dust and water protection. The capacitive measuring principle in combination with a ceramic membrane is resistant to aggressive and abrasive media. The process connection is made of high-quality stainless steel 1.4404 and is therefore suitable for almost all media.

## TECHNICAL DATA

| Measuring range               |  |
|-------------------------------|--|
| Pressure range                | See table „Measuring ranges“ others on request                           |
| Ausgang                       |  |
| Analog output                 | 4...20 mA 3-wires<br>0...10 V 3-wires<br>0...20 mA 3-wires               |
| Relays                        | 250 V AC, max 500 W<br>125 V DC, max 100 W<br>Max. switching current 2 A |
| Power supply                  |  |
| 20 mA output                  | 19...30 V DC   |
| 10 V output                   | 19...30 V DC   |
| Signal characteristics        |  |
| Accuracy                      | $\leq \pm 0,2\%$ FS @ 25 °C  |
| Response time                 | 200 ms - others on request   |
| Switch-on time                | < 1 s  |
| Temperature coefficient       |  |
| Zero                          | $\leq \pm 0,02\%$ FS / Kelvin  |
| Span                          | $\leq \pm 0,02\%$ FS / Kelvin  |
| Temperature ranges            |  |
| Medium temperature            | -40...100 °C (125°C < 0,5 h)   |
| Surrounding temperature       | 0...60 °C  |
| Storage temperature           | -40...60 °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 <sub>2</sub> O <sub>3</sub>                                   |
| Sensor seal                   | FPM (Viton), NBR, EPDM, FFKM (Chemraz / Kalrez)                          |
| Surroundings                  |  |
| Protection type               | IP 65  |
| Exemplary weight              |  |
| PDM80-1 (figure p. 1)         | Approx. 800 g  |

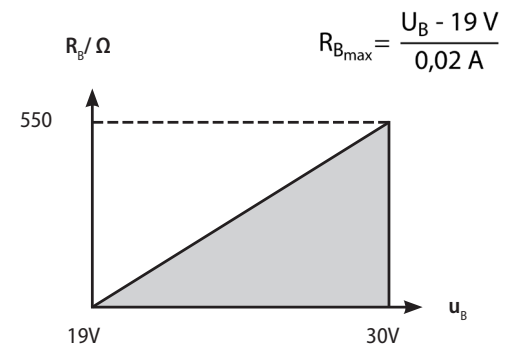
## ELECTRICAL CONNECTION

M12 Connector



|    |                                  |                                 |
|----|----------------------------------|---------------------------------|
| 1  | + 24 V                           | ] Supply voltage<br>19...30V DC |
| 2  | -                                |                                 |
| 3  | PE                               |                                 |
| 4  | + Output 0(4)...20 mA / 0...10 V |                                 |
| 5  |                                  |                                 |
| 6  |                                  | Relay output S 1                |
| 7  |                                  |                                 |
| 8  |                                  |                                 |
| 9  |                                  | Relay output S 2                |
| 10 |                                  |                                 |

## LOAD



## MEASURING RANGES

| Measuring ranges               | Relative | Absolute | Overload (bar) |
|--------------------------------|----------|----------|----------------|
| 0...25 mbar / 0...2,5 kPa*     | A7       |          | -0,3/4         |
| 0...40 mbar / 0...4 kPa*       | A8       |          | -0,3/4         |
| 0...60 mbar / 0...6 kPa*       | A9       |          | -0,3/4         |
| 0...100 mbar / 0...10 kPa      | 00       |          | -0,3/4         |
| 0...160 mbar / 0...16 kPa      | 01       |          | -0,6/5         |
| 0...200 mbar / 0...20 kPa      | B1       | B2       | -1/6           |
| 0...250 mbar / 0...25 kPa      | 02       | 27       | -1/6           |
| 0...400 mbar / 0...50 kPa      | 03       | 28       | -1/6           |
| 0...600 mbar / 0...60 kPa      | 04       | 29       | -1/10          |
| 0...1 bar / 0...100 kPa        | 05       | 30       | -1/10          |
| 0...1,6 bar / 0...160 kPa      | 06       | 31       | -1/18          |
| 0...2 bar / 0...200 kPa        | B3       | B4       | -1/18          |
| 0...2,5 bar / 0...250 kPa      | 07       | 32       | -1/18          |
| 0...4 bar / 0...400 kPa        | 08       | 33       | -1/25          |
| 0...6 bar / 0...600 kPa        | 09       | 34       | -1/40          |
| 0...10 bar / 0...1 MPa         | 10       | 35       | -1/40          |
| 0...16 bar / 0...1,6 MPa       | 11       | 36       | -1/40          |
| 0...20 bar / 0...2 MPa         | B5       | B6       | -1/40          |
| 0...25 bar / 0...2,5 MPa       | 12       | 37       | -1/40          |
| 0...40 bar / 0...4 MPa         | 13       | 38       | -1/60          |
| 0...60 bar / 0...6 MPa         | 14       | 39       | -1/100         |
| 0...100 bar / 0...10 MPa       | 15       | 40       | -1/250         |
| 0...160 bar / 0...16 MPa       | 16       | 41       | -1/400         |
| 0...250 bar / 0...25 MPa       | 17       | 42       | -1/600         |
| -100...0 mbar / -10...0 kPa    | C4       |          | -0,3/4         |
| -100...100 mbar / -10...10 kPa | C5       |          | -1/6           |
| -200...200 mbar / -20...20 kPa | D3       |          | -1/6           |
| -1...0 bar / -100...0 kPa      | D4       |          | -1/6           |
| -1...0,6 bar / -100...60 kPa   | D5       |          | -1/10          |
| -1...1 bar / -100...100 kPa    | D6       |          | -1/10          |
| -1...1,5 bar / -100...150 kPa  | D7       |          | -1/18          |
| -1...3 bar / -100...300 kPa    | D8       |          | -1/25          |
| -1...5 bar / -100...500 kPa    | D9       |          | -1/40          |
| -1...9 bar / -100...900 kPa    | E1       |          | -1/40          |
| -1...15 bar / -100...1,5 MPa   | E2       |          | -1/40          |
| -1...19 bar / -100...1,9 MPa   | E3       |          | -1/40          |

\* Accuracy 0,5%

## ORDERING CODE

### Measuring input

1 1 measuring input

### Output signal

1 0...10 V 3-wires  
5 0(4)...20 mA 3-wires

### Ranges

Measuring ranges see table

99 Non-standard range (on request)

### Process connection and material

2 1/2 - 14 NPT, 1.4404  
3 G 1/2 B, EN 837-1, 1.4404  
G G 1/2 A a, 11,8 mm drill hole, ISO 228-1, 1.4404  
F G 1 A, ISO 228-1, 1.4404  
5 G 1 1/2 A, ISO 228-1, 1.4404  
M Dairy thread DN 25 DIN 11851, 1.4404  
6 Dairy thread DN 32 DIN 11851, 1.4404  
7 Dairy thread DN 40 DIN 11851, 1.4404  
8 Dairy thread DN 50 DIN 11851, 1.4404  
9 Others (on request)

### Sensor seal

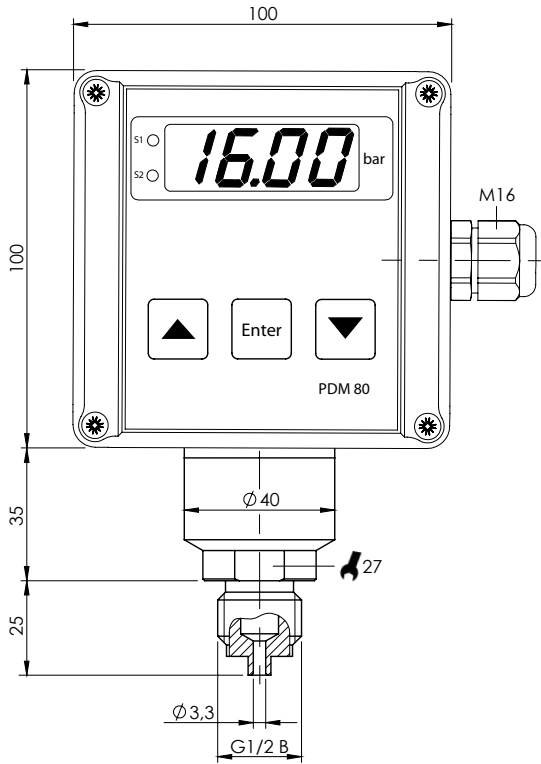
1 FPM (Viton), standard  
2 NBR (Perbuan)  
3 EPDM  
5 FFKM (Chemraz / Kalrez)  
9 Others (on request)

### Relay output

0 no relay  
1 1 relay  
2 2 relays

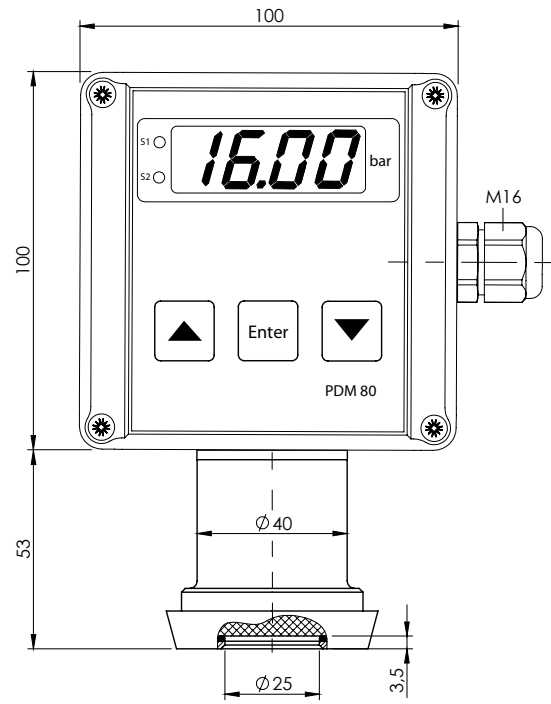
PDM80 - 

## DIMENSIONS



PROZESSANSCHLUSS

TYP 3



TYP 7