

Hand-Held Pressure Indicator

- Model CPH 6200
- Model CPH 6210 (intrinsically safe version)
- Model CPH 6200-S2 (2-channel version)

WIKA Datasheet CPH 6200

Applications

- Calibration service companies / service industry
- Instrument and control workshops
- Quality assurance

Special Features

- Digital instrument with external transmitter (plug and play)
- Pressure ranges: from 0 ... 100 mbar up to 0 ... 1,000 bar
- Certified accuracy: 0.2 % (incl. calibration certificate)
- Option: Intrinsically Safe Version EEx ib IIC T4
- Data Logger evaluation software GSoft, Calibration software EasyCal and fully cased service sets (incl. pumps) available

Description

Areas of application

Pressure transmitters with ranges up to 1,000 bar are available for the CPH 6200 digital indicator. This makes it especially suited to the process technology, mechanical engineering and mobile hydraulics industries. For oil and gas refining or chemical industries, an Intrinsically Safe Version is also available. The digital instrument recognises the range of the connected pressure transmitter automatically and guarantees high precision.

Functionality

Both gauge and absolute pressure ranges can be measured, and by using the 2-channel version CPH 6200-S2 with two connected pressure transmitters it is also possible to measure differential pressure. Via a menu selection, pressures can be displayed in bar, mbar, PSI, kPa, Mpa or mmHG.

An integrated data logger and various other functions (like MIN, MAX, HOLD, TARE, Offset-correction, ALARM, POWER-OFF, 3 SAMPLE RATES, SEALEVEL etc.) ensure that the instrument can be used for many different applications.



Hand-Held Pressure Indicator CPH 6200

Complete test and service sets

For maintenance and service applications various service cases are available. These include pressure service sets with or without pressure pump, with charger, adapter, etc. (PCL-system), or service sets with an additional Hand-Held Thermometer CTH 6200.

Software

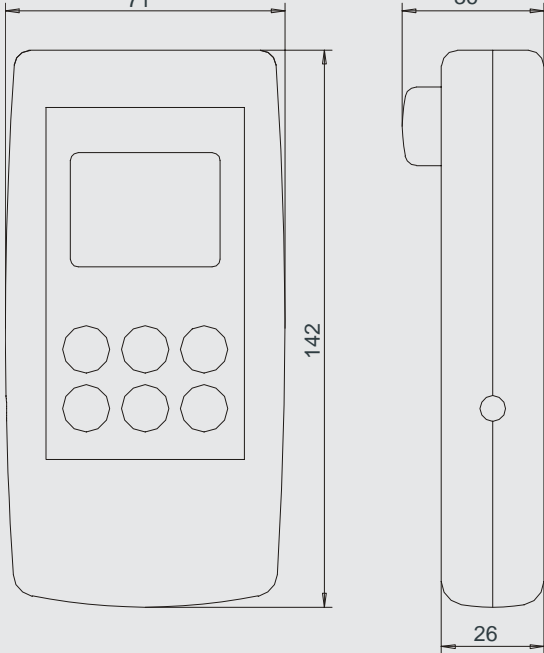
Three different software options are available. The Data Logger evaluation software (GSoft) enables the display of recorded data, as tables or charts, on a PC. Calibration software (EasyCal Light) is available for calibration tasks, while easy adjustment of the CPH 6200's zero and span points is available using "CPH-Adjustment" software.

Certified precision

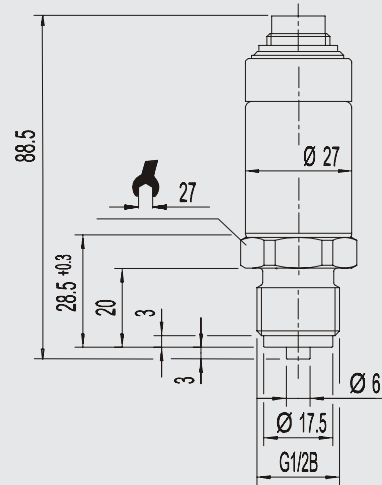
A factory calibration certificate for each pressure transmitter certifies the total uncertainty of the measuring chain. Alternatively, on request, a DKD calibration certificate can be supplied.

Dimensions in mm

Digital instrument CPH 6200



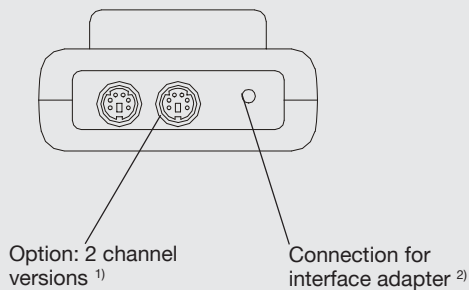
Pressure transmitter CPT 6200



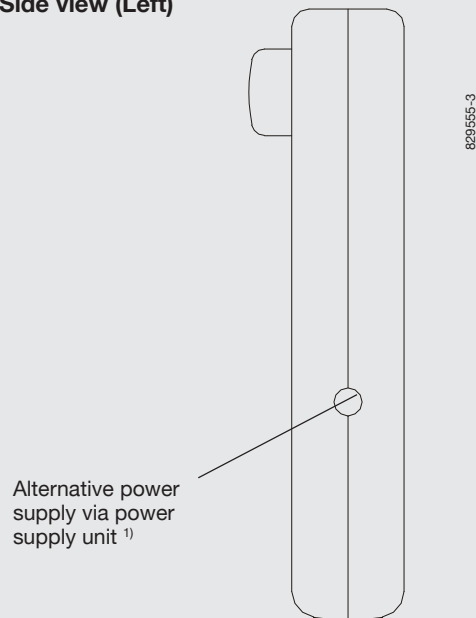
Note: The Intrinsically Safe Version CPH 6210 in a protective leather case has no rubber base on the back.

Electrical connections to the digital instrument

Top View



Side view (Left)



1) Not available for the Intrinsically Safe Version CPH 6210.

2) For the Intrinsically Safe Version CPH 6210, the use of the interface is not permitted with an explosive atmosphere.

Specifications

Hand-Field Indicator CPH 6200

| Input | | 1: for CPH 6200 / CPH 6210; | | | | | 2: for CPH 6200-S2 | | | | | |
|------------------------------|------|---|------|------|-----|-----|--------------------|------|------|------|------|------|
| Pressure range | bar | 0.1 | 0.16 | 0.25 | 0.4 | 0.6 | 1.0 | 1.6 | 2.5 | 4.0 | 6.0 | |
| Over pressure safety | bar | 1 | 1.5 | 2 | 2 | 4 | 5 | 10 | 10 | 17 | 35 | |
| Burst pressure | bar | 2 | 2 | 2.4 | 2.4 | 4.8 | 6 | 12 | 12 | 20.5 | 42 | |
| Resolution | mbar | 0.1 | | | | | 1 | | | | | |
| Pressure range | bar | 10 | 16 | 25 | 40 | 60 | 100 | 160 | 250 | 400 | 600 | 1000 |
| Over pressure safety | bar | 35 | 80 | 50 | 80 | 120 | 200 | 320 | 500 | 800 | 1200 | 1500 |
| Burst pressure | bar | 42 | 96 | 250 | 400 | 550 | 800 | 1000 | 1200 | 1700 | 2400 | 3000 |
| Resolution | bar | 0.01 | | | | | 0.1 | | | | | |
| Type of pressure | | gauge {absolute 0.25 up to 16 bar & vacuum on request} | | | | | | | | | | |
| Accuracy (measurement chain) | | 0.2 % FS +/- 1 digit at reference temperature of 20 °C | | | | | | | | | | |
| Display | | Large LCD display for display of 2 four-digit values and additional information | | | | | | | | | | |
| Range of display | | max. -1999 up to 9999 digit, depending on sensors used | | | | | | | | | | |
| Units | | can be selected from the following: mbar, bar, Pa, kPa, MPa, mmHg, psi (dependent on range) | | | | | | | | | | |

CPH 6200 Digital Instrument specific details:

| | | |
|-------------------------|--------|---|
| Functions via key press | | Min-, Max-memory, Hold, Tare, Offset-correction, Logger (Start/Stop) |
| Functions via Menu | | Min-, Max-alarm (acoustic*/visual), Sealevel (barom. air pressure), Power-Off-Function, measurement rate: 4/sec ("slow"); > 100/sec ("fast"); > 100/sec unfiltered ("peak-detect") [via "peak-detect" and min-/max-memory: pressure peaks of 10 msec can be detected] |
| Data logger | | - discrete value logger: up to 99 recordings incl. time via key press - cyclic logger: automatic recording up to 9900 values incl. time, cycle time: selectable from 1 ... 3600 seconds |
| Interface ¹⁾ | | USB and RS-232 interface via interface cable |
| Power supply | | 9V-zinc-carbon battery, alternative*: 9V rechargeable battery or mains supply |
| Power consumption | | cycle time slow: < 1.5 mA, fast: < 3.0 mA, Low-Power-Logger-Fct.: < 0.1 mA |
| Working temperature | °C | 0 ... 50 |
| Air humidity | % r.h. | 0 ... 95 relative humidity without moisture condensation |
| Storage temperature | °C | -20 ... +70 |
| Housing | | impact-resistant ABS, membrane keyboard, transparent panels (CPH 6210 with cover) |
| Weight | g | approx. 160 |
| EMC- / CE-conformity | | The CPH 6200 device corresponds to the essential protection requirements established in the regulations of the council for the Approximation of Legislation of the member countries regarding electromagnetic compatibility (89/336/EWG). |

CPT 6200 Reference Pressure Sensor specific details:

| | | |
|------------------------------------|----|---|
| Pressure connection | | G½ B; {flush diaphragm (G1 for 0.1 up to 1.6 bar) or various connection adapters on request} |
| Material wetted parts | | Wetted parts stainless steel, case stainless steel flush diaphragm version: stainless steel {Hastelloy C4}; O-Ring: NBR ²⁾ {FKM/FPM or EPDM} |
| Internal transmission fluid | | Synthetic oil, (only for pressure ranges up to 16 bar or flush diaphragm) {Halocarbon oil for oxygen applications ³⁾ ; {Listed by FDA for food industry} |
| One year stability | | 0.2 % of span at reference conditions |
| Permissible | | |
| - medium temperature ³⁾ | °C | -25 ... +100 |
| - ambient temperature | °C | 0 ... 50 |
| - storage temperature | °C | -40 ... +80 |
| Protection class | | IP67 (Sensor) / IP54 (Plug) |
| Compensated range | °C | 0 ... 70 |
| Temperature coefficients | | |
| - mean TC of zero signal | | 0.2 % / 10 K |
| - mean TC of span | | 0.2 % / 10 K |
| Connection to CPH 6200 | | via 1 m cable (plug & play); on request: up to 5 m |
| Weight | g | approx. 220 |

1) For the Intrinsically Safe Version, the use of the interface is not permitted within an explosive atmosphere.

2) O-ring made of FKM/FPM or EPDM for flush diaphragm with integrated cooling element.

3) The oxygen version must not be operated under medium temperatures higher than 60 °C. Cannot be manufactured for absolute pressure ranges < 1 bar abs.

*) Not available for the Intrinsically Safe Version CPH 6210.

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

Mode of operation for Hand-Held Pressure Indicators

1 and 2 channel version for external pressure sensors

Display:

An arrow points to the chosen measurement unit

(„m“ in preparation)



Main display: shows the measured value of CH1 (channel 1)

Symbol indicates weak battery or other warnings

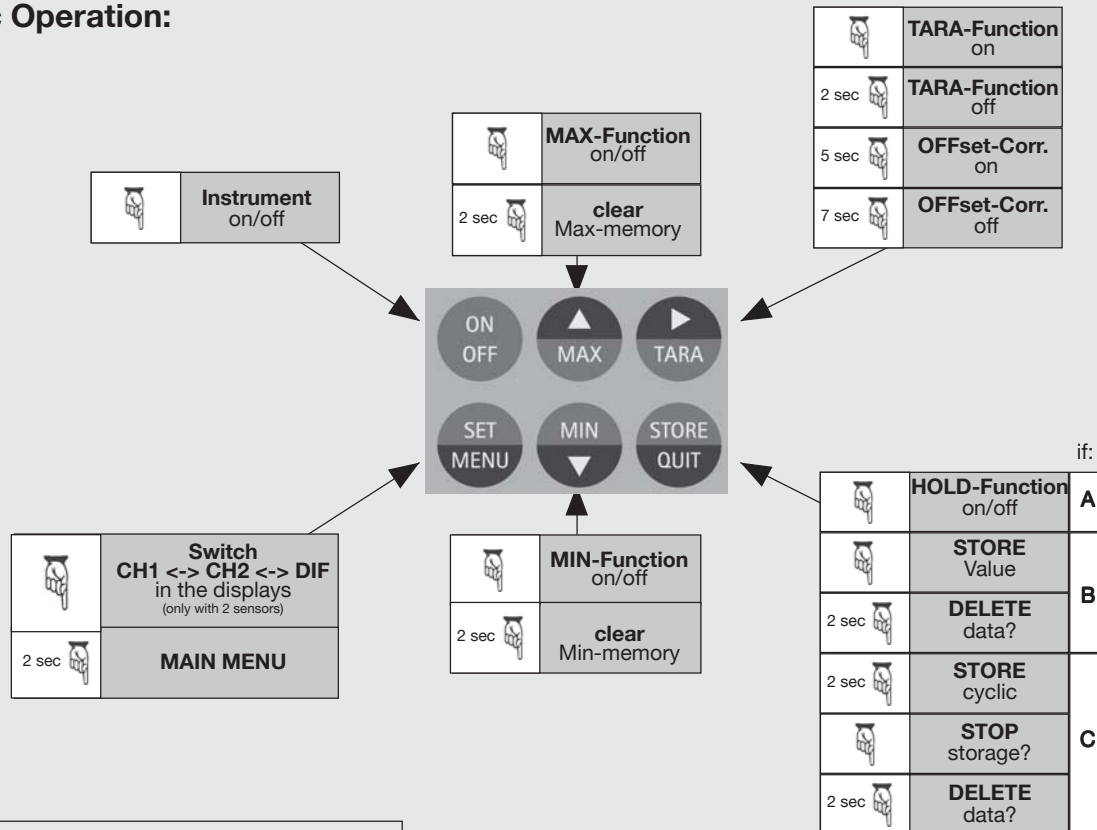
Secondary display shows ...

- The measured value of CH2 or DIF (CH1-CH2) if it is a 2 channel version
- The values of min, max or hold function if it is a 1 channel version

an arrow above

- **Logg:** appears when logger function is chosen via the menu, flashes when logger is running
- **Tara:** indicates that the tare function is active
- **SL:** indicates that the sea level function active

Basic Operation:



= press button

2 sec = press button 2 seconds

More information: See Operating Instructions

A = Logger Function deactivated
B = Logger Function STORE activated via menu
C = Logger Function CYCLE activated via menu

Complete test and service sets



Measuring set for pressure consisting of:

- Plastic service case with digital instrument
- Spare battery
- Various seals
- Space for different CPT 62x0 reference pressure sensor

Basic version I

Available pressure ranges:
see specification on page 3.



and /
or

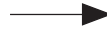


Measuring set for pressure and /or temperature (can be supplied to requirements) based on:

- Transport case with foamed insert and available space for max. 2 digital instruments, several CPT 62x0 reference pressure sensor, several CTH-probes, power supply unit, transformer and charger or spare battery.

Equipment freely selectable

For information on the Hand-Held Thermometer CTH 6200
see Data Sheet CT 51.01.



Test and calibration service set for pressures from -0.95 up to 35 bar consisting of:

- Transport case with digital instrument CPH 6200
- Pneumatic hand-pump: -0.95 up to 35 bar
- Various seals
- Rechargeable battery
- Battery charger
- Space for different CPT 62x0 reference pressure sensor

Basic version II (incl. pressure generation)

Available pressure ranges:
see specification on page 3.



Test and calibration service set for pressures up to 250 bar or 1,000 bar consisting of:

- Transport case with digital instrument CPH 6200
- Hydraulic spindle pump: 250 bar or 1,000 bar
- 1 m pressure hose with G 1/2-connections
- Various seals
- Rechargeable battery
- Battery charger
- Space for different CPT 62x0 reference pressure sensor

Basic version III or IV (incl. pressure generation)

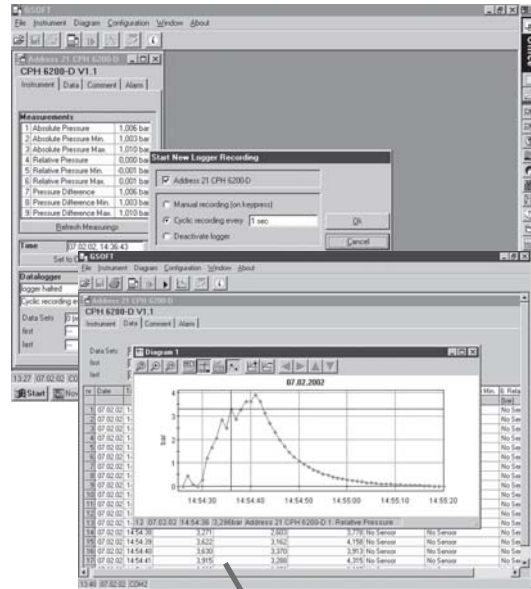
Data Logger - Software GSoft

The Data Logger evaluation software GSoft allows stored data from the internal Data logger (of a Hand-Held Pressure Indicator model CPH 6200 or of a Hand-Held Thermometer model CTH 6200) to be displayed as a table or chart on a PC.

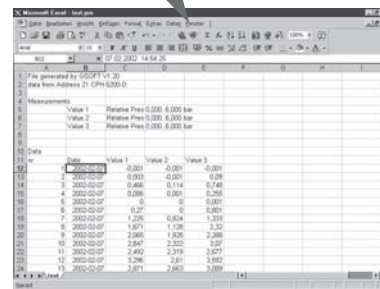
- Easy operation due to self-explanatory icon buttons
- Data of a Pressure and Temperature Hand-Helds in one diagram possible (2 separate y-Axes)
- Zoom function available
- Remote operation via PC possible
- Data can be exported to Excel®, etc.
- Language: English / German

System requirements

- IBM compatible PC (Pentium™)
- At least 20 MB hard disc capacity available
- CD-ROM drive
- At least 32 MB main memory
- Windows™ 95, 98, 2000, XP or NT 4.0 (with Service Pack 3.0) or better
- Mouse
- One unassigned serial interface or one USB-Port (via interface cable)



Data export to an Excel® file for example



Easy operation with self-explanatory icon buttons

Main Toolbar



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

Diagram Toolbar



1. Settings: grind and colour settings, manual zoom
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. (Measurement points) on/off
7. Add / erase measuring series
8. Comment-labels to a measuring point: add, delete

Software CPH-Adjust-light

For the easy adjustment of a Hand-Held Pressure Indicator CPH 6200 at 1 or 2 points.

1 Point:

- Gauge transmitter: Zero-Point correction (no pressure source is needed)
- Absolute transmitter: Offset-Correction at atmospheric pressure

2 Points:

- Zero point and span correction (for adjustment of absolute pressure transmitter, a vacuum pump is required)

Very easy to use

1. Connect Hand-Held Pressure Indicator via interface cable to a PC
2. Select interface (com1, com2, etc.)
3. Start data transfer between CPH 6200 and PC by pressing the button, Search CPH
4. Select 1 or 2 point adjustment and press the button: "Adjustment" to start the adjustment procedure.

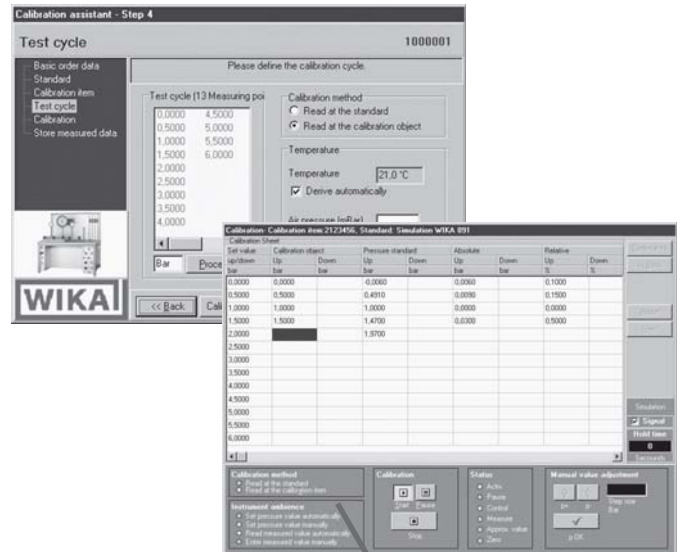


Main Screen of the CPH-Adjust Software

Calibration Software EasyCal

WIKAI calibration software has been developed for the calibration of mechanical and electronic pressure gauges according to ISO 9000 (periodical calibration tests).

- Calibration assistant that guides you through the calibration
 - User-friendly menu
 - Automatic generation of calibration steps according to EN 837-1
 - Certificates 3.1 in accordance with 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)**



Scope of Supply

- CPH 6200 incl. 9V battery
- One sensor connection cable per channel
- Calibration certificate 3.1 according to DIN EN 10 204
- Choice of sensor

Options

- CPH 6200-S2: 2-Channel Version
(Differential pressure measurement between 2 connected CPH-pressure transmitters possible)
- CPH 6210: Intrinsically Safe Version EEx ib IIC T4
(ATEX Directive 94/9/EG)
- DKD certificated accuracy of 0.2 %
- Transmitters for oxygen applications

Accessories

Pressure adapters

- Various pressure adapters
- Quick-Connect process connection system „Minimesh“

Power supply

- Power supply unit
- Rechargeable battery and charger

Pressure generation

- Pneumatic test pumps
- Hydraulic test pumps
- Integral reservoir and pressure hoses

Service cases

- Test and measuring cases
- Various test and calibration cases incl. test pump

Software

- Data Logger Evaluation software GSoft for CPH 6200/CTH 6200
- Calibration software EasyCal light for the CPH 6200
- Adjustment software CPH-Adjust for the CPH 6200

Products and Services within our Testing and Calibration Technology Program

- DKD calibration services for pressure
- Repair of calibration units of all makes
- Portable pressure measuring devices for testing 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 testing and calibration tasks
- Precision Thermometers
- Primary standards for temperature
- Consulting and training

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.



Intrinsically Safe Version CPH 6210



Typical test assembly „hydraulic“

