

Hand-held pressure indicator

Model CPH6300-S1 (1-channel version)

Model CPH6300-S2 (2-channel version)

WIKA data sheet CT 12.01



for further approvals
see page 4

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 (0 ... 0.4 psi bis 0 ... 14,500 psi)
- Pressure type: positive and negative gauge pressure, absolute pressure and differential pressure
- Accuracy: 0.2 %, optional 0.1 % (incl. calibration certificate)
- Software and complete service cases (incl. pumps) available



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

Description

Extensive application possibilities

Stainless steel pressure sensors with measuring ranges up to 1,000 bar (14,500 psi) are available for the model CPH6300 hand-held pressure indicator. The robust and waterproof design makes the CPH6300 ideal for use in adverse environments. 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, mH₂O 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.

Software

In addition to the GSoft data-logger evaluation software for the tabular and graphical representation of the logged data, WIKI-CAL calibration software for calibration tasks is also available. WIKI-CAL also offers, over and above PC-supported calibration, the management of the calibration and instrument data in an SQL database. For data transfer, a USB interface is available.

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.

Certified accuracy

For each reference pressure sensor, 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	0 ... 25	0 ... 40	0 ... 60	0 ... 100	0 ... 160
Burst pressure		1,000	1,000	1,000	2,000	2,000
Measuring range	bar	0 ... 0.25	0 ... 0.4	0 ... 0.6	0 ... 1.0	0 ... 1.6
Burst pressure		2.4	2.4	4.8	6	12
Measuring range		0 ... 2.5	0 ... 4.0	0 ... 6.0	0 ... 10	0 ... 16
Burst pressure		12	20.5	42	42	96
Measuring range		0 ... 25	0 ... 40	0 ... 60	0 ... 100	0 ... 160
Burst pressure		96	400	550	800	1,000
Measuring range		0 ... 250	0 ... 400	0 ... 600	0 ... 1,000	
Burst pressure		1,200	1,700	2,400	3,000	
Overpressure limit	3-times; ≤ 25 bar 2-times; > 25 bar ... ≤ 600 bar 1.5-times; < 600 bar					
Measuring range	psi	0 ... 0.4	0 ... 0.6	0 ... 0.9	0 ... 1.5	0 ... 2.5
Burst pressure		14.5	14.5	14.5	29	29
Measuring range		0 ... 4	0 ... 6	0 ... 10	0 ... 14.5	0 ... 25
Burst pressure		34.8	34.8	69.6	87	174
Measuring range		0 ... 40	0 ... 60	0 ... 90	0 ... 145	0 ... 250
Burst pressure		175	297	580	609	1,390
Measuring range		0 ... 360	0 ... 580	0 ... 870	0 ... 1,450	0 ... 2,320
Burst pressure		1,390	1,390	7,980	11,600	14,500
Measuring range		0 ... 3,630	0 ... 5,800	0 ... 8,700	0 ... 14,500	
Burst pressure		17,400	24,660	34,800	43,500	
Overpressure limit	3-times; ≤ 25 bar 2-times; > 25 bar ... ≤ 600 bar 1.5-times; < 600 bar					
Resolution	dependant on pressure range (max. 4 1/2-digit)					
Accuracy of the measuring chain	0.2 % FS (resolution 4-digit); {optional: 0.1 % FS (resolution 4 1/2-digit)}					
Types of pressure	Relative pressure, {absolute pressure from 0 ... 25 bar abs. (0 ... 360 psi abs.) and vacuum from -1 ... +24 bar (-14.5 ... 550 psi)} Differential pressure measuring only with CPH6300-S2 and two model CPT6200 reference pressure sensors connected possible					
Sensor compatibility	Compatible with model CPT6200 reference pressure sensors					

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

Digital indicator model CPH6300**Display**

Screen	Large 4 1/2-digit LCD screen with backlighting, for the display of two 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 ₂ O and a customer-specific unit, pre-set to kg/cm ² (depending on the measuring range, selectable)

Functions

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
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/s)
Battery status indication	Icon in display

Permissible ambient conditions

Operating temperature	-25 ... +50 °C (-13 ... +122 °F)
Storage temperature	-25 ... +70 °C (-13 ... +158 °F)
Relative humidity	0 ... 95 % r. h. (non-condensing)

Communication

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

Case

Material	impact-resistant ABS plastic, membrane keypad, transparent screen, silicone protective casing
Ingress protection	IP65, IP67 (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 (0.55 lbs) (incl. batteries and protective casing)

Reference pressure sensor model CPT6200

Pressure connection ¹⁾	G ½ B; {flush diaphragm (G 1 for 0.1 ... 1.6 bar (1.5 ... 23.2 psi)) or various connection adapters on request}
Material	
Wetted parts	Stainless steel or Elgiloy [®] , (> 25 bar (360 psi) additionally with NBR seal) ²⁾ 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	
Accuracy per year	≤ 0.2 % of span at reference conditions ³⁾
Compensated range	0 ... 80 °C (0 ... 176 °F)
Mean temperature coefficient	≤ 0.2 % of span/10 K (outside of reference conditions)

Reference pressure sensor model CPT6200

Permissible ambient conditions

Medium temperature ¹⁾	-30 ... +100 °C (-22 ... +212 °F) ⁴⁾
Operating temperature	-20 ... +80 °C (-4 ... +176 °F)
Storage temperature	-40 ... +100 °C (-40 ... +212 °F) ⁴⁾
Relative humidity	0 ... 95 % r. h. (non-condensing)

Case

Material	Stainless steel
Connection to the CPH6300	via 1 m (3.28 ft) connection cable (plug-and-play); optional: up to 5 m (16.4 ft)
Ingress protection	IP67
Dimensions	see technical drawing
Weight	approx. 220 g (0.49 lbs)

{ } 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 (≥ 0.4 psi), with media temperatures between -10 ... +50 °C (14 ... 122 °F) and using stainless steel or Elgiloy[®] wetted parts.

2) For pressure measuring ranges 0 ... 25 mbar, 0 ... 40 mbar and 0 ... 60 mbar (0 ... 0.4 psi, 0 ... 0.6 psi and 0 ... 0.9 psi) all wetted parts are made of stainless steel, silicon, aluminium, gold, silicone.

3) Reference conditions: 15 ... 25 °C (59 ... 77 °F)

4) For pressure measuring ranges 0 ... 25 mbar, 0 ... 40 mbar and 0 ... 60 mbar (0 ... 0.4 psi, 0 ... 0.6 psi and 0 ... 0.9 psi) the medium temperature and storage temperature are limited to +80 °C (176 °F).

Approvals

Logo	Description	Country
	EU declaration of conformity for CPH6300 <ul style="list-style-type: none"> ■ EMC directive EN 61326 emission (group 1, class B) and interference immunity (portable equipment) 	European Union
	EU declaration of conformity for CPT6200 <ul style="list-style-type: none"> ■ EMC directive EN 61326 emission (group 1, class B) and interference immunity (portable equipment) ■ Pressure equipment directive 	European Union
	EAC <ul style="list-style-type: none"> ■ EMC directive ■ Pressure equipment directive 	Eurasian Economic Community
	GOST Metrology, measurement technology	Russia
-	MTSCHS Permission for commissioning	Kazakhstan
	BelGIM Metrology, measurement technology	Belarus

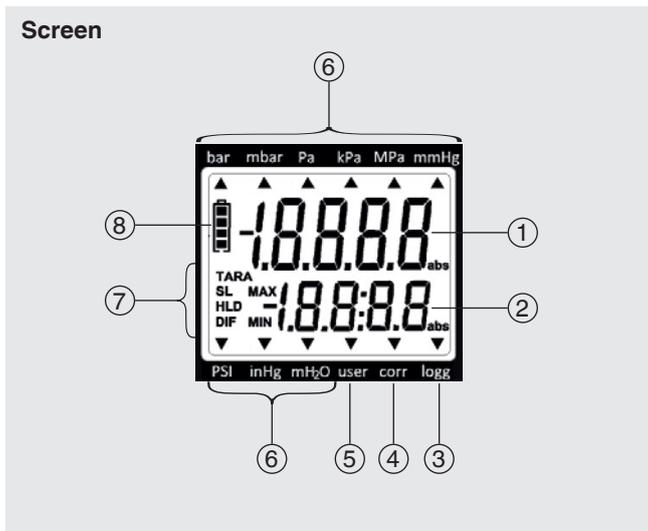
Certificates

Certificate	
Calibration	Standard: 3.1 calibration certificate per DIN EN 10204 Option: DKD/DakS calibration certificate
Recommended recalibration interval	1 year (dependent on conditions of use)

Approvals and certificates, see website

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 arrows for **measured value units**
- 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

	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

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

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

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

Complete test and service cases

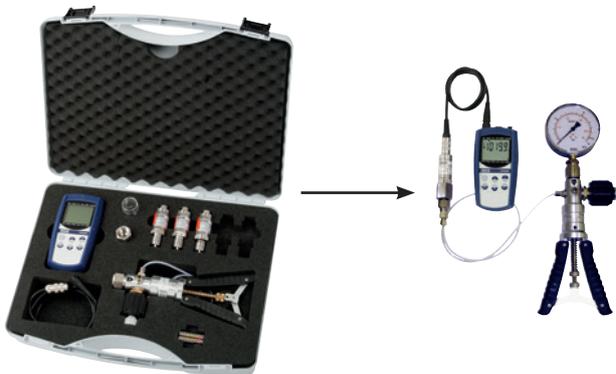


Basic version

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
- Sealing set
- 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 (-14 ... 500 psi), consisting of:

- Plastic service case with foam insert
- Hand-held pressure indicator model CPH6300
- Model CPP30 pneumatic hand test pump; -0.95 ... +35 bar (-14 ... 500 psi)
- Sealing set
- 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 ... 1,000 bar (0 ... 10,000 psi or 0 ... 14,500 psi), 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 (0 ... 10,000 psi or 0 ... 14,500 psi)
- Sealing set
- Sensor cable
- Spaces for several CPT6200 reference pressure sensors

For available measuring ranges: see specifications.

GSoft data-logger evaluation software

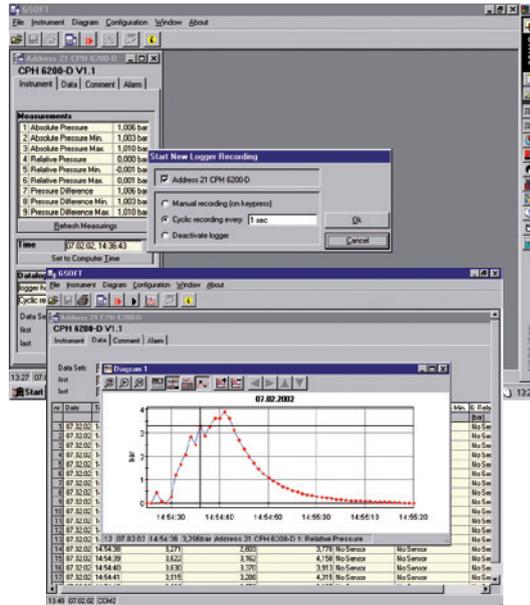
The GSoft data-logger evaluation software is used to display the logger data from the model CPH6300 hand-held pressure indicator on a PC in tabular form and as chart.

- Easy operation with self-explanatory toolbars
- Data from the pressure and temperature hand-helds (CTH6200) can be displayed in a single chart (two 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

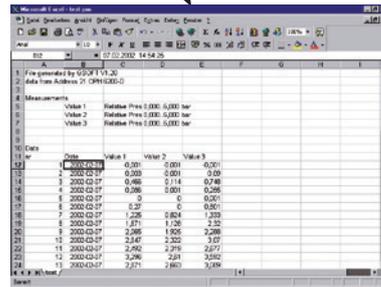
System requirements

- 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.

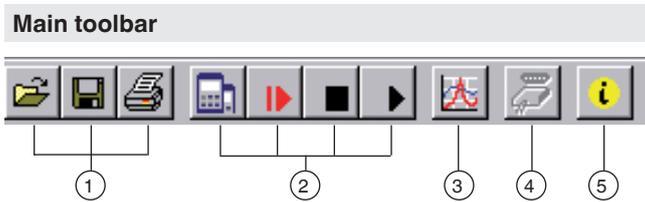


Data export e.g. in an Excel® file

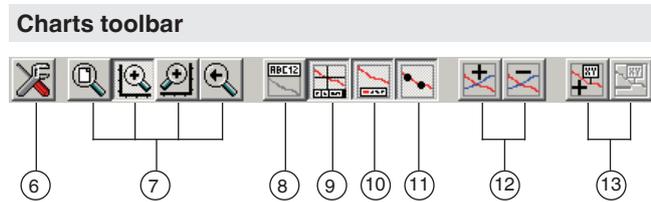


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Easy operation with self-explanatory icon buttons



- 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
- ⑥ Settings: grid and colour settings, manual zooms



- ⑦ Zoom: all, left or right y-axes (via mouse), back
- ⑧ Rename chart
- ⑨ Cursor on/off (Info footer)
- ⑩ Legend on/off
- ⑪ (Measuring point) Symbols on/off
- ⑫ Measurement series (add/delete)
- ⑬ Comments on measuring points (add/delete)

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.

A template helps the user and guides him through the creation process of a document.

In order to switch from the demo version to a full version of the respective template, a USB key with the template has to be purchased.

The pre-installed demo version automatically changes to the selected full version when the USB key is inserted and is available as long as the USB key is connected to the computer.



- Creation of calibration certificates for mechanical and electronic pressure measuring instruments
- A calibration assistant guides you through the calibration
- Automatic generation of the calibration steps
- Generation of 3.1 certificates in accordance with DIN EN 10204
- Creation of logger protocols
- User-friendly interface
- Languages: German, English, Italian and more due with software updates

For further information see data sheet CT 95.10

Calibration certificates can be created with the Cal-Template and logger protocols can be created with the Log-Template.



Cal Demo

Generation of calibration certificates limited to 2 measuring points, with automatic initiation of pressures via a pressure controller.



Cal Light

Generation of calibration certificates with no limitations on measuring points, without automatic initiation of pressures via a pressure controller.



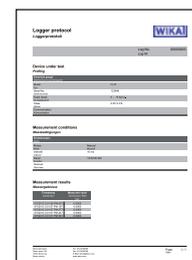
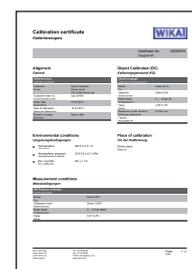
Log Demo

Creation of data logger test reports, limited to 5 measured values.



Log

Creation of data logger test reports without limiting the measured values.



Scope of delivery

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

Options

- Hand-held pressure indicator model CPH6300-S2: 2-channel version (differential pressure measurement possible via two connected model CPT6200 reference pressure sensors)
- DKD/DAkkS calibration certificate
- 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

Voltage supply

- Rechargeable battery and battery charger

Connection cables

- USB interface cable

Pressure generation

- Pneumatic test pumps
- Hydraulic test pumps

Test cases

- Various calibration cases incl. pressure generation

Software

- GSoft data-logger evaluation software
- WIKA-CAL calibration software

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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