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 ... 100 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

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

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_2O 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.

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.

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Specifications

Model CPH6300 hand-held pressure indicator (complete measuring chain)

Measuring inputs	1 input for CPH6300-S1 2 inputs for CPH6300-S2										
Measuring range	bar	0.1	0.16	0.25	0.4	0.6	1.0	1.6	2.5	4.0	6.0	10
Overpressure limit	bar	1	1.5	2	2	4	5	10	10	17	35	35
Burst pressure	bar	2	2	2.4	2.4	4.8	6	12	12	20.5	42	42
Resolution	dependant on pressure range (max. 4 1/2-digit)										
Measuring range	bar	16	25	40	60	100	160	250	400	600	1,000
Overpressure limit	bar	80	50	80	120	200	320	500	800	1,200	1,500
Burst pressure	bar	96	96	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	Gauge pressure {absolute pressure from 0.25 up to 25 bar and vacuum ranges on request}, 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 %										
Sensor compatibility	Compatible with model CPT6200 reference pressure sensors										

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

Model CPH6300 digital indicator

Display	
Screen	Large 4 1/2-digit LCD screen with backlighting, for the display of 2 pressure values and additional information
Indication range	-19999 ... 19999, depending on sensors used
Pressure units	bar, mbar, psi, Pa, kPa, MPa, mmHg, inHg, mH$_2$O and a customer-specific unit, pre-set to kg/cm^2 (selectable dependant on measuring range)
Functions	
Measuring rate	4/sec. ("slow"); 1,000/sec. ("fast"); >1,000/sec. 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 sec., 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 (CPH6300-S1) Cyclic logger: automatic recording of up to 8,000 values incl. time (CPH6300-S2) Cycle time: selectable from 1 ... 3,600 sec.
Real-time clock	integrated clock with date and year
Leak testing/sealing tests	Pressure rate display, logging via data logger
Voltage supply	
Power supply	2 x 1.5 V AAA batteries
Battery life	> 500 hours of operation (1 sensor with a measuring rate of 4/sec.)
Battery status indication	Icon in display
Permissible ambient conditions	
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	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 conditions are met)
Electrical connection	Sensor cable: bayonet connector, 7-pin Interface connector: bayonet connector, 4-pin
Dimensions	163 x 86 x 42 mm incl. silicone protective casing
Weight	approx. 250 g (incl. batteries and protective casing)

Model CPT6200 reference pressure sensor

Pressure connection [1]	G ½ B; {flush diaphragm (G 1 for 0.1 up to 1.6 bar) or various connection adapters on request}

Material

Wetted parts	Stainless steel or Elgiloy®, (> 25 bar additionally with NBR seal) Flush diaphragm version: stainless steel {Hastelloy C4}; O-ring: NBR [2] {FKM/FPM}
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 [1]	-30 ... +100 °C
Operating temperature	-20 ... +80 °C
Storage temperature	-40 ... +100 °C
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

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) O-ring from FKM/FPM flush diaphragm version with integrated cooling element.
{}   Items in curved brackets are optional extras for an additional price.

Approvals and certificates

CE conformity CPH6300

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

CE conformity CPT6200

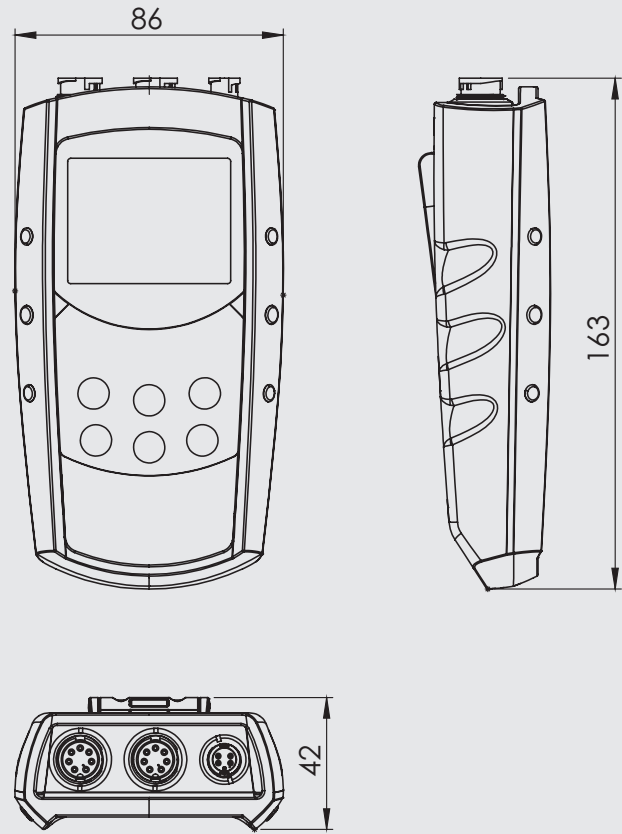|	
Pressure equipment directive	97/23/EC
EMC directive	2004/108/EC, EN 61326 emission (group 1, class B) and interference immunity (portable equipment)

Certificate

Calibration	3.1 calibration certificate per DIN EN 10204 optional: DKD/DAkkS calibration certificate

Dimensions in mm

Digital indicator CPH6300-S1

86
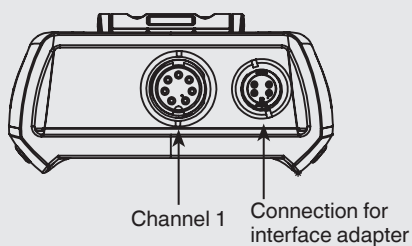
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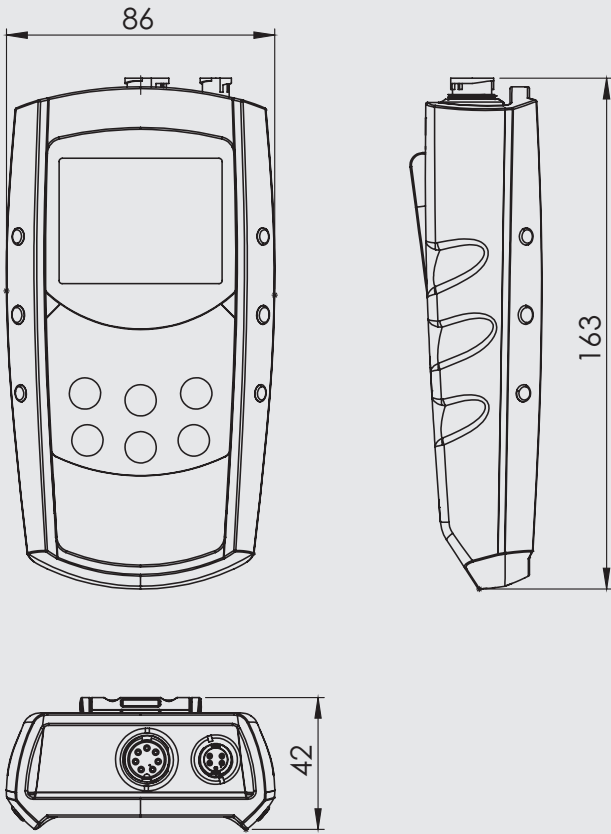
Digital indicator CPH6300-S2

86

163

42

Electrical connections to the digital indicator

Model CPH6300-S1

Top view

Channel 1

Connection for interface adapter

Model CPH6300-S2

Top view

Channel 1   Channel 2   Connection for interface adapter
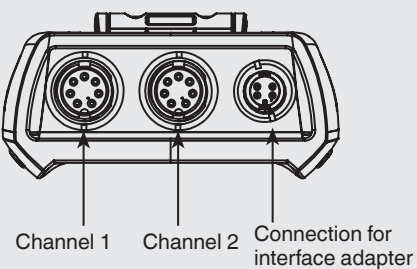
Reference pressure sensor CPT6200

88.5

27

Ø 27

28.5 +0.3

20

3

3

Ø 6

Ø 17.5

G1/2B
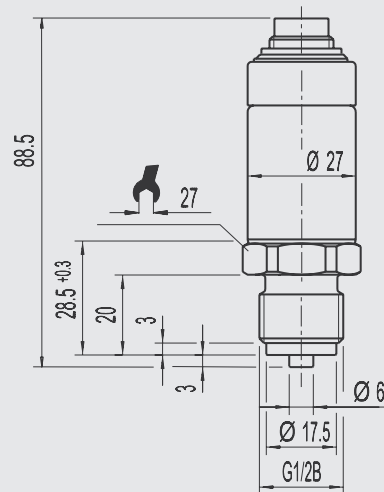
Operation of the models CPH6300-S1 and CPH6300-S2 hand-held pressure indicators

1- and 2-channel version with external pressure sensors

Screen
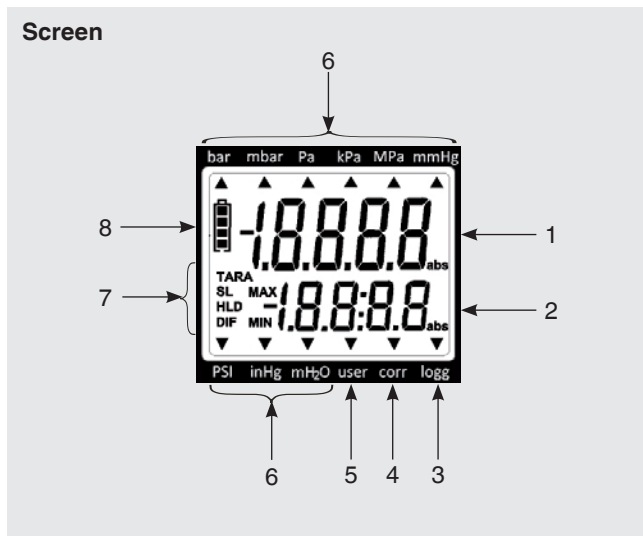
1 **Main display:** current measured value for sensor 1
2 **Secondary display:** current measured value for sensor 2 or differential value between sensor 1 and sensor 2
3 **logg arrow:** logger is ready
  arrow blinking: automatic recording (Logg CYCL) active
4 **corr arrow:** zero point or slope correction 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

	Instrument on	
	Illumination on	
2 sec.	Instrument off	

	MAX function on/off	
2 sec.	MAX value **Delete**	

	TARE function on	
2 sec.	**TARE function** off	
5 sec.	**Zero-point adjustment** on	
10 sec.	**Zero-point adjustment** off	

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	Change the secondary display **CH1 <-> CH2 <-> DIF** (only for 2-channel)	
2 sec.	**Main menu** Enter configuration	

	MIN function on/off	
2 sec.	MIN value **Delete**	

if:

	Hold function on/off	A
	Store value	B
2 sec.	Clear value?	
2 sec.	**Store** cyclic	C
2 sec.	**Stop** store?	
2 sec.	Clear value?	

= 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/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.
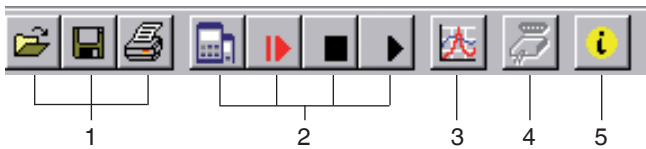Free updates are available for download on www.wika.com.
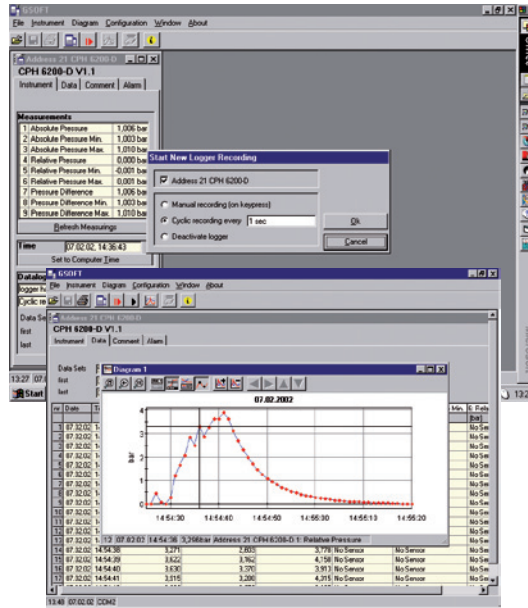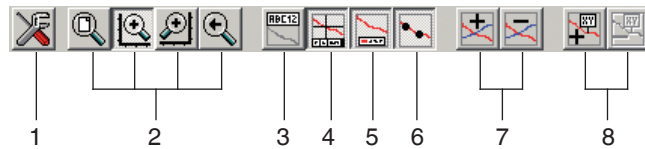
**Data export e.g. in
an Excel® file**
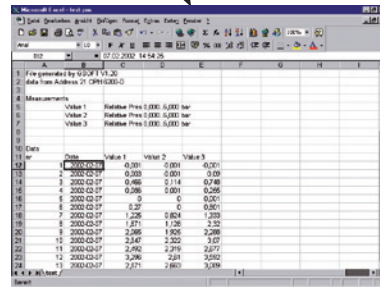
Easy operation with self-explanatory icon buttons

Main toolbar

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

Charts toolbar

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)
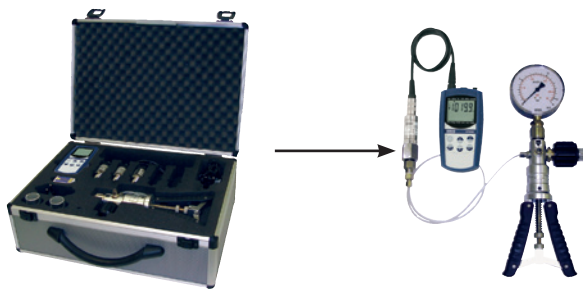8. Comments on measuring points (add/delete)

Complete test and service cases
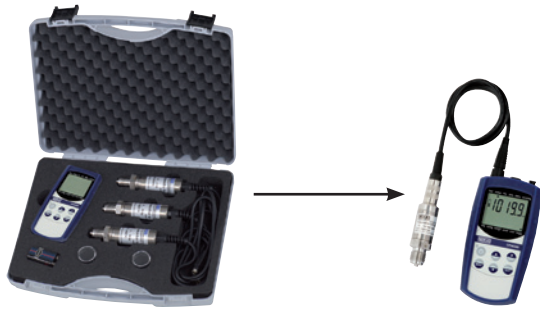
Basic version

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

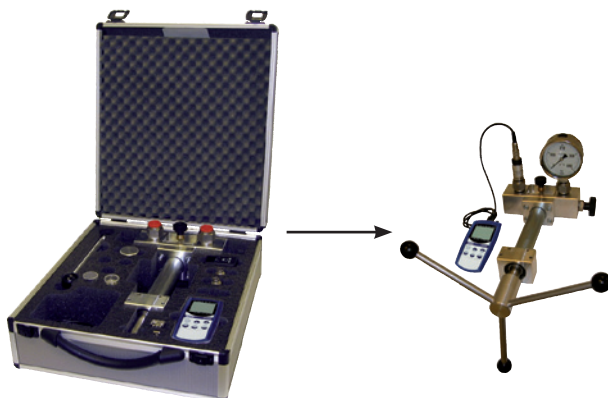For available measuring ranges: see specifications.

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

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
■ Measuring cases
■ Various calibration cases incl. pressure generation

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

Software
■ USB interface cable
■ GSoft data-logger evaluation software for models CPH6300, CPH6200, CPH62l0 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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