

# 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

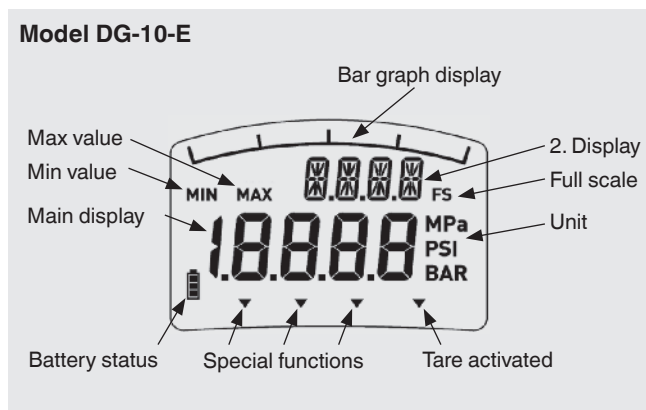
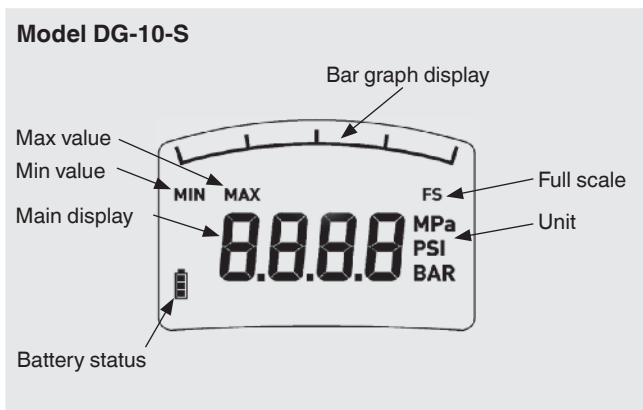
Gauge pressure							
bar	<b>Measuring range</b>	<b>0 ... 5</b>	<b>0 ... 10</b>	<b>0 ... 20</b>	<b>0 ... 50</b>	<b>0 ... 100</b>	<b>0 ... 160</b>
	Overpressure limit	10	20	40	100	200	320
	Burst pressure	12	25	50	120	800	1,000
	<b>Measuring range</b>	<b>0 ... 250</b>	<b>0 ... 400</b>	<b>0 ... 600</b>			
	Overpressure limit	500	800	1,200			
	Burst pressure	1,200	1,700	2,400			
psi	<b>Measuring range</b>	<b>0 ... 145</b>	<b>0 ... 300</b>	<b>0 ... 600</b>	<b>0 ... 1,450</b>	<b>0 ... 2,000</b>	<b>0 ... 3,000</b>
	Overpressure limit	290	580	1,450	2,900	4,640	7,250
	Burst pressure	360	725	1,740	11,600	14,500	17,400
	<b>Measuring range</b>	<b>0 ... 5,000</b>	<b>0 ... 7,500</b>	<b>0 ... 10,000<sup>1)</sup></b>			
	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	<b>Measuring range</b>	<b>-1 ... +5</b>	<b>-1 ... +10</b>
	Overpressure limit	10	20
	Burst pressure	12	25
psi	<b>Measuring range</b>	<b>-30 inHg ... +72 psi</b>	<b>-30 inHg ... +145 psi</b>
	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  $\pm 1$  digit <sup>1)</sup>

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

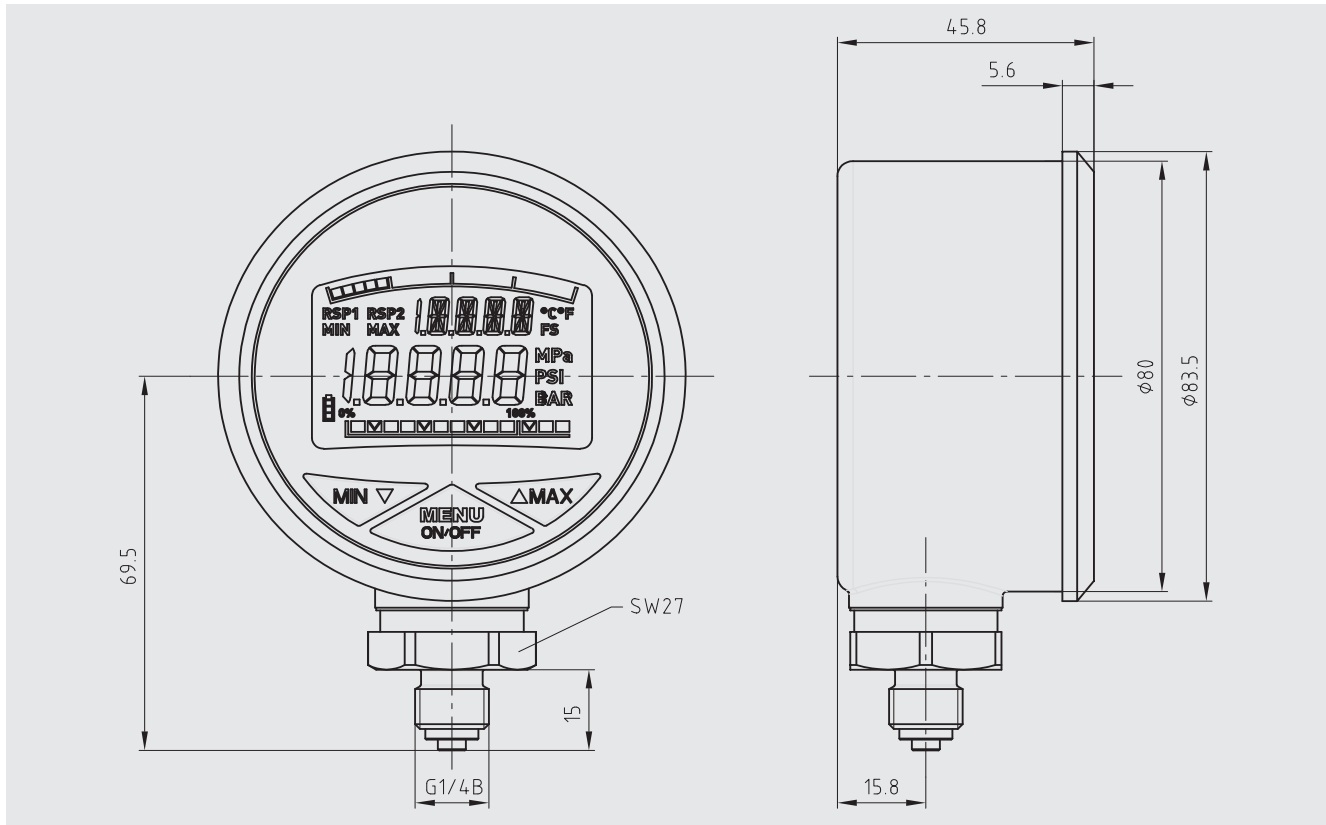
## Approvals

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

Approvals and certificates, see website

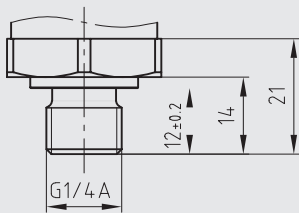
# Dimensions in mm

## Digital pressure gauge

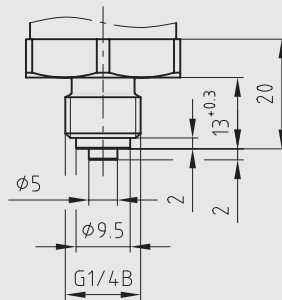


## Process connections

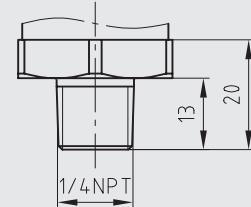
### G 1/4 A ISO1179-2 (formerly DIN 3852-E)



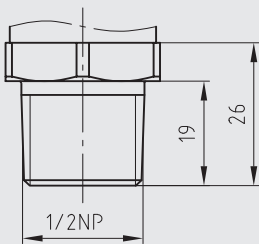
### G 1/4 B EN 837



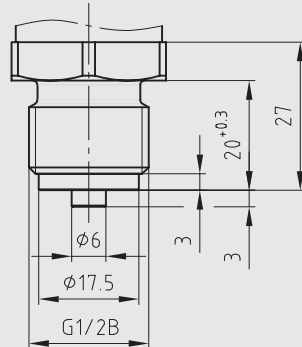
### 1/4 NPT






### 1/2 NPT



### G 1/2 B EN 837



## Accessories

	Description	Order number
	<b>Rubber protection cap (black)</b>	11262010
	<b>Minimes connector</b> Maximum pressure strength 630 bar	9072314
	<b>Sealing for process connection per ISO1179-2 (formerly DIN 3852-E)</b> Material NBR  Thread size G 1/4 A ISO1179-2 (formerly DIN 3852-E)	1537857

### Ordering information

Model / Measuring range / Process connection

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