

# Precision digital pressure gauge Model CPG1500

WIKA data sheet CT 10.51



for further approvals, see  
page 7

## Applications

- Oil and gas industry
- Maintenance and service facilities
- Calibration service companies and service industry
- Simple calibrations directly on-site
- Pressure test

## Special features

- Measuring ranges between 0 ... 10,000 bar [0 ... 150,000 psi] and also vacuum and absolute pressure measuring ranges are available
- Accuracy: up to 0.025 % (incl. calibration certificate)
- Intrinsically safe version
- Logger function with up to 50 measured values per second
- Communication with WIKI-Cal software via Bluetooth®



**Precision digital pressure gauge, model CPG1500**

## Description

The model CPG1500 precision digital pressure gauge adopts the concept of an analogue pressure gauge and at the same time works with the precision of a digital calibration instrument. The instrument thus combines the accuracy of digital measurement technology with the simplicity of an analogue measuring instrument and features impressive performance and ease of use.

The CPG1500 offers an accuracy of 0.1 % FS (optionally 0.05% FS or 0.025 % FS) and is temperature-compensated in the range of -10 ... +50 °C [14 ... 122 °F]. Measurements can be displayed in any of 26 pressure and 5 level units, or in custom units to avoid intricate conversions.

The measuring rate can be user-defined to match the type of measurement required. Standard applications usually use three measured values per second.

If required, this measuring rate can also be set to 50 measured values per second.

Via an energy-saving function, the CPG1500 switches automatically into "sleep" mode, in this mode the battery life can be increased up to 2,500 hours.

Through the innovative menu navigation, simple operation is ensured. The clear display, with integral bar graph display and large text area, assists with the effective analysis of the widest variety of measuring locations.

With the Min./Max. function, the minimum and maximum pressures can be accessed immediately and saved automatically.

## Software

WIKA-Cal calibration software is available for the CPG1500. WIKA-Cal also enables, over and above PC-supported calibration, the management of the calibration and instrument data in an SQL database.

As free software solutions for data transfer, WIKA also offers the WIKA-DCS PC software and the myWIKA device app for Android and iOS systems. Bluetooth® is available for the data transfer.

## Specifications

| Basic information              |                                                                                                                                                                                                                                                                                                                                                                                                |                          |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Pressure types                 |                                                                                                                                                                                                                                                                                                                                                                                                |                          |
| Gauge pressure                 | 0 ... 10,000 bar [0 ... 150,000 psi]                                                                                                                                                                                                                                                                                                                                                           |                          |
| Absolute pressure              | 0 ... 0.25 bar abs. to 0 ... 40 bar abs.<br>[0 ... 0.35 psi abs. to 0 ... 400 psi abs.]                                                                                                                                                                                                                                                                                                        |                          |
| Vacuum and +/- measuring range | -0.25 ... +0.25 mbar to -1 ... 40 bar<br>[-8 ... +8 psi to -14.5 ... 300 psi]                                                                                                                                                                                                                                                                                                                  |                          |
| Accuracy <sup>1) 2)</sup>      | <div><div></div> 0.025 % FS</div> <div><div></div> 0.05 % FS</div> <div><div></div> 0.1 % FS</div> <div><div></div> 0.5 % FS</div> <div>→ Also see table “Accuracy specifications”, page 3</div>                                                                                                                                                                                               |                          |
| Connection location            | Vertical mounting position, process connection lower mount                                                                                                                                                                                                                                                                                                                                     |                          |
| Adjustment                     | Offset and span factor adjustable                                                                                                                                                                                                                                                                                                                                                              |                          |
| Functions                      |                                                                                                                                                                                                                                                                                                                                                                                                |                          |
| Menu functions                 | <div><div></div> Min./Max. alarm (visual)</div> <div><div></div> Power-off function</div> <div><div></div> Measuring rate</div> <div><div></div> Mean value filter</div> <div><div></div> Pressure rate</div> <div><div></div> Mean value (via adjustable interval)</div> <div><div></div> Level indication</div> <div><div></div> Tare offset</div> <div><div></div> Indication damping</div> |                          |
| Memory                         | <div><div></div> Min./Max. memory</div> <div><div></div> Integrated data logger</div>                                                                                                                                                                                                                                                                                                          |                          |
| Mean value interval            | 1 ... 300 seconds, adjustable                                                                                                                                                                                                                                                                                                                                                                  |                          |
| Measuring rate                 | Max. 50/s                                                                                                                                                                                                                                                                                                                                                                                      |                          |
| Data logger <sup>3)</sup>      | <div><div></div> Cyclic logger</div> <div>⇒ Automatic recording of up to 1,000,000 values</div> <div><div></div> Cycle time</div> <div>⇒ Selectable from 1 ... 3,600 s in 1-second steps</div> <div>⇒ Selectable with the measuring rate in the following steps: 1/s, 3/s, 10/s and 50/s</div>                                                                                                 |                          |
| Battery status display         | Symbol display with 4 bars indicates the battery status in 25 % steps.                                                                                                                                                                                                                                                                                                                         |                          |
| Case                           |                                                                                                                                                                                                                                                                                                                                                                                                |                          |
| Rotatability                   | The case is rotatable by 330°.                                                                                                                                                                                                                                                                                                                                                                 |                          |
| Dimensions                     | → See dimensions in mm [in], page 10                                                                                                                                                                                                                                                                                                                                                           |                          |
| Ingress protection             | IP65                                                                                                                                                                                                                                                                                                                                                                                           |                          |
| Weight                         | Incl. batteries                                                                                                                                                                                                                                                                                                                                                                                | Approx. 680 g (1.5 lbs)  |
|                                | With protective case cap                                                                                                                                                                                                                                                                                                                                                                       | Approx. 820 g (1.81 lbs) |

1) It is defined by the total measurement uncertainty, which is expressed with the coverage factor ( $k = 2$ ) and includes the following factors: the intrinsic performance of the instrument, the measurement uncertainty of the reference instrument, long-term stability, influence of ambient conditions, drift and temperature effects over the compensated range during a periodic zero point adjustment.

2) FS = Full span = end of measuring range - start of measuring range

3) The WIKA-Cal software is required to evaluate the logger data  
The logger data can be downloaded as a CSV file using the demo version of WIKA-Cal. You can use the live logger for an accurate data analysis or a direct generation of certificates by means of the logger template of the WIKA-Cal.

| Digital display    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Display            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Display range      | -199999 ... 199999 digits<br>5 ½-digit 7-segment display (incl. a large matrix area for auxiliary information)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Display resolution | 4 ... 5 ½ digits; adjustable; depending on the selected pressure unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Backlighting       | Adjustable via key                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Bar graph          | 0 ... 100 %, 20 individual segments, which show 5 % steps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Menu languages     | Adjustable via menu <ul style="list-style-type: none"> <li>■ English</li> <li>■ German</li> <li>■ Spanish</li> <li>■ French</li> <li>■ Italian</li> <li>■ Russian</li> <li>■ Polish</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Pressure units     | Adjustable via menu <ul style="list-style-type: none"> <li>■ mbar</li> <li>■ bar</li> <li>■ psi</li> <li>■ Pa</li> <li>■ hPa</li> <li>■ kPa</li> <li>■ MPa</li> <li>■ atm</li> <li>■ Torr</li> <li>■ mmHg</li> <li>■ cmHg</li> <li>■ inHg</li> <li>■ inHg (0 °C)</li> <li>■ inHg (60 °F)</li> <li>■ mmH<sub>2</sub>O</li> <li>■ mH<sub>2</sub>O</li> <li>■ inH<sub>2</sub>O</li> <li>■ inH<sub>2</sub>O (4 °C)</li> <li>■ inH<sub>2</sub>O (20 °C)</li> <li>■ inH<sub>2</sub>O (60 °F)</li> <li>■ ftH<sub>2</sub>O</li> <li>■ kg/cm<sup>2</sup></li> <li>■ kp/cm<sup>2</sup></li> <li>■ lbf/ft<sup>2</sup></li> <li>■ kN/m<sup>2</sup></li> <li>■ micron</li> <li>■ 3 x user-defined unit <sup>1)</sup></li> </ul> |

1) The user-defined units can only be set via the WIKA-Cal and WIKA-DCS software. The CPG1500 must be fitted with Bluetooth®.

| Accuracy specifications                            |                                                                          |                                                                                                                  |
|----------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Accuracy <sup>1) 2)</sup>                          |                                                                          |                                                                                                                  |
| Gauge pressure                                     | ■ 0.025 % FS <sup>3) 4)</sup><br>■ 0.05 % FS <sup>3)</sup>               | 1 ... 1,000 bar [15 ... 15,000 psi]                                                                              |
|                                                    | 0.1 % FS                                                                 | 1 ... 2,500 bar [15 ... 50,000 psi]                                                                              |
|                                                    | 0.5 % FS                                                                 | 4,000 ... 10,000 bar [60,000 ... 150,000 psi]                                                                    |
| Absolute pressure                                  | ■ 0.025 % FS <sup>3) 4)</sup><br>■ 0.05 % FS <sup>3)</sup><br>■ 0.1 % FS | 1 ... 40 bar abs. [15 ... 500 psi abs.]                                                                          |
|                                                    | ■ 0.025 % FS <sup>3) 4)</sup><br>■ 0.05 % FS <sup>3)</sup><br>■ 0.1 % FS | -1 ... 0 bar to -1 ... 40 bar and -0.6 ... +0.6 bar<br>[-14.5 ... 0 psi to -14.5 ... 300 psi, and -8 ... +8 psi] |
|                                                    |                                                                          |                                                                                                                  |
| Vacuum and +/- measuring range                     |                                                                          |                                                                                                                  |
| Compensated range                                  | -10 ... 50 °C [14 ... 122 °F]                                            |                                                                                                                  |
| Reference conditions per IEC 61298-1 <sup>5)</sup> |                                                                          |                                                                                                                  |
| Ambient temperature                                | 15 ... 25 °C [59 ... 77 °F]                                              |                                                                                                                  |
| Atmospheric pressure                               | 860 ... 1,060 mbar [12.5 ... 15.4 psig]                                  |                                                                                                                  |
| Air humidity                                       | < 95 % r. h. (non-condensing)                                            |                                                                                                                  |
| Mounting position                                  | Vertical mounting position, process connection facing downwards.         |                                                                                                                  |

1) It is defined by the total measurement uncertainty, which is expressed with the coverage factor (k = 2) and includes the following factors: the intrinsic performance of the instrument, the measurement uncertainty of the reference instrument, long-term stability, influence of ambient conditions, drift and temperature effects over the compensated range during a periodic zero point adjustment.

2) FS = Full span = end of measuring range - start of measuring range

3) At a measuring rate of ≤ 3 measured values per second

4) Only with ≥ 0 ... 1 bar up to ≤ 0 ... 1,000 bar (≥ 0 ... 15 psi up to ≤ 0 ... 14,500 psi), at reference conditions 23 °C ± 3 °C

5) Calibrated at 23 °C [74 °F] and in a vertical mounting position, pressure connection facing downwards.

## Pressure ranges, gauge pressure

| bar        |                               |
|------------|-------------------------------|
| 0 ... 0.1  | 0 ... 200                     |
| 0 ... 0.25 | 0 ... 250                     |
| 0 ... 0.4  | 0 ... 400                     |
| 0 ... 0.6  | 0 ... 600                     |
| 0 ... 1    | 0 ... 700 <sup>1)</sup>       |
| 0 ... 1.6  | 0 ... 1,000 <sup>1)</sup>     |
| 0 ... 2.5  | 0 ... 1,600 <sup>1)</sup>     |
| 0 ... 4    | 0 ... 2,500 <sup>1)</sup>     |
| 0 ... 6    | 0 ... 4,000 <sup>1)</sup>     |
| 0 ... 10   | 0 ... 5,000 <sup>1)</sup>     |
| 0 ... 16   | 0 ... 6,000 <sup>1)</sup>     |
| 0 ... 25   | 0 ... 7,000 <sup>1) 2)</sup>  |
| 0 ... 40   | 0 ... 8,000 <sup>1) 2)</sup>  |
| 0 ... 60   | 0 ... 9,000 <sup>1) 2)</sup>  |
| 0 ... 100  | 0 ... 10,000 <sup>1) 2)</sup> |
| 0 ... 160  |                               |

1) Not possible as flush version > 600 bar [10,000 psi]

2) Measuring range not possible with CSA approval.

| psi         |                                |
|-------------|--------------------------------|
| 0 ... 5     | 0 ... 2,000                    |
| 0 ... 10    | 0 ... 3,000                    |
| 0 ... 15    | 0 ... 5,000                    |
| 0 ... 20    | 0 ... 6,000                    |
| 0 ... 30    | 0 ... 8,000                    |
| 0 ... 50    | 0 ... 10,000 <sup>1)</sup>     |
| 0 ... 60    | 0 ... 15,000 <sup>1)</sup>     |
| 0 ... 100   | 0 ... 20,000 <sup>1)</sup>     |
| 0 ... 150   | 0 ... 30,000 <sup>1)</sup>     |
| 0 ... 160   | 0 ... 40,000 <sup>1)</sup>     |
| 0 ... 200   | 0 ... 50,000 <sup>1)</sup>     |
| 0 ... 300   | 0 ... 60,000 <sup>1)</sup>     |
| 0 ... 500   | 0 ... 75,000 <sup>1)</sup>     |
| 0 ... 700   | 0 ... 100,000 <sup>1) 2)</sup> |
| 0 ... 1,000 | 0 ... 150,000 <sup>1) 2)</sup> |
| 0 ... 1,500 |                                |

## Pressure ranges, absolute pressure

| bar abs.   |          |
|------------|----------|
| 0 ... 0.25 | 0 ... 6  |
| 0 ... 0.4  | 0 ... 7  |
| 0 ... 0.6  | 0 ... 10 |
| 0 ... 1    | 0 ... 16 |
| 0 ... 1.6  | 0 ... 20 |
| 0 ... 2.5  | 0 ... 25 |
| 0 ... 4    | 0 ... 40 |

| psi abs.  |           |
|-----------|-----------|
| 0 ... 3.5 | 0 ... 60  |
| 0 ... 5   | 0 ... 100 |
| 0 ... 10  | 0 ... 150 |
| 0 ... 15  | 0 ... 200 |
| 0 ... 20  | 0 ... 300 |
| 0 ... 30  | 0 ... 500 |
| 0 ... 50  |           |

## Pressure range, vacuum and +/- measuring range

| bar             |           |
|-----------------|-----------|
| -0.25 ... +0.25 | -1 ... 7  |
| -0.4 ... +0.4   | -1 ... 9  |
| -0.6 ... +0.6   | -1 ... 10 |
| -1 ... 0        | -1 ... 15 |
| -1 ... +0.6     | -1 ... 24 |
| -1 ... 1.5      | -1 ... 25 |
| -1 ... 2.5      | -1 ... 39 |
| -1 ... 3        | -1 ... 40 |
| -1 ... 5        |           |

| psi           |           |
|---------------|-----------|
| -14.5 ... 0   | -8 ... +8 |
| -14.5 ... +15 | -5 ... +5 |
| -14.5 ... 40  | -3 ... +3 |
| -14.5 ... 70  | -8 ... 0  |
| -14.5 ... 100 | -5 ... 0  |
| -14.5 ... 130 | -3 ... 0  |
| -14.5 ... 300 |           |

Other measuring ranges on request.

## Further details on: Measuring range

### Overpressure limit

|                          |                         |                           |
|--------------------------|-------------------------|---------------------------|
| 3 times                  | < 25 bar                | < 360 psi                 |
| 2 times                  | > 25 ... ≤ 600 bar      | > 360 ... ≤ 8,700 psi     |
| 1.5 times                | > 600 ... ≤ 1,600 bar   | > 8,700 ... ≤ 25,000 psi  |
| 1.3 times                | > 1,600 ... ≤ 6,000 bar | > 25,000 ... ≤ 85,000 psi |
| 1.1 times                | > 6,000 bar             | > 85,000 psi              |
| Display                  | > 110 % FS or -10 % FS  |                           |
| <b>Vacuum resistance</b> | Yes                     |                           |

## Process connection

| Standard                 | Thread sizes                                                                                                                                                          | Possible measuring ranges                    |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| <b>EN 837</b>            | <ul style="list-style-type: none"> <li>■ G ¼ B</li> <li>■ G ½ B</li> <li>■ G ¾ B</li> <li>■ G ¼ female thread</li> </ul>                                              | ≤ 1,000 bar [≤ 15,000 psi]                   |
|                          | G ½ B flush with O-ring (NBR)                                                                                                                                         | 2.5 ... 60 bar [60 ... 6,000 psi]            |
|                          | G 1 B flush with O-ring (NBR)                                                                                                                                         | 0.4 ... 16 bar [16 ... 200 psi]              |
| <b>ANSI/ASME B1.20.1</b> | <ul style="list-style-type: none"> <li>■ ½ NPT</li> <li>■ ¼ NPT</li> <li>■ ½ NPT female thread</li> <li>■ ¼ NPT female thread</li> <li>■ ½ NPT male thread</li> </ul> | ≤ 1,000 bar [≤ 15,000 psi]                   |
|                          | M20 x 1.5                                                                                                                                                             | ≤ 1,000 bar [≤ 15,000 psi]                   |
|                          | R ½                                                                                                                                                                   | ≤ 1,000 bar [≤ 15,000 psi]                   |
|                          | G ½ male on G 1/8 female                                                                                                                                              | ≤ 400 bar [≤ 5,800 psi]                      |
|                          | M16 x 1.5 female, with sealing cone                                                                                                                                   | ≥ 1,600 bar [≥ 20,000 psi]                   |
| <b>-</b>                 | <ul style="list-style-type: none"> <li>■ M20 x 1.5 female, with sealing cone</li> <li>■ 9/16-18 UNF female F 250-C</li> </ul>                                         | 1,600 ... 7,000 bar [20,000 ... 100,000 psi] |

## Further details on: Process connection

|                                       |                                                                                        |                                                                                                  |
|---------------------------------------|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Process connection adapter 1)         | <div>■ Without</div> <div>■ G ½ to ¼ NPT</div> <div>■ G ½ to ½ NPT</div>               |                                                                                                  |
| Sealing                               | <div>■ NBR</div> <div>■ EPDM</div>                                                     |                                                                                                  |
| Other versions                        |                                                                                        |                                                                                                  |
| Oil- and grease-free                  | Per G93:2019 level D (< 220 mg/m²)                                                     |                                                                                                  |
| Oxygen, oil- and grease-free          | <div>■ Per G93:2019 level D (&lt; 220 mg/m²)</div> <div>■ Particle &lt; 1,000 µm</div> |                                                                                                  |
| Material                              |                                                                                        |                                                                                                  |
| Case                                  | Aluminium die-casting, nickel-plated                                                   |                                                                                                  |
| Wetted parts                          | Stainless steel 316                                                                    | <div>■ ≤ 1,000 bar [≤ 15,000 psi]</div> <div>■ -1 ... &lt; 40 bar [-14.5 ... &lt; 500 psi]</div> |
|                                       | Stainless steel 1.4534                                                                 | > 1,000 bar [>15,000 psi]                                                                        |
|                                       | Stainless steel 316 + Elgiloy® cell 2.4711                                             | > 40 bar ... ≤ 1,000 bar [> 500 ... ≤ 15,000 psi]                                                |
| Internal pressure transmission medium | Synthetic oil                                                                          | With measuring ranges up to ≤ 25 bar [≤ 360 psi]                                                 |
|                                       | Halocarbon oil                                                                         | For oxygen version                                                                               |

1) Only possible for thread size G ½ B.

→ For drawings of process connections, see page 11

## Output signal

### Communication

|           |                          |                            |
|-----------|--------------------------|----------------------------|
| Interface | Bluetooth® <sup>1)</sup> | For Low Energy version 4.0 |
|           |                          | For Classic version 2.1    |

- 1) Requires a PC with at least Bluetooth® 2.1 interface  
Bluetooth® Low Energy (= LE) is required to communicate with an iOS-enabled mobile device via the myWIKa device smartphone app.  
Communication with iOS-enabled devices is supported up to and including iOS version 15.

## Radio standard

### Bluetooth® <sup>1)</sup>

|                    |                           |       |
|--------------------|---------------------------|-------|
| Version            | Bluetooth® Low Energy 4.0 |       |
|                    | Bluetooth® Classic 2.1    |       |
| Frequency range    | 2,400 ... 2,500 MHz       |       |
| HF output power    | Max. 2 dBm (+ 2 dBi)      |       |
| Number of channels | Classic                   | 79    |
|                    | Low Energy                | 40    |
| Channel spacing    | Classic                   | 1 MHz |
|                    | Low Energy                | 2 MHz |
| Bandwidth          | 1 or 2 MHz                |       |
| Max. output power  | 4 dBm / 10 mW             |       |

- 1) Requires a PC with at least Bluetooth® 2.1 interface  
Bluetooth® Low Energy (= LE) is required to communicate with an iOS-enabled mobile device via the myWIKa device smartphone app.  
Communication with iOS-enabled devices is supported up to and including iOS version 15.

## Voltage supply and performance data

|                 |                                                                                   |
|-----------------|-----------------------------------------------------------------------------------|
| Battery         | 3 x 1.5 V AA alkaline batteries <sup>1)</sup>                                     |
| Maximum voltage | DC 4.95 V                                                                         |
| Battery life    | Typically 2,000 ... 2,500 h (without backlighting and with Bluetooth® not active) |

- 1) For hazardous areas, only approved models are permitted. These are listed separately in the operating instructions and in the additional information.

## Operating conditions

|                                 |                                                                                                  |
|---------------------------------|--------------------------------------------------------------------------------------------------|
| Medium temperature range        | -10 ... +50 °C [14 ... 122 °F]<br>Lower temperature limit above the freezing point of the medium |
| Operating temperature           | -10 ... +50 °C [14 ... 122 °F]                                                                   |
| Storage temperature range       | -20 ... +70 °C [-4 ... +158 °F]                                                                  |
| Relative humidity, condensation | < 95 % r. h. (non-condensing)                                                                    |
| Permissible media               | All liquids and gases which are compatible with 316 stainless steel                              |

## Approvals

| Logo                                                                              | Description                                                                                                                                                                                                                                             | Region         |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|  | <b>EU declaration of conformity</b>                                                                                                                                                                                                                     | European Union |
|                                                                                   | EMC directive<br>EN 61326 emission (group 1, class B) and immunity (industrial environment)                                                                                                                                                             |                |
|                                                                                   | Pressure equipment directive<br>PS > 200 bar, module A, pressure accessory                                                                                                                                                                              |                |
|                                                                                   | RED - radio equipment directive<br>EN 300 328 harmonised frequency range 2,400 ... 2,500 MHz is used; Bluetooth® Classic, max. transmission power 10 mW.<br>The instrument may be used without restrictions in the EU and in the countries of the EFTA. |                |
|                                                                                   | RoHS directive                                                                                                                                                                                                                                          |                |
|                                                                                   |                                                                                                                                                                                                                                                         |                |
|  | <b>Radio Law Japan</b><br>Radio approval                                                                                                                                                                                                                | Japan          |
|  | <b>Federal Communications Commission (FCC) for US</b><br>Radio approval                                                                                                                                                                                 | USA            |
| -                                                                                 | <b>Innovation, Science and Economic Development (ISED) for Canada</b><br>Radio approval                                                                                                                                                                 | Canada         |

## Optional approvals

| Logo                                                                                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Region         |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|    | <b>EU declaration of conformity</b><br><br>ATEX directive<br>Hazardous areas<br><br>Ex i     Zone 0 gas                                II 1G Ex ia IIC T4 Ga<br>Zone 1 connection to zone 0 gas    II 1/2G Ex ia IIC T4 Ga/Gb<br>Zone 1 gas                                  II 2G Ex ia IIC T4 Gb<br>T4 at -10 ... +50 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | European Union |
|  | <b>IECEX (option)</b><br>Hazardous areas<br><br>Ex i     Zone 0 gas                                Ex ia IIC T4 Ga<br>Zone 1 connection to zone 0 gas    Ex ia IIC T4 Ga/Gb<br>Zone 1 gas                                Ex ia IIC T4 Gb<br>Zone 2 gas                                Ex ia IIC T4 Gc<br>T4 at -10 ... +50 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | International  |
|  | <b>CSA (only up to 6,000 bar [85,000 psi])</b><br><br>Safety (e.g. electr. safety, overpressure, ...)<br>Class - 3631 06 - Electrical measurement and inspection equipment<br>Class - 3631 86 - Electrical equipment for measurement - certified according to US standards<br><br><b>Hazardous areas</b><br>Class - 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically-safe, Entity - hazardous area<br><br>Ex i     Class I, Zone 0 Ex ia IIC T4 Ga<br>Class I, Division 1, Groups A, B, C and D T4<br>T4 at -10 ... +50 °C<br><br>Class - 2258 84 - PROCESS CONTROL EQUIPMENT - Intrinsically-safe, Entity - hazardous area - certified in accordance with US standards<br><br>AEx i    Class I, Zone 0 AEx ia IIC T4 Ga<br>Class I, Division 1, Groups A, B, C and D T4<br>T4 at -10 ... +50 °C | USA and Canada |

| Logo                                                                              | Description                                                                                                                                                                                                                                                            | Region                      |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
|  | <b>EAC</b><br><ul style="list-style-type: none"> <li>■ EMC directive</li> <li>■ Hazardous areas</li> </ul> Ex i    Zone 0 gas<br>Zone 1 connection to zone 0 gas<br>Zone 1 gas<br><br>Ex ia IIC T4 Ga<br>Ex ia IIC T4 Ga/Gb<br>Ex ia IIC T4 Gb<br>T4 at -10 ... +50 °C | Eurasian Economic Community |
| -                                                                                 | <b>MChS</b><br>Permission for commissioning                                                                                                                                                                                                                            | Kazakhstan                  |
| -                                                                                 | <b>PAC Ukraine</b><br>Metrology, measurement technology                                                                                                                                                                                                                | Ukraine                     |
| -                                                                                 | <b>CRN</b><br>Safety (e.g. electr. safety, overpressure, ...)                                                                                                                                                                                                          | Canada                      |

## Certificates

| Certificate                             |                                                                                                                                                                                                                        |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Calibration <sup>1)</sup></b>        | <ul style="list-style-type: none"> <li>■ 3.1 inspection certificate per EN 10204 (factory calibration)</li> <li>■ DAkkS calibration certificate (traceable and accredited in accordance with ISO/IEC 17025)</li> </ul> |
| <b>Recommended calibration interval</b> | 1 year (dependent on conditions of use)                                                                                                                                                                                |

1) Calibrated in vertical mounting position with process connection facing downwards

## Patents, property rights

| Patent number  | Description   |
|----------------|---------------|
| US D 803.082 S | Design patent |

→ For approvals and certificates, see website

## Safety-related characteristic values (Ex)

### Permissible temperature ranges

| Parameters                              |                                                  |
|-----------------------------------------|--------------------------------------------------|
| Ambient temperature range ( $T_a$ )     | $-10 \leq T_a \leq +50 \text{ }^{\circ}\text{C}$ |
| Max. medium temperature range ( $T_m$ ) | $-10 \leq T_m \leq +50 \text{ }^{\circ}\text{C}$ |

### Battery supply (optional)

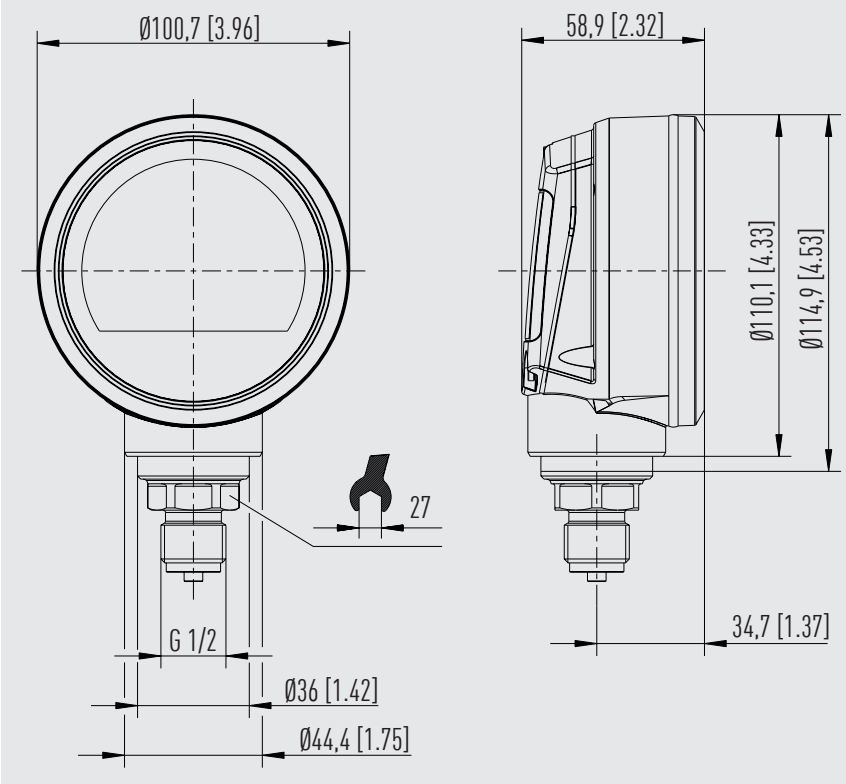
| Parameters                       |           |
|----------------------------------|-----------|
| Rated voltage (3 x AA batteries) | DC 4.5 V  |
| Max. voltage (sparking)          | DC 4.95 V |

### High-frequency output with Bluetooth®

| Parameters                                          |                     |
|-----------------------------------------------------|---------------------|
| Output frequency                                    | 2,400 ... 2,500 MHz |
| Nominal output power                                | 10 mW               |
| Max. output power (under fault conditions for "ia") | 490 mW              |

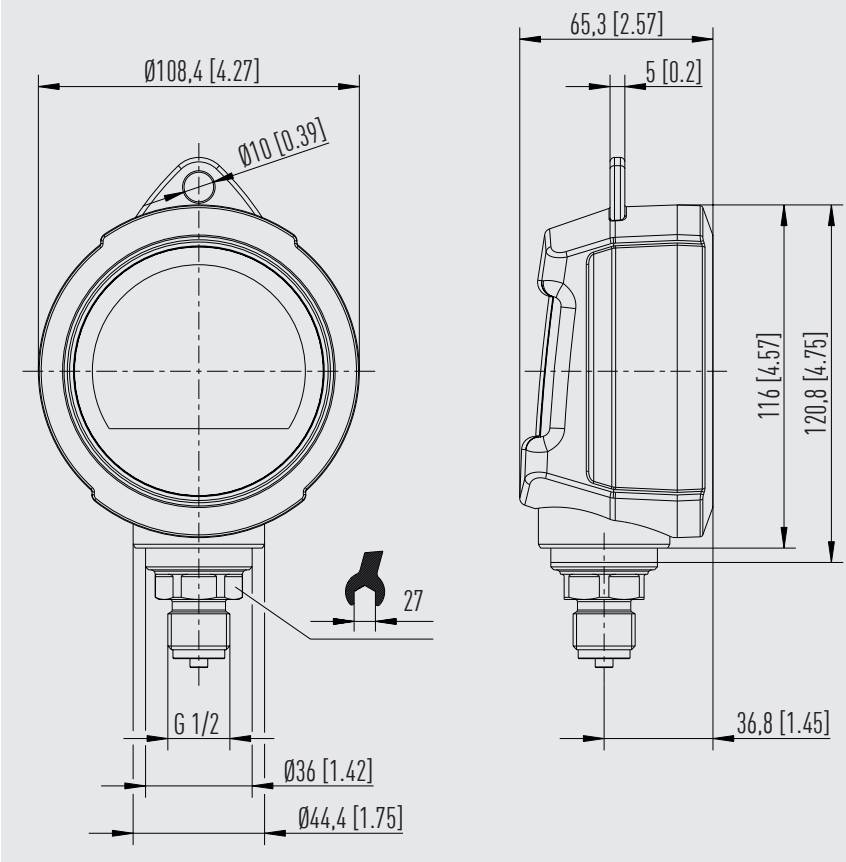
Dimensions in mm [in]

CPG1500 without protective case cap



14562303

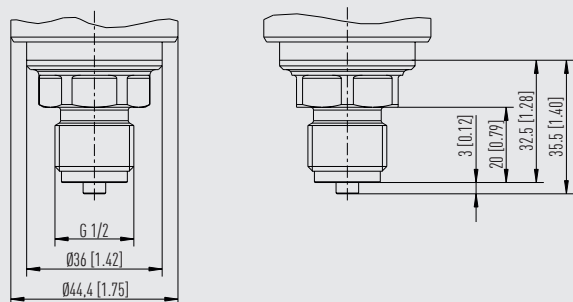
CPG1500 with protective case cap



14546316

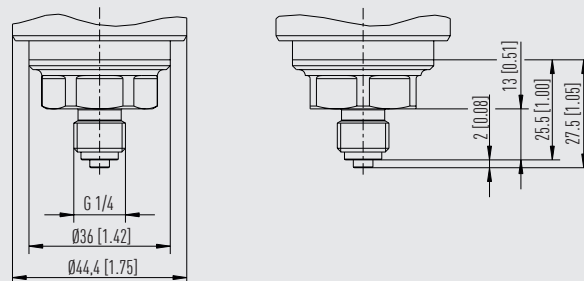
## Process connections

**Threaded connection G 1/2**



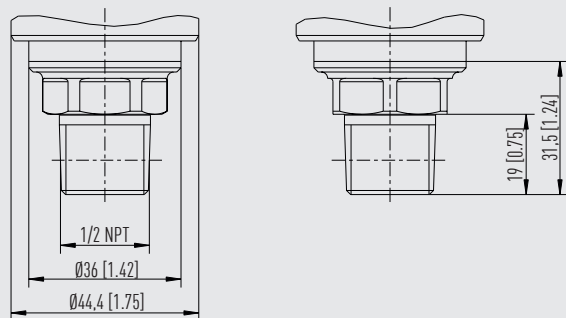
14562604

**Threaded connection G 1/4**



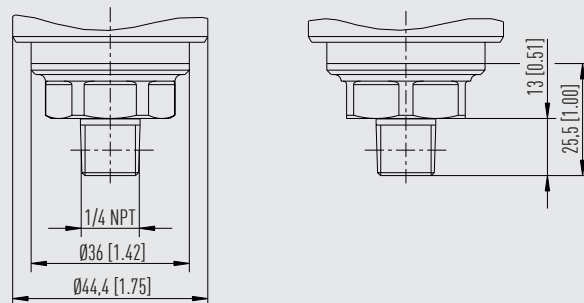
14562604

**Threaded connection 1/2 NPT**



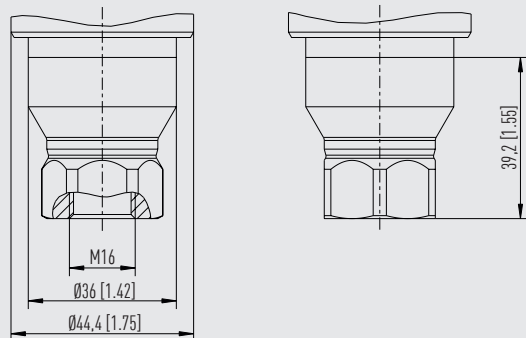
14562604

**Threaded connection 1/4 NPT**



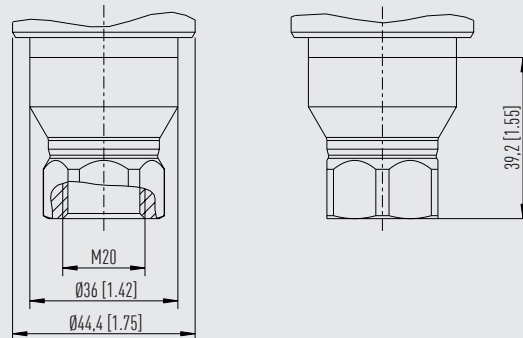
14562604

**Threaded connection M16**



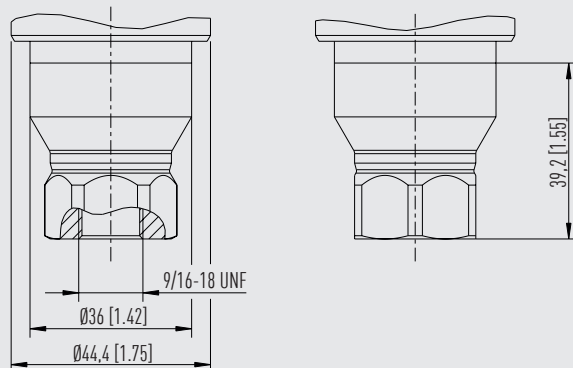
14562604

**Threaded connection M20**



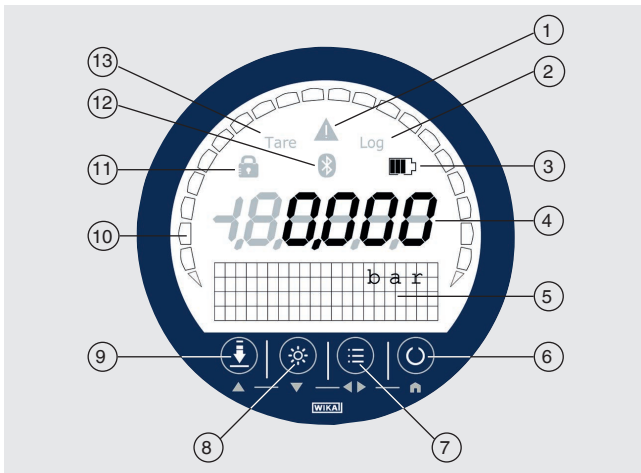
14562604

**Threaded connection 9/16 - 18 UNF**



14562604

## Front foil



### ① Warning notice for:

- Exceeding or dropping below the pressure range
- Exceeding or dropping below the temperature range
- Logger memory is more than 90 % full
- Instrument error or battery status < 10 %

### ② Log

Logger function active/inactive

### ③ Battery status

### ④ Pressure indication

### ⑤ Matrix field

Serves as menu and secondary display

### ⑥ On/Off button

### ⑦ MENU button

Calling up the menu

### ⑧ LIGHT button

Turning the backlighting on and off

### ⑨ ZERO button

The current pressure value will be set to "0" (gauge) or reference pressure (abs.)

### ⑩ Bar graph

Indicates the current pressure graphically

### ⑪ Lock symbol

Menu button or ZERO button locked/unlocked

### ⑫ Bluetooth® symbol

Bluetooth® active/inactive

### ⑬ Tare

TARE active/inactive

## App "myWIKa device"



Via the app "myWIKa device" and the Bluetooth® connection, the CPG1500 can be configured for calibration and logging tasks in a convenient way through a mobile phone. During the pressure measurement, the value is displayed in the required unit directly on the phone.

Moreover, further parameters like temperature and rate of change of pressure can be monitored. It is also possible to retrieve more detailed

instrument information directly from the Wika website. In addition, the app allows configuration, control and saving of log procedures.

Logs that were saved on the mobile phone can be transferred to a PC and be read by Wika-Cal. This enables them to be processed further and the app forms the final part of a complete solution for handling data from the CPG1500.

In the basic setting of the CPG1500, a distinction can be made between the communication types of Bluetooth® Classic alone or Bluetooth® Classic and Bluetooth® Low Energy (= LE).

Bluetooth® Low Energy (= LE) is required to communicate with an iOS-capable mobile phone or tablet via the myWIKa device smartphone app.

To connect to a PC or an Android-enabled device, it is recommended to choose Bluetooth Classic.



For iOS-based mobile phones, the app is available in the Apple Store under the link below.

[Download here](#)



For mobile phones with an Android operating system, the app is available in the Play Store under the link below.

[Download here](#)



## WIKA-Cal calibration software

### Easy and fast creation of a high-quality calibration certificate

The WIKA-Cal calibration software is used for generating calibration certificates or logger protocols for pressure measuring instruments and is available as a demo version for a cost-free download.

To switch from the demo version to a licenced version, a USB dongle with a valid licence must be purchased.

The preinstalled demo version changes automatically to the selected version when plugging in the USB dongle and remains available as long as the USB dongle is connected to the PC.



- The user is guided through the calibration or logger process
- Management of calibration data and instrument data
- Intelligent preselection via SQL database
- Menu languages: German, English, Italian, French, Dutch, Polish, Portuguese, Romanian, Spanish, Swedish, Russian, Greek, Japanese, Chinese  
More languages are due with software updates
- Customer-specific complete solutions possible
- Maximum degree of automation in connection with our CPx series

The supported instruments are continuously expanded and even customer-specific adaptations are possible.

For further information, see data sheet CT 95.10

### There are two licences available for WIKA-Cal in conjunction with a precision pressure measuring instrument of the CPx series

The WIKA-Cal calibration software is available both for reading the logger data stored in the precision digital pressure gauge as well as for online calibrations together with a PC. The scope of software functions depends on the selected licence. Several licences can be combined on one USB dongle.

| Cal-Template (demo version)                                                                                                                                                                                                                  | Cal-Template (light version)                     | Log-Template (full version)                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fully automatic calibration                                                                                                                                                                                                                  | Semi-automatic calibration                       | <ul style="list-style-type: none"><li>■ Live measured value recording for a certain period of time with selectable interval, duration and start time</li><li>■ Readout of the integrated data logger of the precision digital pressure gauge</li><li>■ Creation of logger protocols with graphic and/or tabular representation of the measuring results in PDF format</li><li>■ Possibility of exporting measuring results as CSV file</li></ul> |
| Limitation to two measuring points                                                                                                                                                                                                           | No limitation of the measuring points approached |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"><li>■ Creation of 3.1 inspection certificates per DIN EN 10204</li><li>■ Calibration data can be exported to Excel® template or XML file</li><li>■ Calibration of pressure measuring instruments</li></ul> |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                              |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Ordering information for your enquiry for a single licence:                                                                                                                                                                                  |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Is available for a cost-free download                                                                                                                                                                                                        | WIKA-CAL-LZ-Z-Z                                  | WIKA-CAL-ZZ-L-Z                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                              | WIKA-CAL-LZ-L-Z                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## WIKI-DCS configuration software

As a supplement to the model CPG1200 and CPG1500 digital pressure gauges, in addition to the WIKI-Cal calibration software, the WIKI-DCS configuration software is also available.

With the help of the software, the instruments can be easily configured, either via the USB or Bluetooth® connection. The configuration includes, for example, setting the indication unit, displaying the temperature, min./max values and other menu settings.

The software also enables the configuration, control and storage of logger operations.

- Configuring the instrument
- Configuring logger sequences with the CPG1200/CPG1500
- Carrying out logger sequences with the CPG1200/CPG1500
- Downloading log files from the CPG1200/CPG1500
- Download the logger protocols as a CSV file
- Menu languages: German, English, French and Spanish



| Minimum system requirements |                                                                                                                                                                                  |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Processor                   | Intel® Pentium® 4 or AMD Athlon® 64                                                                                                                                              |
| Software                    | <ul style="list-style-type: none"><li>■ Microsoft® Windows® XP with Service Pack 3</li><li>■ Windows® 7 with Service Pack 1</li><li>■ Windows® 8</li><li>■ Windows® 10</li></ul> |
| Storage                     | 1 GB RAM and 1 GB free hard disc space (no installation possible on portable flash storage media)                                                                                |
| Display                     | 1024 x 768 pixel screen resolution (1280 x 800 pixel recommended) with 16-bit colour depth and 256 MB VRAM                                                                       |

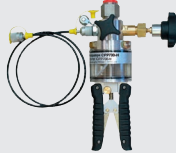
Microsoft® and Windows® are registered trademarks of Microsoft Corporation in the United States and other countries.

Bluetooth® is a registered trademark of Bluetooth SIG, Inc..

# Complete test and service cases

The available test and service cases are individually equipped according to your needs.  
There is a differentiation between 2 different variants.

| Case variants and existing recesses                   | Pneumatic service kit | Hydraulic service kit |
|-------------------------------------------------------|-----------------------|-----------------------|
| <b>Recesses for standard components</b>               |                       |                       |
| Precision digital pressure gauge model CPG1500        | x                     | x                     |
| Sensor connection cable 1.1 m [3.3 ft]                | x                     | x                     |
| Sealing set                                           | x                     | x                     |
| Pneumatic hand test pump, model CPP30                 | x                     | -                     |
| Hydraulic hand test pump, model CPP700-H or CPP1000-H | -                     | x                     |
| <b>Ordering information for your enquiry</b>          | CPG-KITP              | CPG-KITH              |
| <b>For further specifications, see data sheet</b>     | CT 93.01              | CT 93.02              |

| Recommended pressure generation                   |                                                                                   |                                                                                               |
|---------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Hand test pump                                    | Pneumatic<br>Model CPP30                                                          | Hydraulic<br>Model CPP700-H/ CPP1000-H                                                        |
|                                                   |  |            |
| Pressure range                                    | -0.95 ... +35 bar [-28 inHg ... +500 psi]                                         | <div>■ 0 ... 700 bar [0 ... 10,000 psi]</div> <div>■ 0 ... 1,000 bar [0 ... 14,500 psi]</div> |
| <b>For further specifications, see data sheet</b> | CT 91.06                                                                          | CT 91.07                                                                                      |



The recommended hand test pumps and service cases are not approved for use in hazardous areas!

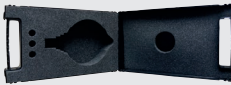


Pneumatic service kit incl. pneumatic hand test pump



Hydraulic service kit incl. hydraulic hand test pump

## Accessories

| Description <sup>1)</sup>                                                           |                                                                                                                                                                                                                                                                                                        | Order code |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
|                                                                                     | CPG-A-15-                                                                                                                                                                                                                                                                                              |            |
|    | <b>Alkaline batteries - Ex-approved</b><br>3 x 1.5 V AA                                                                                                                                                                                                                                                | -C-        |
|    | <b>Protective case cap - Ex-approved</b><br>For CPG1500 case<br><br> <b>Only approved protective case caps may be used in Ex areas!</b><br><b>You can find further information on this in the instructions.</b>       | -G-        |
|    | <b>Sealing set</b><br>Consisting of:<br>■ 4 x G ½ USIT seals<br>■ 2 x G ¼ USIT seals<br>■ Plastic box                                                                                                                                                                                                  | -D-        |
| -                                                                                   | <b>Dips (Diaphragm Impact Protection System)</b><br>For M16 x 1.5<br>Pressure range: 1,600 ... 2,500 bar                                                                                                                                                                                               | -O-        |
|                                                                                     | For M16 x 1.5<br>Pressure range: > 4,000 bar                                                                                                                                                                                                                                                           | -P-        |
|                                                                                     | For M20 x 1.5<br>Pressure range: 1,600 ... 2,500 bar                                                                                                                                                                                                                                                   | -Q-        |
|                                                                                     | For M20 x 1.5<br>Pressure range: > 4,000 bar                                                                                                                                                                                                                                                           | -R-        |
|                                                                                     | For 9/16-18 UNF<br>Pressure range: 1,600 ... 2,500 bar                                                                                                                                                                                                                                                 | -S-        |
|                                                                                     | For 9/16-18 UNF<br>Pressure range: > 4,000 bar                                                                                                                                                                                                                                                         | -T-        |
|  | <b>Instrument mounting bracket 90°</b><br>Material: Aluminium<br>Screws: stainless steel<br><br> <b>Not approved in hazardous area for Zone 0!</b><br><b>Only approved in hazardous area for Zone 1 and Zone 2!</b> | -1-        |
|  | <b>Plastic case</b><br>For 1 x CPG1500 for storage and transport<br><br> <b>The plastic case is not permitted to be used in hazardous areas!</b>                                                                    | -5-        |
|  | <b>Plastic case</b><br>For 3 x CPG1500 for storage and transport<br><br> <b>The plastic case is not permitted to be used in hazardous areas!</b>                                                                    | -6-        |
|  | <b>Plastic case</b><br>For 1 x digital pressure gauge, 1 x CPP700-H hydraulic hand test pump<br><br> <b>The plastic case is not permitted to be used in hazardous areas!</b>                                        | -N-        |
|                                                                                     | For 1 x digital pressure gauge, 1 x CPP7-H or CPP30 pneumatic hand test pump<br><br> <b>The plastic case is not permitted to be used in hazardous areas!</b>                                                        | -L-        |

| Description <sup>1)</sup>                                                                                                                                                                                                              |  | Order code |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------|
|  <b>Bluetooth® USB stick</b><br> <b>May not be used in Ex areas!</b> |  | CPG-A-15-  |
|                                                                                                                                                                                                                                        |  | -2-        |
| Ordering information for your enquiry:                                                                                                                                                                                                 |  |            |
| <b>1. Order code: CPG-A-15</b><br><b>2. Option:</b>                                                                                                                                                                                    |  | ↓<br>[   ] |

1) The figures are an example and may change depending on the state of the art in design, material composition and representation

## Scope of delivery

- Precision digital pressure gauge model CPG1500
- 3 x 1.5 V AA alkaline batteries
- Operating instructions
- Calibration certificate



**Precision digital pressure gauge with protective case cap, model CPG1500**

## Ordering information

CPG1500 / Version / Explosion protection / Instrument variant / Unit / Pressure type / Measuring range / Process connection / Wetted parts / Version for specific media / Accuracy / Type of certificate / Communication / Data logger / protective case cap / Software / Carrying case / Further approvals / Additional accessories / Additional ordering information

© 04/2016 WIKA Alexander Wiegand SE & Co. KG, all rights reserved.  
The specifications given in this document represent the state of engineering at the time of publishing.  
We reserve the right to make modifications to the specifications and materials.



**WIKA Alexander Wiegand SE & Co. KG**  
Alexander-Wiegand-Straße 30  
63911 Klingenberg/Germany  
Tel. +49 9372 132-0  
info@wika.de  
www.wika.de