

# Hand-held pressure indicator

## Model CPH6300-S1 (1-channel version)

## Model CPH6300-S2 (2-channel version)

WIKA data sheet CT 12.01



### Applications

- Calibration service companies and service industry
- Measurement and control laboratories
- Quality assurance
- Leak testing

### Special features

- Robust and waterproof digital indicator with interchangeable pressure sensors (plug-and-play)
- Measuring ranges from 0 ... 25 mbar to 0 ... 1,000 bar
- Pressure type: positive and negative gauge pressure, absolute pressure and differential pressure
- Accuracy: 0.2 %, optional 0.1 % (incl. calibration certificate)
- Data logger evaluation software GSoft as well as fully cased service sets (incl. pumps) available

### Description

#### Extensive application possibilities

Stainless steel pressure sensors with measuring ranges up to 1,000 bar are available for the model CPH6300 hand-held pressure indicator. The robust and waterproof design makes the CPH6300 ideal for use in adverse environments. It is therefore particularly suitable as a test instrument for applications such as process engineering, chemical industry, refineries etc. This digital indicator automatically detects the measuring range of the connected pressure sensor and guarantees a high-precision pressure measurement.

#### Functionality

The CPH6300 can be used for measuring both gauge and absolute pressure. Differential pressure measurement is possible with the 2-channel version CPH6300-S2, and two model CPT6200 reference pressure sensors possible. The selectable pressure units are bar, mbar, psi, Pa, kPa, MPa, mmHg, inHg, mH<sub>2</sub>O and one customer-specific unit. An integrated data logger and various other functions such as Min, Max, Hold, Tare, zero-point adjustment, Alarm, Power-Off, peak value detection (up to 1,000 measurements/s), average value filter etc. ensure that the CPH6300 can be used for many different applications.



**Model CPH6300-S1 hand-held pressure indicator with optional model CPT6200 reference pressure sensor**

The large, backlit display and also a long battery life complete the features of the CPH6300.

#### Complete test and service cases

For maintenance and service applications, various service case systems are available. These include service cases with or without pressure generation, rechargeable battery, battery charger, connection adapter etc.

#### Software

GSoft data-logger evaluation software is also available for the tabular and graphical representation of the logger data.

#### Certified accuracy

For each reference pressure transmitter, the accuracy for the complete measuring chain is certified by a factory calibration certificate which accompanies the instrument. On request, we can provide a DKD/DAkkS calibration certificate for this instrument.

## Specifications

Model CPH6300 hand-held pressure indicator (complete measuring chain)									
Measuring inputs	1 input for CPH6300-S1 2 inputs for CPH6300-S2								
Measuring range	mbar	25	40	60	100	160	250	400	600
Overpressure limit	mbar	500	500	500	1,000	1,500	2,000	2,000	4,000
Burst pressure	mbar	1,000	1,000	1,000	2,000	2,000	2,400	2,400	4,800
Resolution	dependant on pressure range (max. 4 1/2-digit)								
Measuring range	bar	1.0	1.6	2.5	4.0	6.0	10	16	25
Overpressure limit	bar	5	10	10	17	35	35	80	50
Burst pressure	bar	6	12	12	20.5	42	42	96	96
Resolution	dependant on pressure range (max. 4 1/2-digit)								
Measuring range	bar	40	60	100	160	250	400	600	1,000
Overpressure limit	bar	80	120	200	320	500	800	1,200	1,500
Burst pressure	bar	400	550	800	1,000	1,200	1,700	2,400	3,000
Resolution	dependant on pressure range (max. 4 1/2-digit)								
Types of pressure	Relative pressure, {absolute pressure from 0 ... 25 bar abs. and vacuum from -1 ... 24 bar} Differential pressure only with CPH6300-S2 and two model CPT6200 reference pressure sensors connected								
Accuracy of the measuring chain	0.2 % FS; optional: 0.1 % FS								
Sensor compatibility	Compatible with model CPT6200 reference pressure sensors								

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

Model CPH6300 digital indicator	
<b>Display</b>	
Screen	Large 4 1/2-digit LCD screen with backlighting, for the display of 2 pressure values and additional information
Indication range	-19999 ... 19999 digits, depending on sensors used
Pressure units	bar, mbar, psi, Pa, kPa, MPa, mmHg, inHg, mH <sub>2</sub> O and a customer-specific unit, pre-set to kg/cm <sup>2</sup> (depending on the measuring range, selectable)
<b>Functions</b>	
Measuring rate	4/s ("slow"); 1,000/s ("fast"); > 1,000/s unfiltered (peak value detection), selectable
Memory	Min/Max, integrated data logger
Functions via key press	Backlighting, Min/Max memory, Hold, Tare, Zero-point adjustment, Logger (Start/Stop)
Menu functions	Min/Max Alarm (acoustic/visual), Sea level (barometric air pressure), Power-Off function, measuring rate, average value filter
Average filter	1 ... 120 seconds, adjustable
Data logger	Discrete value logger: up to 1,000 recordings (with measuring point input, 40 settable measuring point texts or measuring point nos.) incl. time via key press Cyclic logger: automatic recording of up to 10,000 values incl. time Cycle time: selectable from 1 ... 3,600 seconds
Real-time clock	integrated clock with date and year
Leak testing/sealing tests	Pressure rate display, logging via data logger
<b>Voltage supply</b>	
Power supply	2 x 1.5 V AAA batteries
Battery life	> 500 hours of operation (1 sensor with a measuring rate of 4/s)
Battery status indication	Icon in display
<b>Permissible ambient conditions</b>	
Operating temperature	-25 ... +50 °C
Storage temperature	-25 ... +70 °C
Relative humidity	0 ... 95 % r.H. (non-condensing)

## Model CPH6300 digital indicator

### Communication

Interface	USB via special interface cable
Analogue output	DC 0 ... 1 V; configurable (alternative instead of serial interface via menu selectable)

### Case

Material	impact-resistant ABS plastic, membrane keypad, transparent screen, silicone protective casing
Ingress protection	IP 65, IP 67 (both ingress protection ratings are met)
Electrical connection	Sensor cable: bayonet connector, 7-pin Interface connector: bayonet connector, 4-pin
Dimensions	see technical drawings
Weight	approx. 250 g (incl. batteries and protective casing)

## Model CPT6200 reference pressure sensor

Pressure connection <sup>1)</sup>	G ½ B; {flush diaphragm (G 1 for 0.1 up to 1.6 bar) or various connection adapters on request}
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### Material

Wetted parts	Stainless steel or Elgiloy®, (> 25 bar additionally with NBR seal) <sup>2)</sup> Flush diaphragm version: stainless steel {Hastelloy C4}; O-ring: NBR {FKM/FPM or EPDM}
Internal transmission fluid	Synthetic oil, (only for measuring ranges up to 16 bar or flush diaphragm) {Halocarbon oil for oxygen applications}; {Listed by FDA for food industry}

### Sensor specifications

1-year stability	≤ 0.2 % of span at reference conditions
Compensated range	0 ... 80 °C

### Permissible ambient conditions

Medium temperature <sup>1)</sup>	-30 ... +100 °C <sup>3)</sup>
Operating temperature	-20 ... +80 °C
Storage temperature	-40 ... +100 °C <sup>3)</sup>
Relative humidity	0 ... 95 % r.H. (non-condensing)

### Case

Material	Stainless steel
Connection to the CPH6300	via 1 m connection cable (plug-and-play); optional: up to 5 m
Ingress protection	IP 67
Dimensions	see technical drawing
Weight	approx. 220 g

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

1) As an oxygen version, a flush diaphragm model is not available. In an oxygen version, the model CPT6200 is only available in gauge pressure ranges ≥ 0.25 bar, with media temperatures between -10 ... +50 °C and using stainless steel or Elgiloy® wetted parts.

2) For pressure measuring ranges 0 ... 25 mbar, 0 ... 40 mbar and 0 ... 60 mbar all wetted parts are made of stainless steel, silicon, aluminium, gold, silicone.

3) For pressure measuring ranges 0 ... 25 mbar, 0 ... 40 mbar and 0 ... 60 mbar the medium temperature and storage temperature are limited to +80 °C.

## CE conformity, approvals, certificates

### CE conformity CPH6300

EMC directive	2004/108/EC, EN 61326 emission (group 1, class B) and interference immunity (portable equipment)
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### CE conformity CPT6200

Pressure equipment directive	97/23/EC
EMC directive	2004/108/EC, EN 61326 emission (group 1, class B) and interference immunity (portable equipment)

### Approvals

GOST-R	Import certificate, Russia
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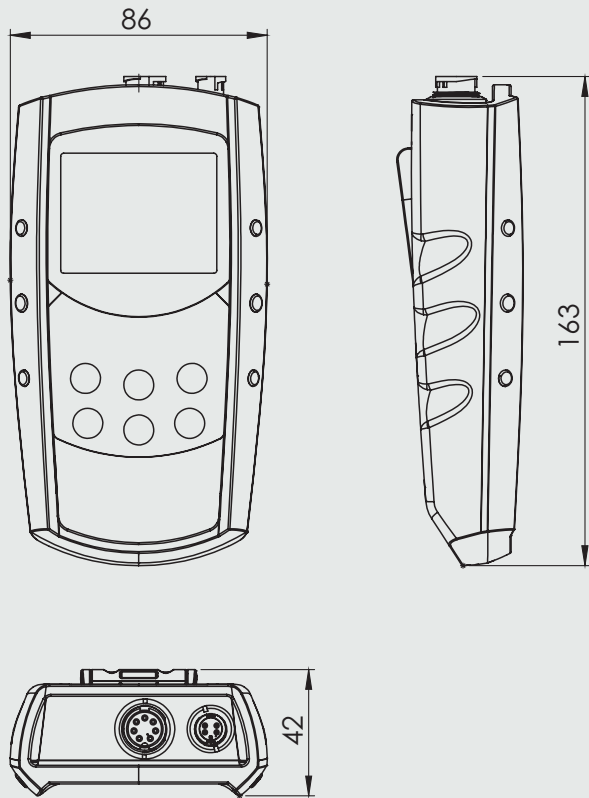
### Certificates

Calibration	Standard: 3.1 calibration certificate per DIN EN 10204 Option: DKD/DAkkS calibration certificate
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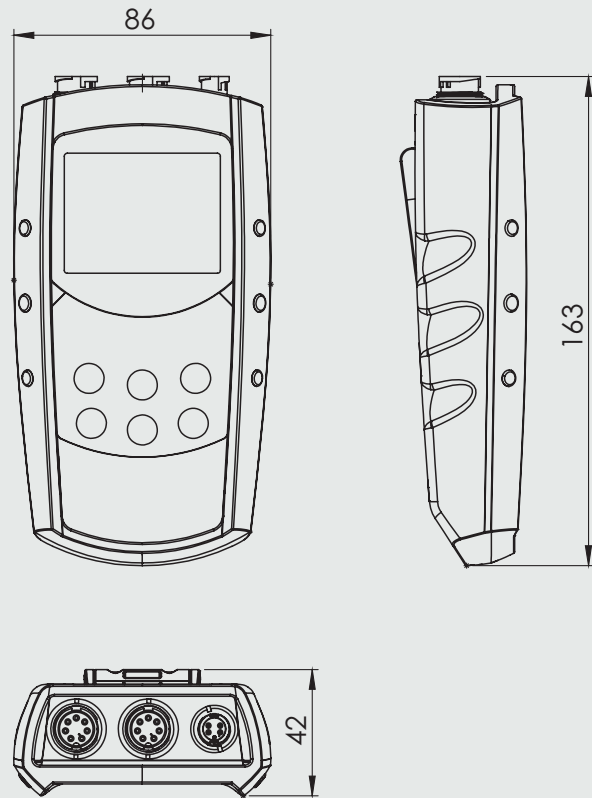
Approvals and certificates, see website

## Dimensions in mm

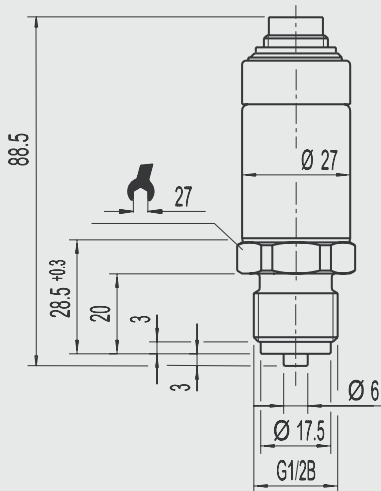
Digital indicator CPH6300-S1



Digital indicator CPH6300-S2



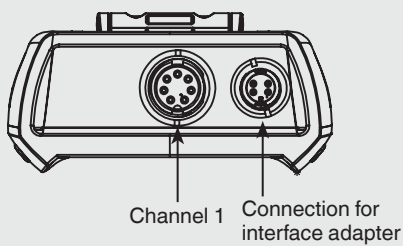
Reference pressure sensor CPT6200



## Electrical connections

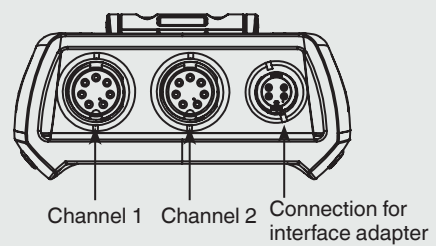
Model CPH6300-S1

Top view



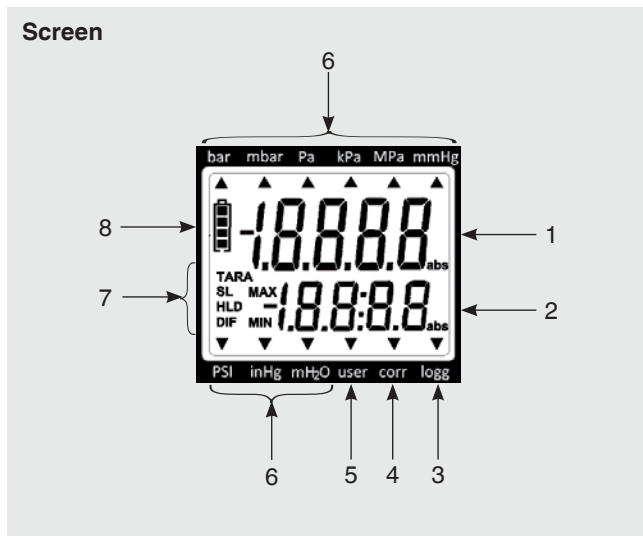
Model CPH6300-S2

Top view



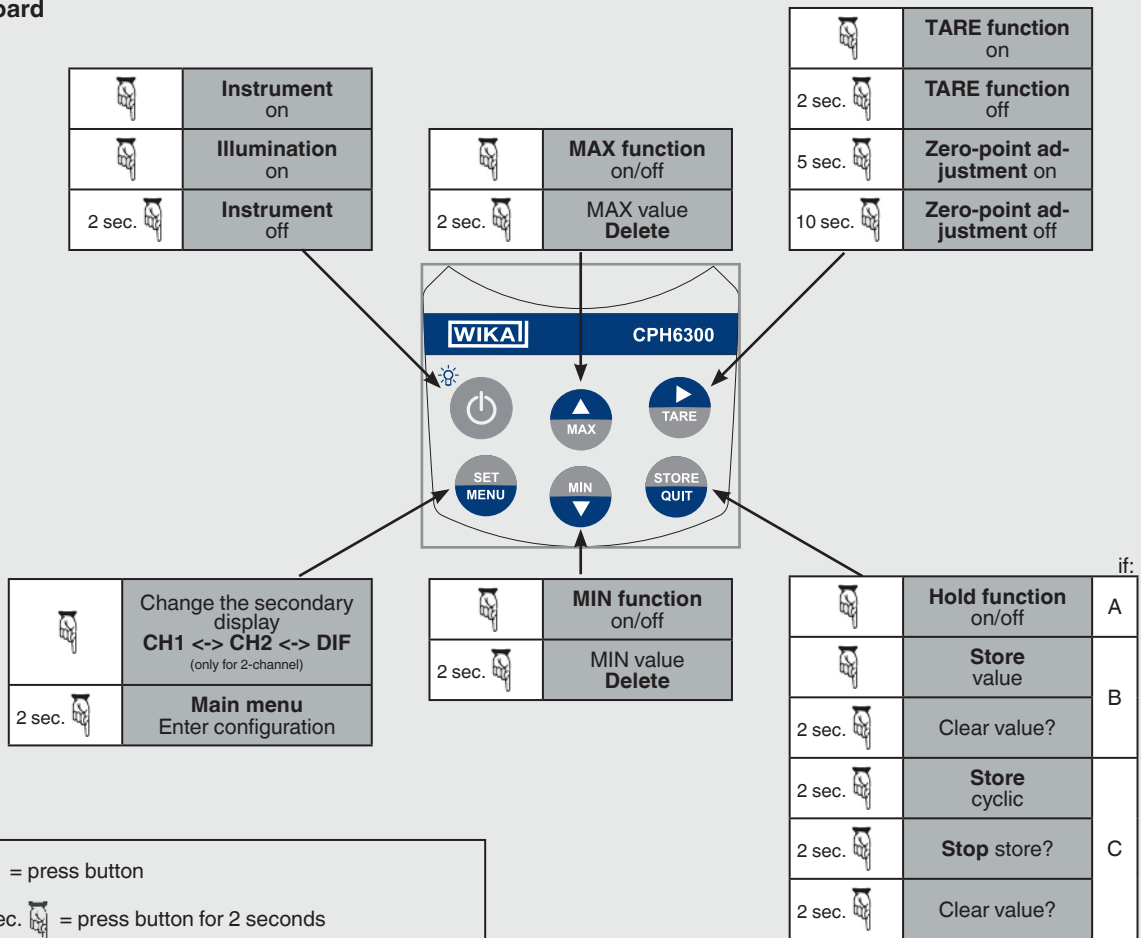
# Operation of the models CPH6300-S1 and CPH6300-S2

## 1- and 2-channel version with external pressure sensors



- 1 **Main display:** current measured value for sensor 1
- 2 **Secondary display:** current measured value for sensor 2 or differential value between sensor 1 and sensor 2
- 3 **logg arrow:** logger is ready  
arrow blinking: automatic recording (Logg CYCL) active
- 4 **corr arrow:** zero point or slope correction has been made
- 5 **user arrow:** measured value is specified in the freely-configurable user unit
- 6 Display arrow for **measured value unit**
- 7 Display elements for the display of the Min/Max values, as well as the Tare function and sea-level correction
- 8 Battery status indication

## Keyboard



= press button  
 2 sec. = press button for 2 seconds  
 For more information: see operating instructions

A = Logger functions deactivated  
 B = Logger function STORE activated via menu  
 C = Logger function CYCLE activated via menu

# GSoft data-logger evaluation software

The GSoft data-logger evaluation software is used to display the logger data from the model CPH6300 hand-held pressure indicator on a PC in tabular form and as chart.

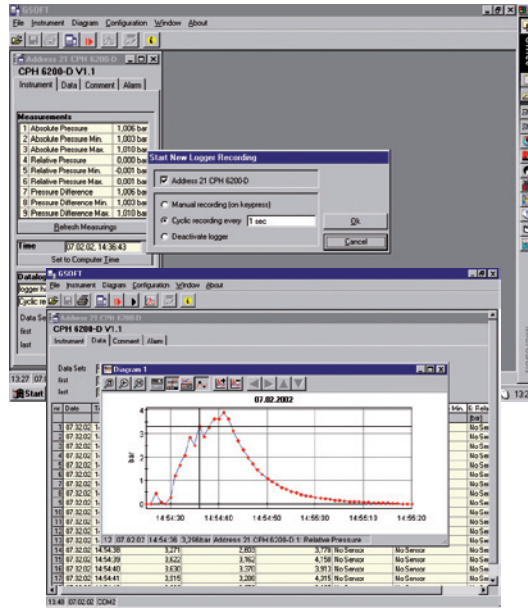
- Easy operation with self-explanatory toolbars
- Data from the pressure and temperature hand-helds (CTH6200) can be displayed in a single chart (2 separate y-axes)
- Charts offer a zoom function
- Operation of the logger function via PC (remote control)
- Data can be exported (Excel®, etc.)
- Languages: German, English, French, Spanish and Czech

## System requirements

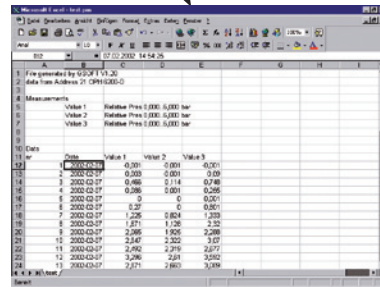
- IBM compatible PC (Pentium®)
- At least 20 MB free hard disc space
- CD-ROM drive
- At least 32 MB RAM
- Windows® operating system 95, 98, NT 4.0 (with Service Pack 3.0 or higher), 2000, XP, Vista or 7
- Mouse
- USB port (via interface cable)

To operate the GSoft software with the CPH6300, GSoft Version 3.0 or later is needed.  
Free updates are available for download on [www.wika.com](http://www.wika.com).

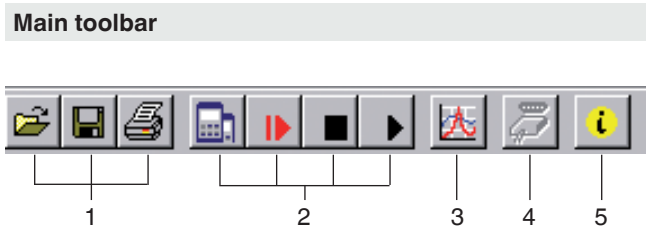
Windows® is a registered trademark of Microsoft Corporation in the United States and other countries.



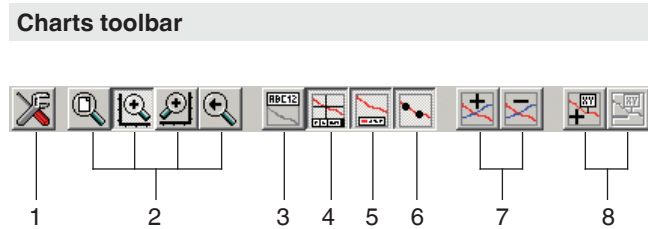
Data export e.g. in an Excel® file



## Easy operation with self-explanatory icon buttons

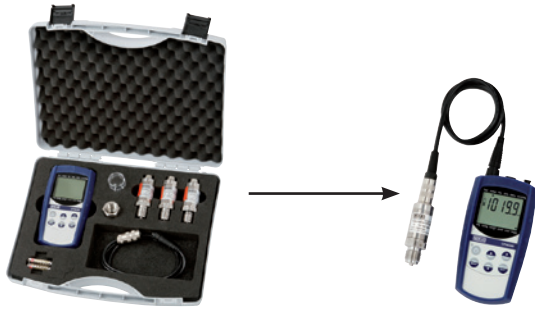


1. File functions: open, save, print
2. Logger functions: start communication, start logger, stop, read data
3. Data display: create chart
4. Interface configuration
5. Program information



1. Settings: grid and colour settings, manual zooms
2. Zoom: all, left or right y-axes (via mouse), back
3. Rename chart
4. Cursor on/off (Info footer)
5. Legend on/off
6. (Measuring point) Symbols on/off
7. Measurement series (add/delete)
8. Comments on measuring points (add/delete)

## Complete test and service cases



**Basic version**

### Calibration case with model CPH6300 hand-held pressure indicator for pressure, consisting of:

- Plastic service case with foam insert
- Hand-held pressure indicator model CPH6300
- Two AAA batteries
- Various seals
- Sensor cable
- Spaces for several CPT6200 reference pressure sensors

For available measuring ranges: see specifications.



**Basic version incl. pneumatic pressure generation**

### Calibration case with model CPH6300 hand-held pressure indicator and model CPP30 hand test pump for pressures of -0.95 ... +35 bar, consisting of:

- Plastic service case with foam insert
- Hand-held pressure indicator model CPH6300
- Model CPP30 pneumatic hand test pump; -0.95 ... +35 bar
- Various seals
- Sensor cable
- Spaces for several CPT6200 reference pressure sensors

For available measuring ranges: see specifications.



**Basic version incl. hydraulic pressure generation**

### Calibration case with model CPH6300 hand-held pressure indicator and model CPP700-H or CPP1000-H hand test pump for pressures of 0 ... 700 bar or 0 ... 1000 bar, consisting of:

- Plastic service case with foam insert
- Hand-held pressure indicator model CPH6300
- Model CPP700-H or CPP1000-H hydraulic hand test pump, 0 ... 700 bar or 0 ... 1,000 bar
- Various seals
- Sensor cable
- Spaces for several CPT6200 reference pressure sensors

For available measuring ranges: see specifications.

## Scope of delivery

- CPH6300-S1 incl. two AAA batteries
- One sensor connection cable per channel
- 3.1 calibration certificate per DIN EN 10204
- Choice of sensors

## Options

- CPH6300-S2: 2-channel version (differential pressure measurement possible via 2 connected model CPT6200 reference pressure sensors)
- DKD/DAkkS certified accuracy of 0.2 % or 0.1 %
- Sensors for oxygen applications



Model CPH6300-S2 hand-held pressure indicator with two model CPT6200 reference pressure sensors

## Accessories

### Connection adapters

- Various pressure adapters
- "Minimess®" quick-connect process connection system

### Pressure generation

- Pneumatic test pumps
- Hydraulic test pumps

### Voltage supply

- Rechargeable battery and battery charger

### Test cases

- Various calibration cases incl. pressure generation

### Software

- USB interface cable
- GSoft data-logger evaluation software for models CPH6300, CPH6200, CPH6210 and CTH6200

## Ordering information

CPH6300 / Instrument version / Additional cable for reference pressure sensor / Rechargeable battery and battery charger / Software / Interface cable / Test pump / Carrying case / Additional order information

CPT6200 / Unit / Pressure range / Accuracy / Process connection / Special design features / Type of certificate / Additional order information

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