

Modular High-Precision Pressure Indicator Model CPG8000



WIKA Data Sheet CT 25.05

Applications

- National institutes and institutions
- Research and development laboratories
- Industry (laboratory, workshop and production)
- Calibration service companies

Special Features

- Up to 4 sensors can be integrated
- Pressure ranges: from 0 ... 100 mbar to 0 ... 2,500 bar
- Total uncertainty of measurement: 0.025 % ... 0.008 % (certified)
- Over pressure safety (up to 400 bar)
- Easy retrofitting



High-Precision Pressure Indicator CPG8000

Description

Areas of application

The CPG8000 is a modular pressure system incorporating up to 4 high-precision pressure sensors and a barometric reference as an option.

Due to its certified uncertainty of up to 0.008 % the system is especially suitable as a factory / working standard for the calibration or testing of any pressure measuring instrument. Its modular construction enables it to be adapted to suit all customer's requirements.

Functionality

The high-resolution colour graphics display, on which up to 4 windows with many extras can be viewed simultaneously, is a new feature for an instrument of this class. They can be used to display the pressure signal in different pressure units or to activate various functions.

8 programmable relay outputs, a data logger and various functions, such as Min, Max, Hold, Zero, Average, Pressure

rate or Zero point adjustment ensure that the precision pressure systems can be used for many different applications.

Software

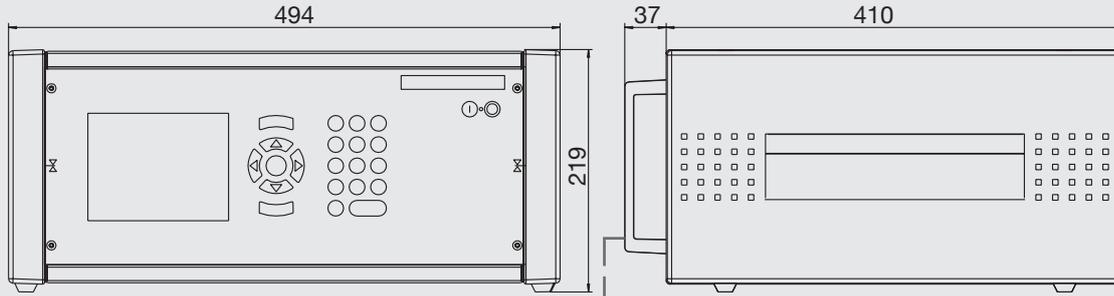
WIKA calibration and documentation software EasyCal is to make the calibrations of any type of pressure measuring instrument easy and enable calibration certificates to be produced. Furthermore the customer can also create his own test programs with the help of the software LabVIEW®.

Complete testing and calibration systems

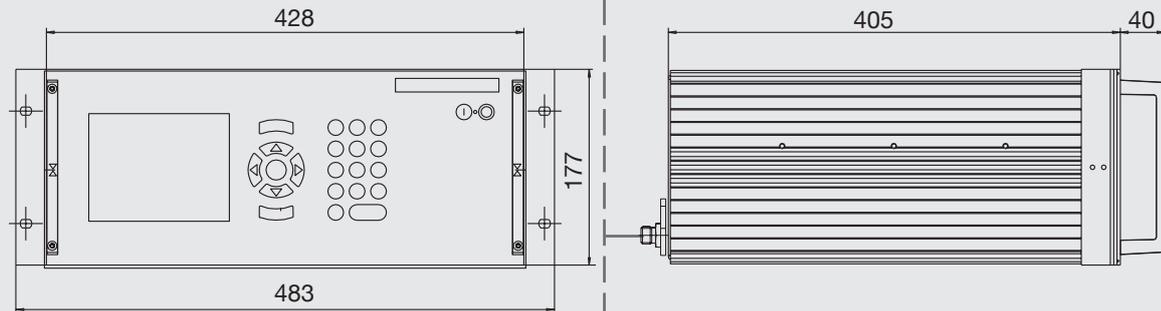
An IEEE-488.2 and a RS-232 interface exist for communication with other instruments, and therefore the instrument can be integrated into an existing compound system, or, on request, customised mobile or stationary test systems can be manufactured.

Dimensions in mm

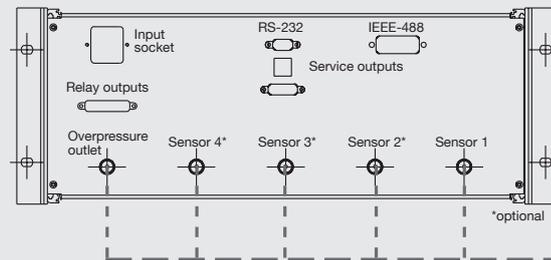
Desk top model



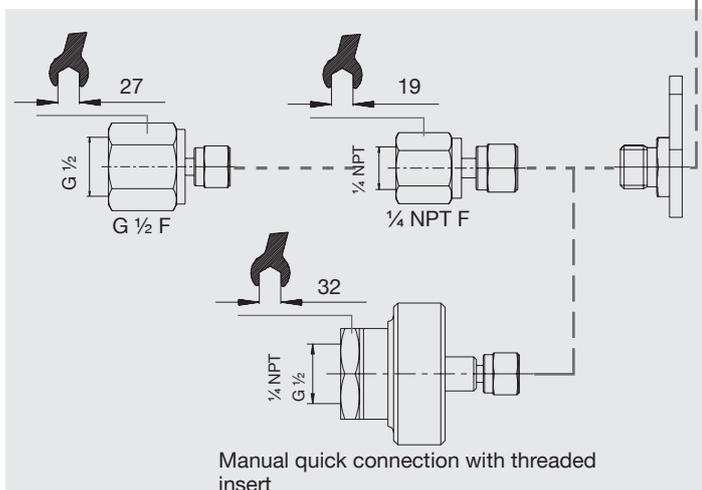
19" plug-in case



Rear view



Optional adapters



Pressure ports: (depending on pressure range)
 up to 400 bar: 6 mm SWAGELOK® tube fitting
 over 400 bar: 1/4" SNOTRIK® tube fitting

Specifications

CPG8000

Number of integratable sensors (selectable)	pcs.	1 ... 4
Pressure range ¹⁾	bar	0 ... 0.1 up to 0 ... 2,500 (sensor related)
Total uncertainty of measurement ¹⁾		0.025 % FS up to 0.008 % IS ²⁾ (sensor related)
Pressure ports		
■ Up to 400 bar (standard version)		6 mm SWAGELOK® tube fitting
■ Over 400 bar (high pressure version)		¼" SNOTRIK® tube fitting
Pressure ports adapter		on request
Tube material		stainless steel 1.4571 and 1.4401 (all connections without seals)
Overpressure protection (up to 400 bar)		safety valves, scaled to 120 % of FS
Instrument version		desk top / 19" plug -in case
Screen		TFT-Colour graphics display (320 x 240 Pixel)
Screen division	windows	1, 2 or 4
Indication of measured values	digits	up to 7
Measuring rate	values/sec.	up to 8 (sensor related)
Keyboard		Membrane keyboard
Evaluation unit		Motorola 50 MHz Power PC-Board
Operating system		Windows CE
Digital interface		RS-232 and IEEE-488.2
Relay outputs		8 programmable change-over contacts
Power supply		100 ... 240 VAC, 50/60 Hz, < 55 VA
Permissible		
■ Media		sensor related; for any noncorrosive liquid resp. clean, dry air or nitrogen
■ Operating temperature	°C	15 ... 35
■ Storage temperature	°C	0 ... 70
■ Air humidity	%	35 ... 85 relative humidity without moisture condensation
Ingress protection		IP31 (front panel IP41)
Weight	Kg	10 ... 17 (dependent on sensors used)
Dimensions		see technical drawings
CE-mark		conformity certificate
Calibration ³⁾		Incl. calibration report 3.1 per to DIN EN 10 204

1) For pressure ranges available and accuracies please see current price list.

2) IntelliScale offers a total uncertainty of measurement of 0.008 % of Reading in the upper 2/3 of the span and 0.008 % of 1/3 FS in the lower one-third of the span.

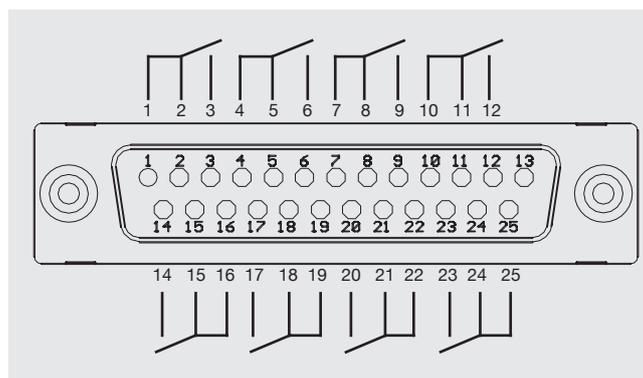
3) Calibrated in a horizontal mounting position.

Wiring details

The input socket and the digital interfaces (see Rear view on Page 2) should/must only be connected with specific connection cables approved for this purpose.

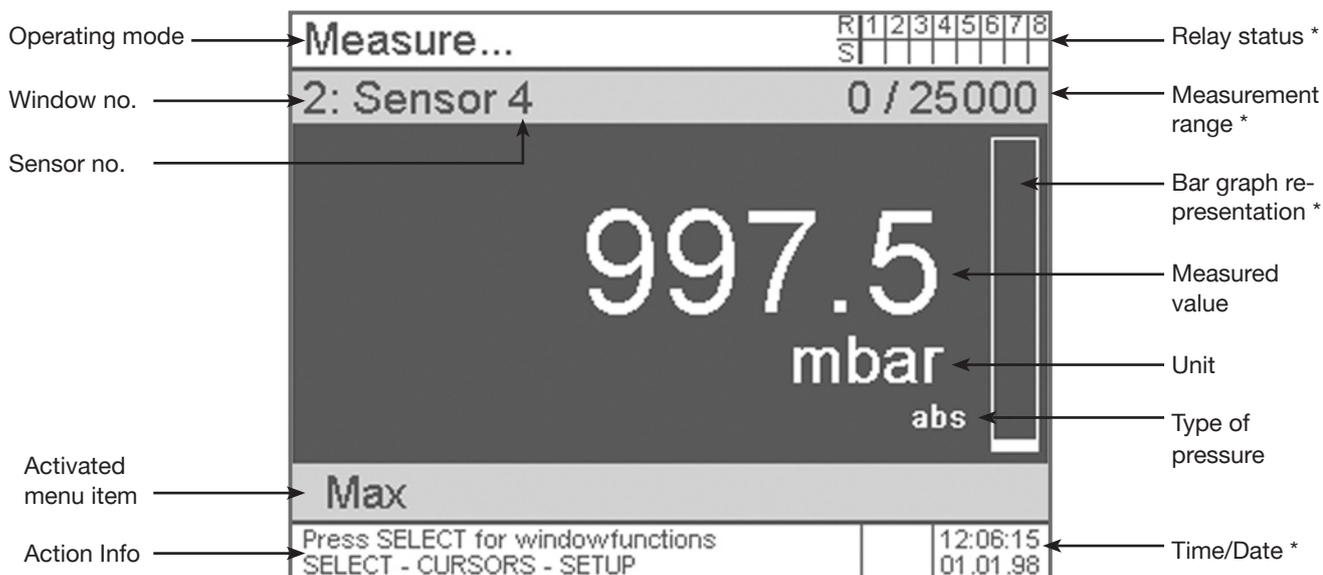
Relay outputs (8 potential free change-over contacts)

Condition of wiring scheme as shown: inactive
Output capacity of relays: max. 1 A / 30 VDC



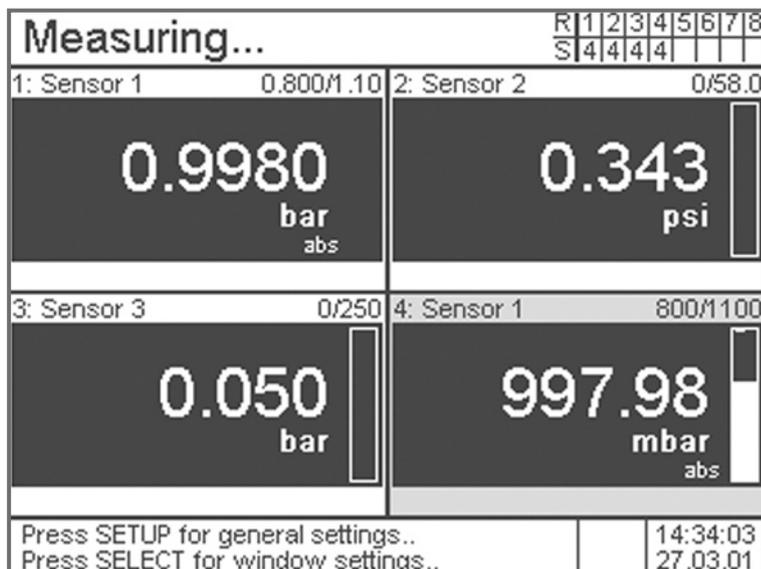
Examples of display (up to 4 windows can be viewed simultaneously)

Single window example



* can be masked out

4 Window example

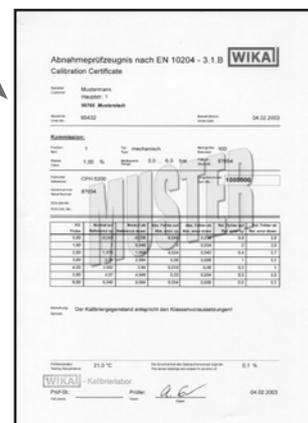
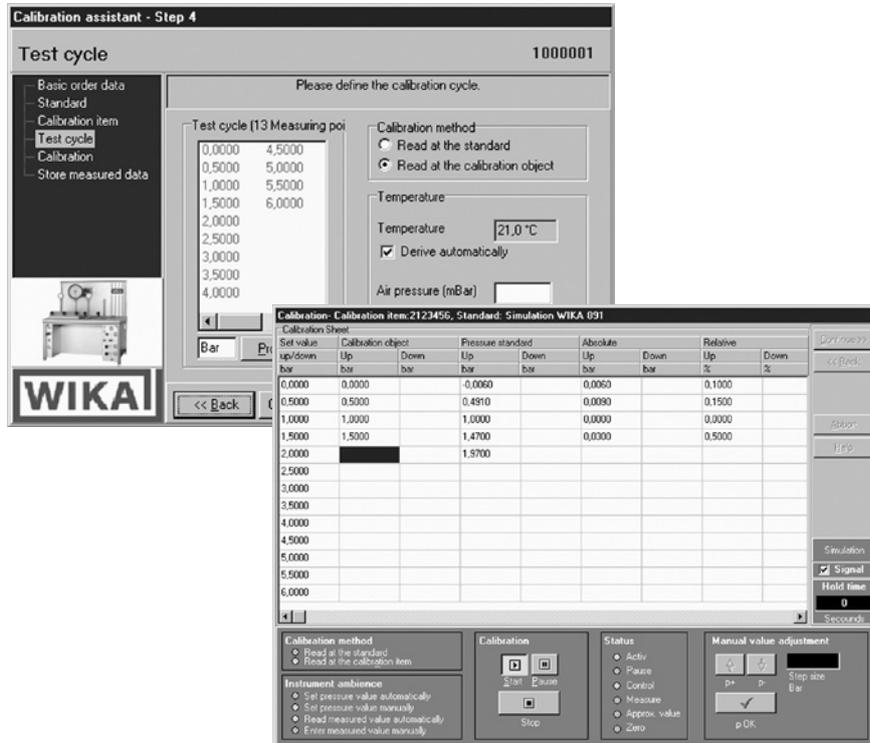


The windows can be used:

- To display more than one sensor signal
- To display one signal in different pressure units
- To display the difference between 2 sensor signals
- To activate one or two functions

Automatic calibration via CPG8000 and EasyCal PC calibration software

The WIKA calibration software has been developed for the calibration (control of test and measurement equipment) of mechanical and electronic pressure gauges in accordance with ISO 9000.



Performance data for EasyCal professional:

- Calibration assistant that guides through a calibration
- User-friendly menu
- Automatic generation of calibration steps per EN 837-1
- 3.1 Certificates per EN 10 204
- Customised test protocols possible (Access Report-Designer)
- Archiving of calibration data as well as instrument administration via Access database
- Language: English/German



Demo-Version available (free of charge)

Interface communication: via RS-232 or IEEE-488.2

Scope of supply

- High-Precision Pressure Indicator CPG8000
- Mains cable 1.5 m with mains plug
- Operating instructions in English
- 3.1 Calibration report per DIN EN 10 204

Options

- DKD certificated accuracy
- 19" plug-in case
- Up to 4 sensors can be integrated
- Barometric reference
- Complete testing and calibration systems



Application example

Accessories

- Rugged transport box (aluminium)
- Pressure adapter and manual quick connection adapter
- Interface cable
- Calibration software EasyCal
- Instruments for pressure generation
- Service tools

Products and Services within our Calibration Technology Program

- DKD calibration services for pressure
- Repair of all makes of calibration units
- Portable pressure measuring devices for test and calibration tasks
- Precision pressure measuring units and pressure controllers
- Primary standards for pressure
- Testing technology system solutions
- DKD calibration services for temperature
- Temperature dry well calibrators
- Calibration baths and furnaces
- Temperature measuring instruments for test and calibrating tasks
- Precision thermometers
- Primary standards for temperature
- Consulting and seminars

Specifications and dimensions given in this leaflet 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.



WIKAL Alexander Wiegand SE & Co. KG
Alexander-Wiegand-Straße 30
63911 Klingenberg/Germany
Tel. (+49) 9372/132-9986
Fax (+49) 9372/132-217
E-mail testequip@wika.de
www.wika.de