

# Digital Pressure Gauge Type DG-10

WIKA Datasheet DG-10

## Applications

- Mechanical engineering
- Hydraulics and Pneumatics
- Pumps and Compressors
- Service

## Special Features

- Pressure ranges: from 0 ... 30 psi up to 0 ... 10,000 psi
- Display accuracy:  $\leq \pm 0.25\%$  B.F.S.L.
- Pressure connections: G1/4 DIN 3852-E, 1/4 NPT male, 1/2 NPT male, G1/4B, G1/2B and others
- Case: stainless steel, 3.15" (80 mm) diameter
- Power supply: 2x 1.5 V Type AA cell

## Description

### Durable, precise local display

A digital display is ideal for precise and fast pressure readings. The DG-10 features a durable stainless steel housing and integral battery power supply making it suitable for a wide range of applications and industries.

The multi-function display features a bar graph with a drag pointer function and a MIN/MAX memory. The MIN/MAX memory feature permits later recall of the minimum and maximum pressure readings.



DG-10-S  
Standard Version



DG-10-E  
Enhanced Version

### Standard and enhanced versions

The DG-10 is available in two versions: standard (DG-10-S) and enhanced (DG-10-E). Both versions allow the user to easily switch between the most widely-accepted international measurement units including bar, psi and MPa.

Additional features of the enhanced version include a back-lit display for use in low light conditions and a housing that can be rotated for optimal viewing. Additional user-programmable functions of the DG-10-E include auto power-off, tare function, and password protection.

### Proven pressure measurement technology

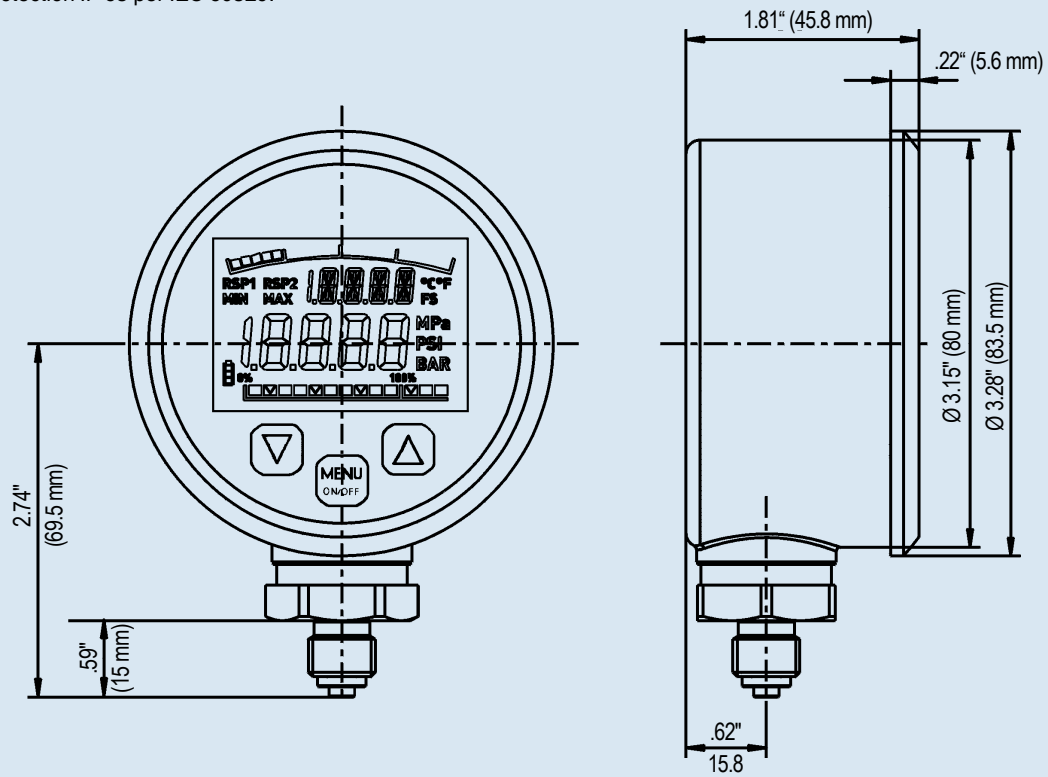
Sensors manufactured by WIKA provide high accuracy, long-term stability and excellent repeatability. For optimal performance, pressure ranges up to 600 psi (50 bar) use the WIKA ceramic sensor. Pressure ranges of 1450 psi (100 bar) and higher utilize WIKA thin film sensor technology.

| Specifications   |   | Type DG-10                                  |                      |                                       |                      |            |
|--|---|---|----------------------|---------------------------------------|----------------------|------------|
| Pressure ranges  | -30 InHg ... 29 psi   | -30 InHg ... 72 psi                         | -30 InHg ... 145 psi | -30 InHg ... 290 psi                  | -30 InHg ... 145 psi |            |
| Over pressure safety                                   | 70 psi  | 145   | 290                  | 580                                   | 1,450 psi            |            |
| Burst pressure   | 85 psi  | 170   | 360                  | 725                                   | 1,740 psi            |            |
| Pressure ranges  | 30 psi  | 60 psi                                      | 145 psi              | 300 psi                               | 600 psi              | 1,450psi   |
| Over pressure safety                                   | 70 psi  | 145 psi                                     | 290 psi              | 580 psi                               | 1,450 psi            | 2,900 psi  |
| Burst pressure   | 85 psi  | 170 psi                                     | 360 psi              | 725 psi                               | 1,740 psi            | 11,600 psi |
| Pressure ranges  | 2,000 psi   | 3,000 psi                                   | 5,000 psi            | 7,500 psi                             | 10,000 psi           |            |
| Over pressure safety                                   | 4,640 psi   | 7,250 psi                                   | 11,600 psi           | 17,400 psi                            | 21,750 psi           |            |
| Burst pressure   | 14500 psi   | 17,400 psi                                  | 24,650 psi           | 34,800 psi                            | 43,500 psi           |            |
| <b>Materials</b>                                       |   |   |                      |                                       |                      |            |
| ■ Wetted parts   |   |   |                      |                                       |                      |            |
| » Pressure connection                                  | 1.4571, 316TI SS  |   |                      |                                       |                      |            |
| » Pressure sensor                                      | Ceramic Al <sub>2</sub> O <sub>3</sub> 96%, NBR {EPDM } (up to 0 ... 600 psi) |   |                      |                                       |                      |            |
|  | XM-13 (1.4534) (≥ 1,450 psi)  |   |                      |                                       |                      |            |
| ■ Case   |   |   |                      |                                       |                      |            |
|  | 1.4301, 304 SS  |   |                      |                                       |                      |            |
| Power supply   | 2x 1.5 V Type AA batteries  |   |                      |                                       |                      |            |
| Operating time   | h   | 4,000 (AA 2,000 mAh)                        |                      |                                       |                      |            |
| Internal sampling rate                                 | ms  | 200   |                      |                                       |                      |            |
| Insulation voltage                                     | VDC   | 500   |                      |                                       |                      |            |
| Display accuracy                                       | % of span   | ≤ ± 0.25% B.F.S.L.                          |                      |                                       |                      |            |
| Zero offset  | % of span   | ≤ 0.1 (Power-up reset)                      |                      |                                       |                      |            |
| Zero adjustability                                     | % of span   | ≤ 20 (via Tare-Function with model DG-10-E) |                      |                                       |                      |            |
| Hysteresis   | % of span   | ≤ 0.1                                       |                      |                                       |                      |            |
| Non-repeatability                                      | % of span   | ≤ 0.1                                       |                      |                                       |                      |            |
| Long-term stability per year                           | % of span   | ≤ 0.2                                       |                      |                                       |                      |            |
| Long-term drift  | % of span   | ≤ 0.1                                       |                      |                                       |                      |            |
| Permissible temperature of                             |   |   |                      |                                       |                      |            |
| ■ Medium   |   |   |                      |                                       |                      |            |
|  | -4°F ... +185°F (-20°C ... +85°C) (up to 0 ... 600 psi)                       |   |                      |                                       |                      |            |
|  | -22°F ... +212°F (-30°C ... +100°C) (≥ 1450 psi)                              |   |                      |                                       |                      |            |
| ■ Ambient  |   |   |                      |                                       |                      |            |
|  | +14°F ... +140°F (-10°C ... +60°C)  |   |                      |                                       |                      |            |
| ■ Storage  |   |   |                      |                                       |                      |            |
|  | -4°F ... +158°F (-20°C ... +70°C)   |   |                      |                                       |                      |            |
| Operating temperature range                            | +32°F ... +140°F (0°C ... +60°C)  |   |                      |                                       |                      |            |
| Temperature coefficients within compensated temp range |   |   |                      |                                       |                      |            |
| ■ Mean TC of zero                                      |   |   |                      |                                       |                      |            |
|  | % of span   | ≤ 0.15 / 10k                                |                      |                                       |                      |            |
| ■ Mean TC of span                                      |   |   |                      |                                       |                      |            |
|  | % of span   | ≤ 0.15 / 10k                                |                      |                                       |                      |            |
| CE-conformity  |   |   |                      |                                       |                      |            |
| ■ Pressure equipment directive                         |   |   |                      |                                       |                      |            |
|  | 97/23/EC  |   |                      |                                       |                      |            |
| ■ EMC directive  |   |   |                      |                                       |                      |            |
|  | 89/336/EEC emission (class B) and immunity according to EN 61 326             |   |                      |                                       |                      |            |
| Case rotation  | °   | 300 ° (only with model DG-10-E)             |                      |                                       |                      |            |
|  |   | <b>DG-10-S</b>                              |                      | <b>DG-10-E</b>                        |                      |            |
| Principle  |   | 7 segment LCD 4 digit                       |                      | 7 segment LCD 4½ digit                |                      |            |
|  |   |   |                      | 14 segment LCD 4½ digit (2nd display) |                      |            |
| Digit size   |   | .43" (11 mm)                                |                      | .43 (11 mm) and .28" (7 mm)           |                      |            |
| Display  |   | -999 ... 9999                               |                      | -1999 ... 19999                       |                      |            |
| Background illumination                                |   | No  |                      | Included                              |                      |            |
| Bar graph with trailing pointer function               |   | Included                                    |                      | Included                              |                      |            |
| Min/Max memory   |   | Included                                    |                      | Included                              |                      |            |
| Auto On/Off  |   | Optional (ex works)                         |                      | 15/30/60/120 min                      |                      |            |
| Tare adjustment  |   | No  |                      | Included                              |                      |            |
| Units bar, psi, MPa                                    |   | Included                                    |                      | Included                              |                      |            |
| Password protection                                    |   | No  |                      | Included                              |                      |            |
| Reset factory setting                                  |   | No  |                      | Included                              |                      |            |
| Weight   |   | Approx. 14oz. (400 g)                       |                      |                                       |                      |            |

{ } Items in curved brackets are optional extras for additional price.

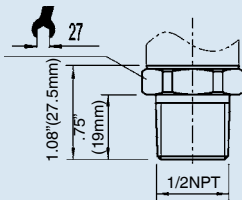
### Dimensions in inches (mm)

Ingress protection IP 65 per IEC 60529.

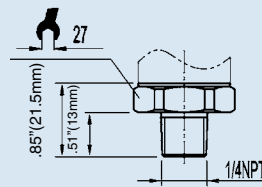


### Pressure connections

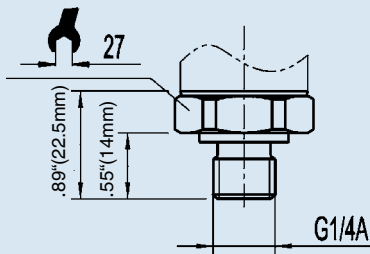
1/2 NPT male  
Order code: ND



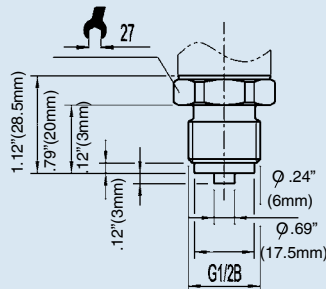
1/4 NPT male  
Order code: NB



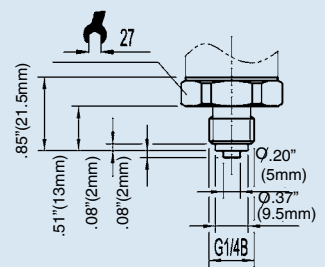
G 1/4 male  
DIN 3852-E  
Order code: HD



G1/2B  
Order code: GD

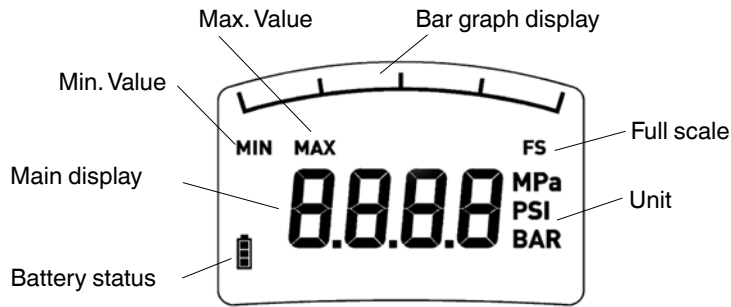


G1/4B  
Order code: GB

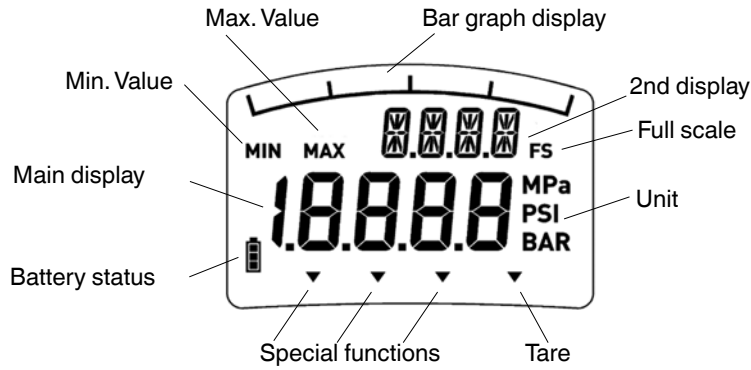


## Description of the Display

### DG-10-S



### DG-10-E

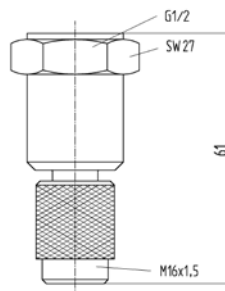


## Accessories

**Protective boot  
(black, vulcanized rubber)**



**Minimess gauge adapter system**



Specifications and dimensions given in this data sheet represent the state of engineering at the time of printing. Modifications may take place and materials specified may be replaced by others without prior notice.

