Intrinsically safe hand-held pressure indicator (ATEX version)
Model CPH62I0-S1 (1-channel version)
Model CPH62I0-S2 (2-channel version)

Applications

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

Special features

- Digital indicator with interchangeable pressure sensors (plug-and-play)
- Measuring ranges from 0 ... 100 mbar to 0 ... 1,000 bar
- Accuracy: 0.2 %, optional 0.1 % (incl. calibration certificate)
- Intrinsically safe version, II 2G Ex ib IIC T4
- Software and complete service cases (incl. pumps) available

Hand-held pressure indicator model CPH62I0-S1
With optional model CPT62I0
reference pressure sensor

Description

Extensive application possibilities

Stainless steel pressure sensors with measuring ranges up to 1,000 bar are available for the model CPH62I0 hand-held pressure indicator. It is therefore particularly suitable as a test instrument for applications such as process engineering, chemical industry, refineries, etc. The digital indicator automatically detects the measuring range of the connected pressure sensor and guarantees a highly accurate pressure measurement.

Functionality

The CPH62I0 can be used for measuring both gauge and absolute pressure. Differential pressure measurement is possible with the 2-channel version CPH62I0-S2, and two connected model CPT62I0 reference pressure sensors. Selectable pressure units here are bar, mbar, psi, Pa, kPa, MPa, mmHg or inHg.
An integrated data logger and various other functions such as Min, Max, Hold, Tare, zero point adjustment, alarm, power-off, peak value detection (1,000 measurements/s), average value filter, etc. ensure that the CPH62I0 can be used for many different applications.

Software

In addition to the GSoft data-logger evaluation software for the tabular and graphical representation of the logged data, WIKA-CAL calibration software for calibration tasks is also available. WIKA-CAL also offers, over and above PC-supported calibration, the management of the calibration and instrument data in an SQL database. For data transfer, an RS-232 and a USB interface are 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, battery, 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.

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Specifications

Model CPH62I0 hand-held pressure indicator (complete measuring chain)

Measuring inputs	1 input for CPH62I0-S1 2 inputs for CPH62I0-S2									
Measuring range	**mbar**	**0 ... 100**	**0 ... 160**	**0 ... 250**	**0 ... 400**	**0 ... 600**				
Overpressure limit	mbar	1,000	1,500	2,000	2,000	4,000				
Burst pressure	mbar	2,000	2,000	2,400	2,400	4,800				
Resolution	dependent on pressure range (max. 4 1/2-digit)									
Measuring range	**bar**	**0 ... 1.0**	**0 ... 1.6**	**0 ... 2.5**	**0 ... 4.0**	**0 ... 6.0**	**0 ... 10**	**0 ... 16**	**0 ... 25**	**0 ... 40**
Overpressure limit	bar	5	10	10	17	35	35	80	50	80
Burst pressure	bar	6	12	12	20.5	42	42	96	250	400
Resolution	dependent on pressure range (max. 4 1/2-digit)									
Measuring range	**bar**	**0 ... 60**	**0 ... 70**	**0 ... 100**	**0 ... 160**	**0 ... 250**	**0 ... 400**	**0 ... 600**	**0 ... 1,000**	
Overpressure limit	bar	120	120	200	320	500	800	1,200	1,500	
Burst pressure	bar	550	550	800	1,000	1,200	1,700	2,400	3,000	
Resolution	dependent on pressure range (max. 4 1/2-digit)									
Types of pressure	Relative pressure, {absolute pressure from 0 ... 25 bar abs. and vacuum measuring ranges from -1 ... +24 bar}, differential pressure only with CPH62I0-S2 and two connected model CPT62I0 reference pressure sensors									
Accuracy of the measuring chain	0.2 % FS (resolution 4-digit); {optional: 0.1 % FS (resolution: 4 1/2-digit)}									
Sensor compatibility	Compatible with model CPT62I0 reference pressure sensors									

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

Digital indicator model CPH62I0

Indication	
Display	Large 4 1/2-digit LCD display for indication of 2 pressure values and additional information
Indication range	-19999 ... 19999 digits, depending on sensor used
Pressure units	mbar, bar, Pa, kPa, MPa, mmHg, inHg and psi (depending on the measuring range, freely 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	Min/Max memory, Hold, Tare, zero point adjustment, logger (start/stop)
Menu functions	Min/Max alarm (visual), sea level (barometric air pressure), power-off function, measuring rate, average value filter
Average value filter	1 ... 120 seconds, adjustable
Data logger	Individual value logger: up to 99 recordings 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
Voltage supply	
Power supply	9 V battery
Battery life	> 300 hours of operation (1 sensor with a measuring rate of 4/s)

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Digital indicator model CPH62I0

Permissible ambient conditions	
Operating temperature	-10 ... +50 °C
Storage temperature	-20 ... +70 °C
Relative humidity	0 ... 95 % r. h. (non-condensing)
Communication	
Interface 1)	RS-232 or USB via special interface cable
Analogue output 1)	DC 0 ... 1 V; configurable (selectable via menu alternative to interface)
Case	
Material	Impact-resistant ABS plastic, membrane keypad, transparent screen, protective leather case
Dimensions	see technical drawing
Weight	approx. 160 g (incl. battery)

1) The use of the interface and analogue output is only permitted outside the hazardous area.

Reference pressure sensor model CPT62I0

Pressure connection 2)	G ½ B; {flush (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 {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
Mean temperature coefficient	≤ 0.2 % of span/10 K (outside of reference conditions)
Permissible ambient conditions	
Medium temperature 2)	-20 ... +50 °C (T4)
Operating temperature	-20 ... +50 °C (T4)
Storage temperature	-40 ... +80 °C
Relative humidity	0 ... 95 % r. h. (non-condensing)
Case	
Material	Stainless steel
Connection to the CPH62I0	via 1 m connection cable (plug-and-play); optional: up to 5 m
Ingress protection	IP 67 (sensor)
Dimensions	see technical drawing
Weight	approx. 220 g

{} Items in curved brackets are optional extras for an additional price.
2) As an oxygen version, a flush diaphragm model is not available. In an oxygen version, the model CPT62I0 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.
3) Reference conditions: 15 ... 25 °C

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Ignition protection types

ATEX directive CPH62I0	94/9/EC, category 2G, ignition protection type Ex ib IIC T4 II 2G Ex ib IIC T4 (T_a = -10 ... +50 °C) BUREAU VERITAS EPS 09 ATEX 1 227 X
ATEX directive CPT62I0	94/9/EC, Category 2G, ignition protection type Ex ib IIC T4 Gb II 2G Ex ib IIC T4 Gb (T_a = -20 ... +50 °C) DEKRA BVS 10 ATEX E 150 X
Connection values CPH62I0	
Max. voltage	U_o = DC 10.38 V
Max. current	I_o = 93 mA
Max. power	P_o = 240 mW
Max. effective internal capacitance	C_o = 1,240 nF
Max. effective internal inductance	L_o negligible
Power supply circuit CPT62I0	
Max. voltage	U_i = DC 10.4 V
Max. current	I_i = 100 mA
Max. power	P_i = 500 mW
Max. effective internal capacitance	C_i = 600 nF
Max. effective internal inductance	L_i negligible

CE conformity, approvals, certificates

CE conformity CPH62I0	
EMC directive	2004/108/EC, EN 61326 emission (group 1, class B) and interference immunity (portable equipment)
ATEX directive	94/9/EC, category 2G, ignition protection type Ex ib IIC T4
CE conformity CPT62I0	
Pressure equipment directive	97/23/EC
EMC directive	2004/108/EC, EN 61326 emission (group 1, class B) and interference immunity (portable equipment)
ATEX directive	94/9/EC, Category 2G, ignition protection type Ex ib IIC T4 Gb
Approvals	
GOST-R	Import certificate, Russia
GOST	Metrology/measurement technology, Russia
Certificates	
Calibration	Standard: 3.1 calibration certificate per DIN EN 10204 Option: DKD/DAkkS calibration certificate

Approvals and certificates, see website

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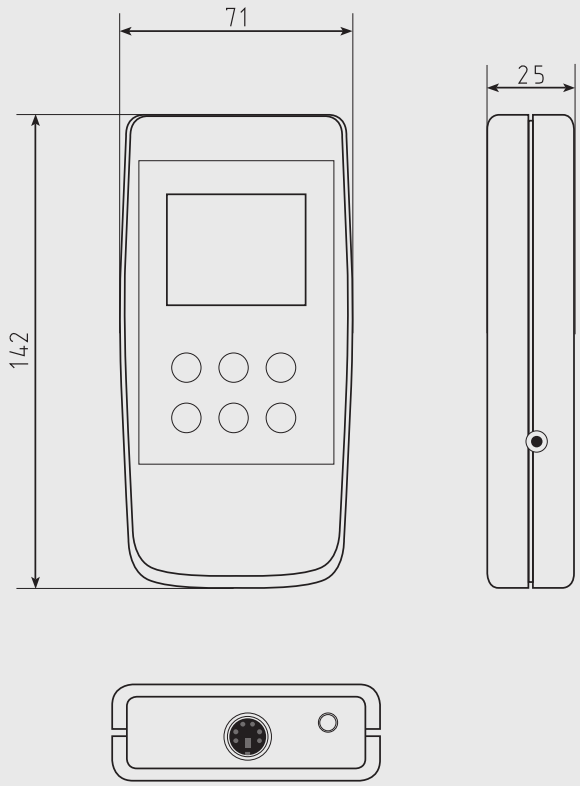
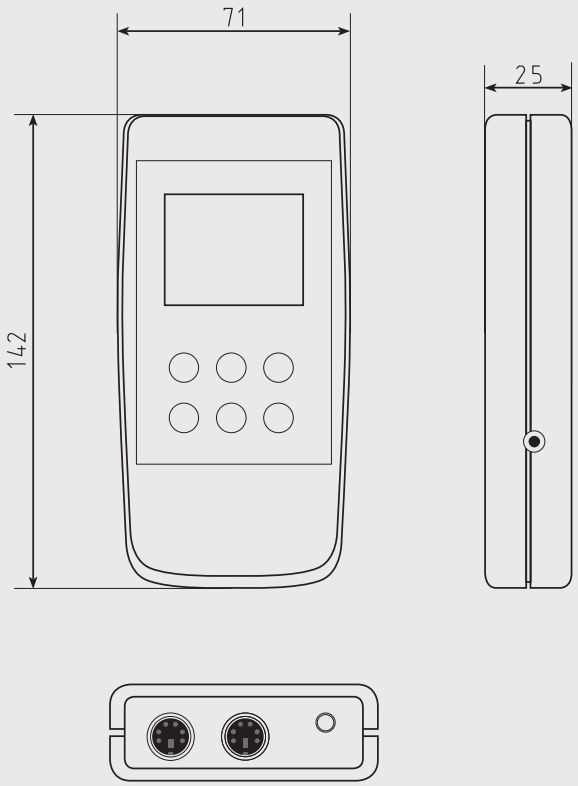
Dimensions in mm

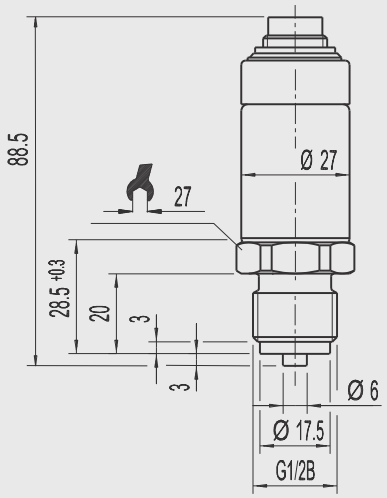
Digital indicator CPH62I0-S1



Digital indicator CPH62I0-S2



CPT62I0 reference pressure sensor



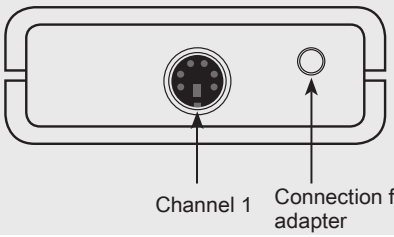
Note: The CPH62I0 intrinsically safe version is in a protective leather case (Ex-protective cover).

For the CPH62I0 intrinsically safe version, the use of the interface and power supply unit is only permitted outside the hazardous area. The connection for interface adapter is located below the Ex-protective cover.

Electrical connections

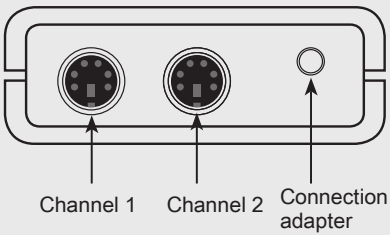
Model CPH62I0-S1

Top view



Model CPH62I0-S2

Top view



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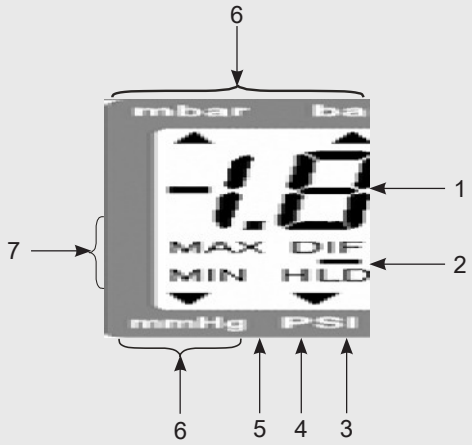
Operating functions of the models CPH62I0-S1 and CPH62I0-S2

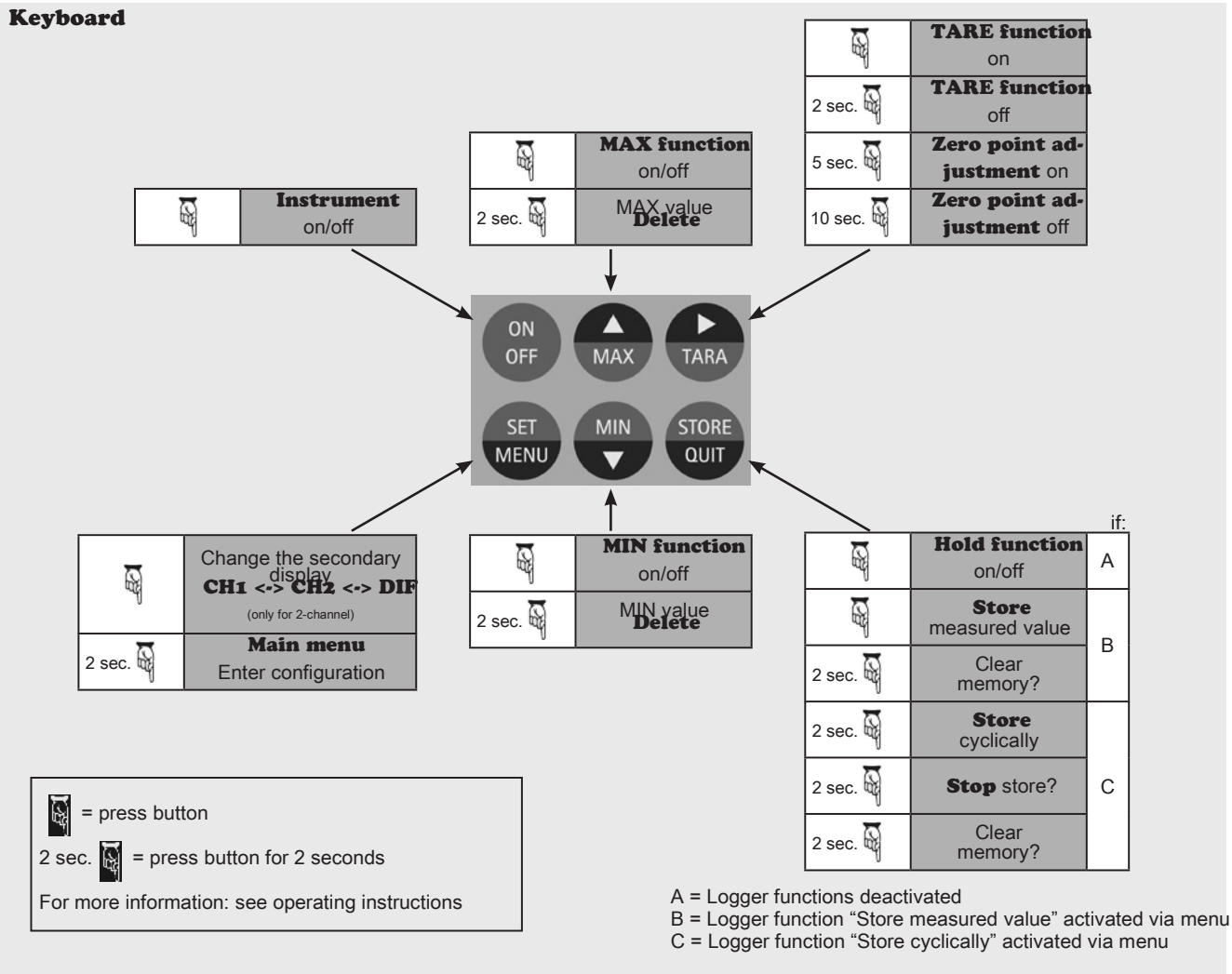
1- and 2-channel version with external pressure sensors

Display



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 **Tare arrow:** Tare function was activated
5 **SL arrow:** height correction (sea level) was activated
6 Display arrows for **measured value units**
7 Indication elements for Min/Max measured value illustration

Keyboard



A = Logger functions deactivated
B = Logger function “Store measured value” activated via menu
C = Logger function “Store cyclically” activated via menu

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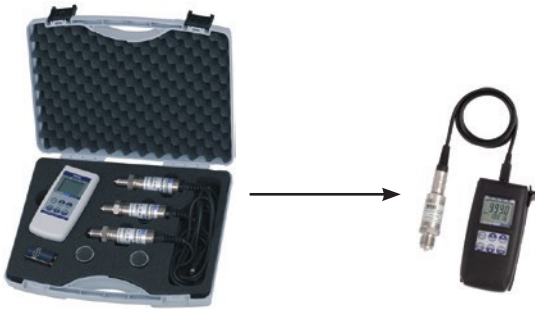
Complete test and service cases



Basic version

Calibration case with model CPH62I0 hand-held pressure indicator for pressure, consisting of:

- Plastic service case with foam insert
- Model CPH62I0 hand-held pressure indicator
- 9 V battery
- Sealing set
- Sensor cable
- Spaces for several CPT62I0 reference pressure sensors

Available measuring ranges see specifications

Equipment freely selectable

Calibration case for pressure and/or temperature (equipment freely selectable), consisting of:

- Transport case with foam insert and space for max. 2 hand-held pressure indicators/thermometers, several CPT62I0 reference pressure sensors, 2 temperature sensors and battery

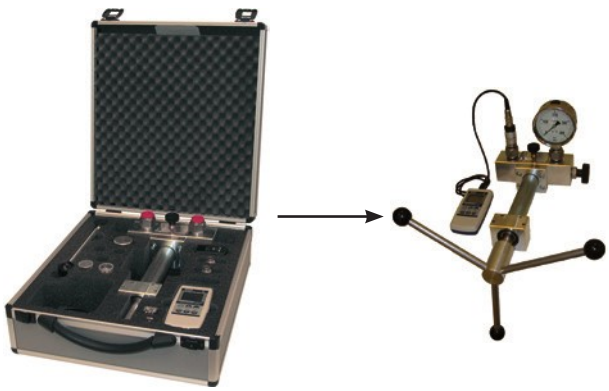
For further specifications see data sheet CT 51.01

Basic version incl. pneumatic pressure generation

Calibration case with model CPH62I0 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
- Model CPH62I0 hand-held pressure indicator
- Pneumatic hand test pump model CPP30; -0.95 ... +35 bar
- Sealing set
- Sensor cable
- 9 V battery
- Spaces for several CPT62I0 reference pressure sensors

Available measuring ranges see specifications



Basic version incl. hydraulic pressure generation

Calibration case with model CPH62I0 hand-held pressure indicator and model CPP1000-L hand spindle pump for pressures of 0 ... 1,000 bar, consisting of:

- Transport case with foam insert
- Model CPH62I0 hand-held pressure indicator
- Hydraulic hand spindle pump model CPP1000-L; 0 ... 1,000 bar
- Sealing set
- Sensor cable
- 9 V battery
- Spaces for several CPT62I0 reference pressure sensors

Available measuring ranges see specifications

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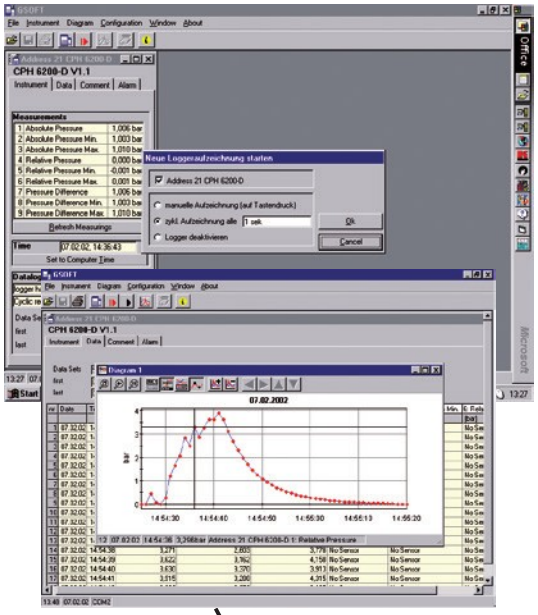
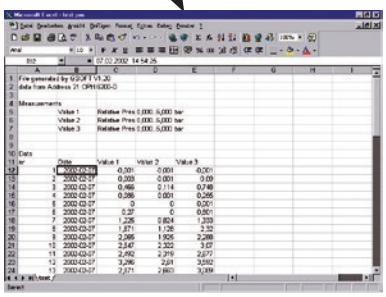
GSoft data-logger evaluation software

The GSoft data-logger evaluation software is used to display the logger data from the model CPH62I0 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)
- Chart offers 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



Data export e.g. in an Excel® file



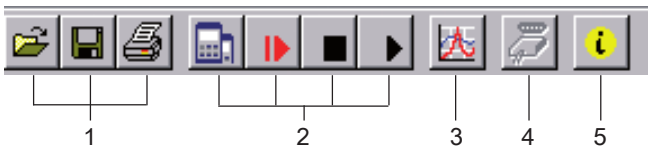
System requirements

- 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
- One free serial interface or USB connection (via interface cable)

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

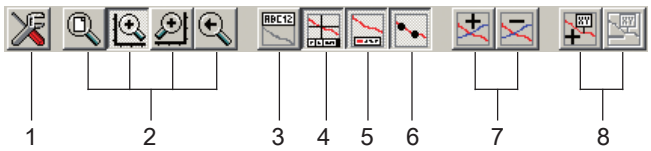
Easy operation with self-explanatory icon buttons

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-axis (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)

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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

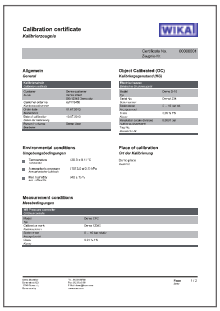
Calibration certificates can be created with the Cal-Template and logger protocols can be created with the Log-Template.

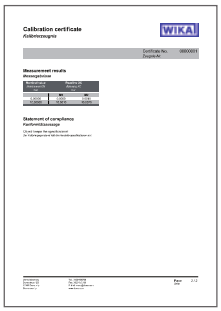
Cal Demo

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.



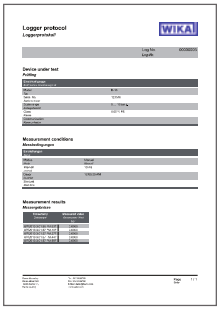


Log Demo

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

Log

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



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Scope of delivery

- Hand-held pressure indicator model CPH62I0-S1, incl. 9 V battery
- One sensor connection cable per channel
- 3.1 calibration certificate per DIN EN 10204
- Choice of sensors

Options

- Hand-held pressure indicator model CPH62I0-S2: 2-channel version (differential pressure measurement possible via 2 connected model CPT62I0 reference pressure sensors)
- DKD/DAkkS certified accuracy
- Sensors for oxygen applications

Model CPH62I0-S2 hand-held pressure indicator with two model CPT62I0 reference pressure sensors

Accessories

Connection adapters

- Various pressure adapters
- MINIMESS® quick-connect process connection system

Connection cables

- USB or RS-232 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

CPH62I0 / Instrument version / Additional cable for reference pressure sensor / Software / Interface cable / Test pump / Transport case / Additional order information

CPT62I0 / Unit / Measuring range / Accuracy / Process connection / Special design features / Type of certificate / Additional order information

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We reserve the right to make modifications to the specifications and materials.

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