

Digital pressure gauge

For general industrial applications

Model DG-10

WIKA data sheet PE 81.66



further approvals
see Page 5

Applications

- Machine building
- Hydraulics and pneumatics
- Pumps and compressors
- Service tasks

Special features

- Measuring ranges from 0 ... 5 to 0 ... 600 bar
- Accuracy $\leq \pm 0.5\% \pm 1$ digit
- Battery operation (2 x 1.5 V AA cell)
- Option: Rotatable instrument head, backlighting



Digital pressure gauge, model DG-10-E

Description

Robust, precise digital indicator

The robust stainless steel case and the battery power enable a flexible operation in various applications and industries. For a precise and quick on-site reading of a pressure value, a digital indicator is the ideal solution. The bar graph display and drag pointer function integrated into the display, as well as retrievable Min/Max peak values, enable effective analysis of the measuring point.

Customised installation

Through its rotatable case, the model DG-10-E can be easily adapted to local conditions. The backlighting also provides easy readability of the display in poor lighting conditions.

Additional programming functions are: Automatic power-off, tare function and password protection. There is unit switching between the units bar, psi and MPa already integrated into the standard model DG-10-S.

Proven sensor technology

For decades, sensors manufactured by WIKA have guaranteed high accuracy, long-term stability and repeatability in industrial pressure measurement.

Measuring ranges

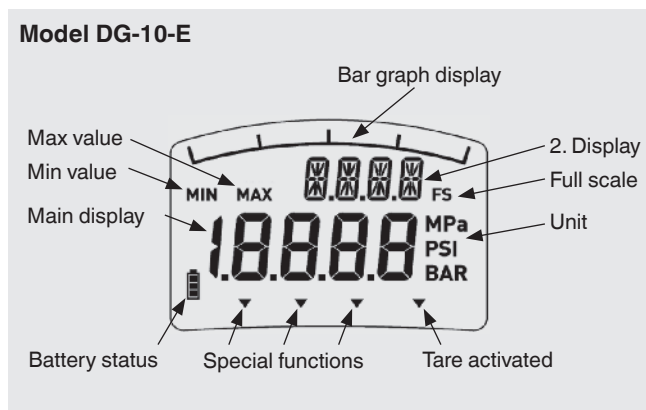
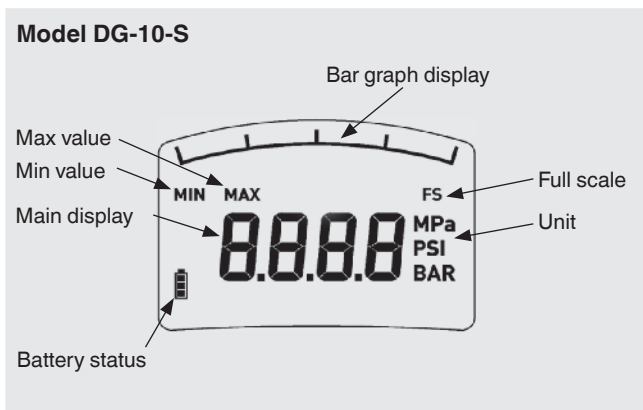
| Gauge pressure | | | | | | | |
|----------------|------------------------|--------------------|--------------------|----------------------------------|--------------------|--------------------|--------------------|
| bar | Measuring range | 0 ... 5 | 0 ... 10 | 0 ... 20 | 0 ... 50 | 0 ... 100 | 0 ... 160 |
| | Overpressure limit | 10 | 20 | 40 | 100 | 200 | 320 |
| | Burst pressure | 12 | 25 | 50 | 120 | 800 | 1,000 |
| | Measuring range | 0 ... 250 | 0 ... 400 | 0 ... 600 | | | |
| | Overpressure limit | 500 | 800 | 1,200 | | | |
| | Burst pressure | 1,200 | 1,700 | 2,400 | | | |
| psi | Measuring range | 0 ... 145 | 0 ... 300 | 0 ... 600 | 0 ... 1,450 | 0 ... 2,000 | 0 ... 3,000 |
| | Overpressure limit | 290 | 580 | 1,450 | 2,900 | 4,640 | 7,250 |
| | Burst pressure | 360 | 725 | 1,740 | 11,600 | 14,500 | 17,400 |
| | Measuring range | 0 ... 5,000 | 0 ... 7,500 | 0 ... 10,000¹⁾ | | | |
| | Overpressure limit | 11,600 | 17,400 | 21,750 | | | |
| | Burst pressure | 24,650 | 34,800 | 43,500 | | | |

1) DG-10-S can only display up to 9999 psi

| Vacuum and +/- measuring ranges | | | |
|---------------------------------|------------------------|-----------------------------|------------------------------|
| bar | Measuring range | -1 ... +5 | -1 ... +10 |
| | Overpressure limit | 10 | 20 |
| | Burst pressure | 12 | 25 |
| psi | Measuring range | -30 inHg ... +72 psi | -30 inHg ... +145 psi |
| | Overpressure limit | 145 | 290 |
| | Burst pressure | 170 | 360 |

Digital indicator

| | Model DG-10-S | Model DG-10-E |
|--------------------------------------|----------------|--|
| Type of indication | 7-segment LCD | 7-segment LCD 14-segment LCD (option) |
| Digits | 4-digit | 4 ½-digit |
| Character size | 11 mm | 11 mm and 7 mm |
| Indication range | -1999 ... 9999 | -1999 ... 19999 |
| Update | 200 ms | 200 ms |
| Backlighting | no | yes (see "Hardware functions") |
| Bar graph with drag pointer function | yes | yes |
| Rotatability | no | 300° (see "Hardware functions") |



Software functions

| Function | Model DG-10-S | Model DG-10-E |
|---------------------------|---------------|-------------------------|
| Min/Max memory | yes | yes |
| Automatic power-off | no | 15, 30, 60, 120 minutes |
| Tare function | no | yes |
| Unit switching | bar, psi, MPa | bar, psi, MPa |
| Password protection | no | yes |
| Reset to factory settings | no | yes |

Hardware functions

Rotatability of the display

The display of the model DG-10-E can be rotated through 300°, thus it can be read from almost any position. Therefore the model DG-10-E can also be used in situations where mounting is difficult.



Backlighting

The model DG-10-E features backlighting so that the display can be easily read, even under poor lighting conditions.



Voltage supply

The voltage supply is provided via two 1.5 V AA cells.

The operating time is approx. 4,000 hours, when using batteries with a capacity of 2,000 mAh.

Reference conditions

Temperature

0 ... 60 °C (32 ... 140 °F)

Atmospheric pressure

860 ... 1,060 mbar (12.5 ... 15.4 psi)

Humidity

< 90 % r. h. (non-condensing)

Nominal position

Calibrated in vertical mounting position with process connection facing downwards.

Power supply

2 x 1.5 V AA cell

Accuracy

Accuracy at reference conditions

$\leq \pm 0.5$ % of span ± 1 digit ¹⁾

1) Restriction for vacuum and +/- measuring ranges in the range of -1 ... 0 bar
 $\leq \pm 1.0$ % of span ± 1 digit

Including non-linearity, hysteresis, zero offset and end value deviation (corresponds to measured error per IEC 61298-2).

Calibration accuracy of zero signal

$\leq \pm 0.1$ % of span (power-up reset)

Adjustability of zero point

$\leq \pm 20$ % of span (via tare function with model DG-10-E)

Temperature error at 0 ... 60 °C

- Mean temperature coefficient of zero point
 $\leq \pm 0.15$ % of span/10 K
- Mean temperature coefficient of span
 $\leq \pm 0.15$ % of span/10 K

Long-term stability

$\leq \pm 0.2$ % of span/year

Operating conditions

Ingress protection (per IEC 60529)

IP65

Temperatures

- Medium: -30 ... +100 °C (-22 ... 212 °F)
- Ambient: -10 ... +60 °C (14 ... 140 °F)
- Storage: -20 ... +70 °C (-4 ... 158 °F)

Process connections

| Standard | Thread size |
|---------------------------------|-------------|
| ISO1179-2 (formerly DIN 3852-E) | G ¼ A |
| EN 837 | G ¼ B |
| | G ½ B |
| ANSI/ASME B1.20.1 | ¼ NPT |
| | ½ NPT |

Sealings

Process connections to the ISO1179-2 (formerly DIN 3852-E) standard are delivered with NBR sealings as standard.

Materials








Wetted parts

- Process connection: Stainless steel 316Ti
- Sealing material: See "Process connections"
- Sensor element: PH grade steel

Non-wetted parts

- Case: Stainless steel 304
- Front foil and membrane: Polyester

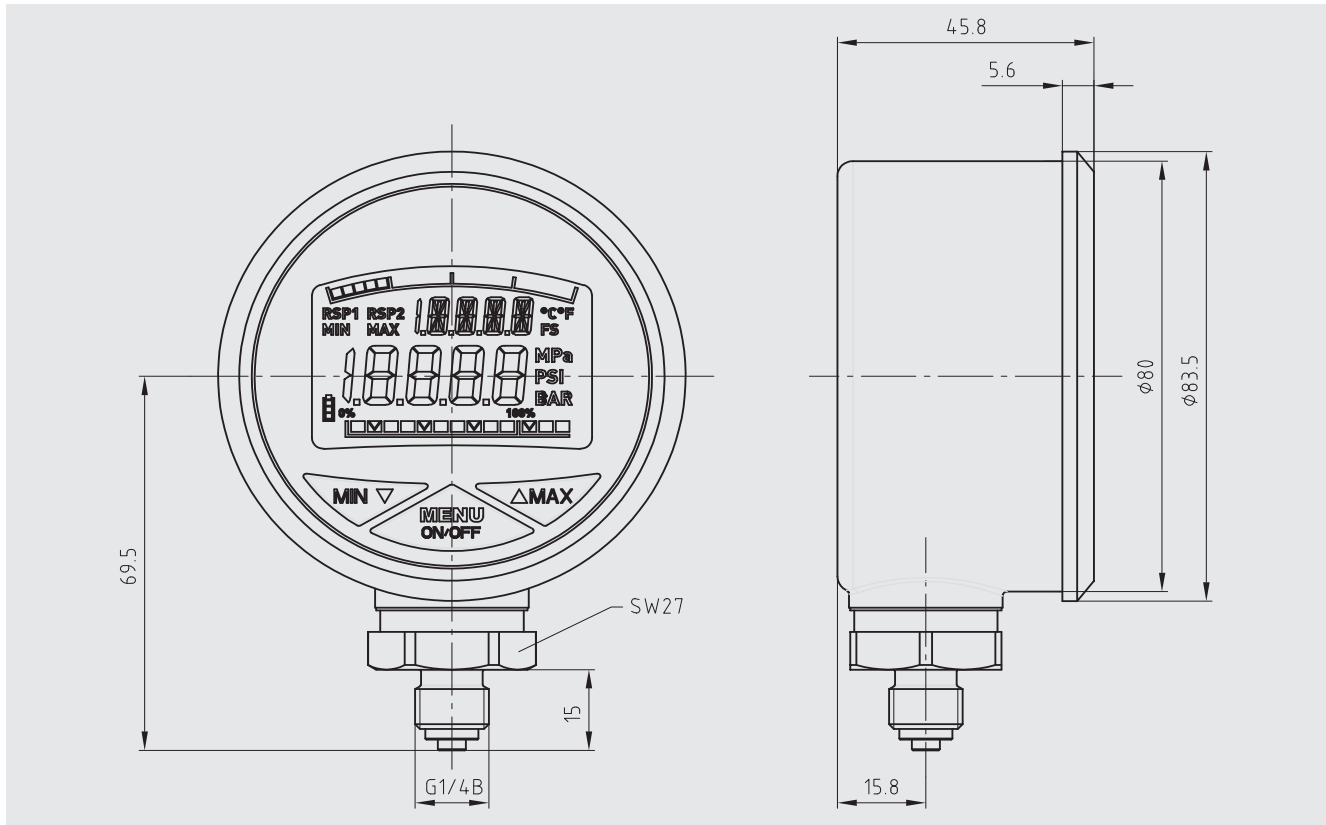
Approvals

| Logo | Description | Country |
|---|---|-----------------------------|
|  | EU declaration of conformity <ul style="list-style-type: none"> ■ EMC directive EN 61326 emission (group 1, class B) and interference immunity (industrial application) ■ Pressure equipment directive ■ RoHS directive | European Union |
|  | EAC <ul style="list-style-type: none"> ■ EMC directive ■ Pressure equipment directive | Eurasian Economic Community |
|  | GOST Metrology, measurement technology | Russia |
|  | KazInMetr Metrology, measurement technology | Kazakhstan |
|  | BelGIM Metrology, measurement technology | Belarus |
|  | UkrSEPRO Metrology, measurement technology | Ukraine |
|  | Uzstandard Metrology, measurement technology | Uzbekistan |
| - | CRN Safety (e.g. electr. safety, overpressure, ...) | Canada |

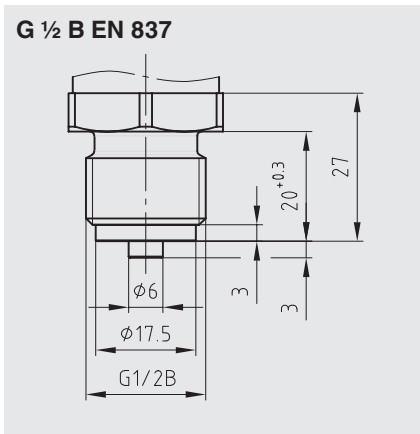
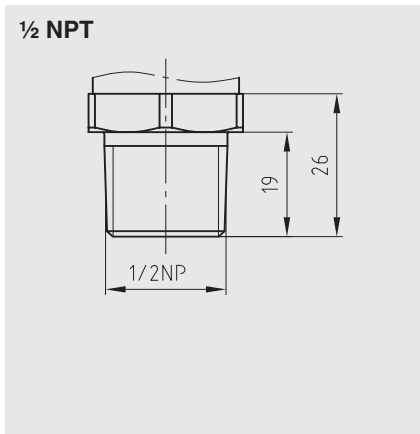
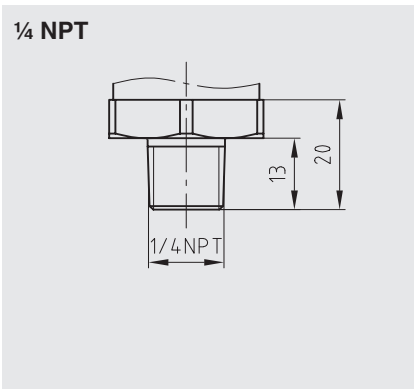
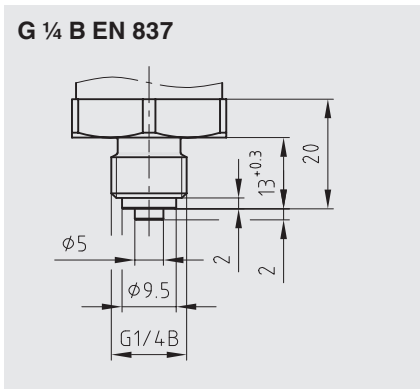
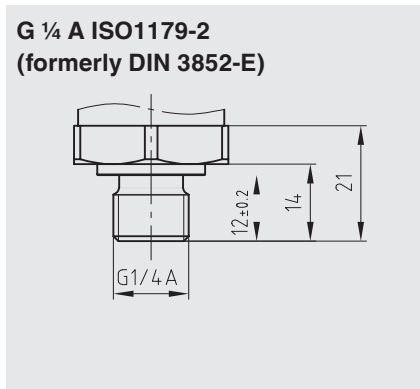
Approvals and certificates, see website

Dimensions in mm




Digital pressure gauge



Process connections



Accessories

| | Description | Order number |
|---|---|--------------|
|  | Rubber protection cap (black) | 11262010 |
|  | Minimes connector Maximum pressure strength 630 bar | 9072314 |
|  | Sealing for process connection per ISO1179-2 (formerly DIN 3852-E) Material NBR Thread size G ¼ A ISO1179-2 (formerly DIN 3852-E) | 1537857 |