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

WIKA data sheet CT 11.02



for further approvals see page 4 - 5

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 (0 ... 0.4 psi to 0 ... 14,500 psi) at positive and negative overpressure, absolute pressure and differential pressure
- Accuracy: 0.2 %, optionally 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 (14,500 psi) 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. A USB interface is available for the data transfer.

WIKA data sheet CT 11.02 · 04/2018

Data sheets showing similar products and accessories: Hand-held pressure indicator; model CPH62I0; see data sheet CT 11.01 Hand-held pressure indicator; model CPH6300; see data sheet CT 12.01 Test pumps, hydraulic; CPP series; see data sheet CT 91.05 Hand test pump, pneumatic; model CPP30; see data sheet CT 91.06 Calibration software; WIKA-Cal; see data sheet CT 95.10 Page 1 of 11



Complete test and service cases

For maintenance and service applications, various 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.

Specifications

Measuring inputs	1 input for (CPH62I0-S1				
incusuring inputs		CPH62I0-S2				
Measuring range						
Gauge pressure	mbar	-600 0	-600 +600	-400 0	-400 +400	-250 0
		-250 +250	-100 +100	-20 +60	-20 +40	-20 +25
		0 25	0 40	0 60	0 100	0 160
		0 250	0 400	0 600		
	bar	-1 0	-1 1.5	-1 3	-1 5	-1 9
		-1 15	-1 24	-1 39	0 1	0 1.6
		02.5	0 4	06	0 10	0 16
		0 25	0 40	0 60	070	0 100
		0 160	0 250	0 400	0600	0 1.000
	psi	-9 0	-9 +9	-40	-4 +4	-1,5+1,5
		-1,5 0	0 0,4	0 0,6	00,9	0 1,5
		0 2,5	0 4	06	0 10	0 14,5
		0 25	0 40	0 60	090	0 145
		0 250	0 360	0 580	0870	0 1,450
		0 2,320	0 3,630	0 5,800	08,700	0 14,500
Absolute pressure	mbar abs.	0 250	0 400	0 600		
	bar abs.	0 1	0 1.6	0 2.5	0 4	0 6
		0 10	0 16	0 25	0,8 1,2	
	psi abs.	0 4	0 9	0 14,5	0 25	0 60
		0 90	0 145	0 250		
Overpressure limit	2 times; > 2	3 times; ≤ 25 bar 3 times; ≤ 360 psi 2 times; > 25 bar ≤ 600 bar 2 times; > 360 psi ≤ 8,700 psi 1.5 times; > 600 bar 1.5 times; > 8,700 psi				
Resolution	dependent	on pressure rang	ge (max. 4 1/2-digi	t)		
Accuracy of the measuring chain 1)	0.2 % FS (r	resolution 4-digit)	; {optional: 0.1 % F	S (resolution: 4 1	/2-digit)} 2)	
Types of pressure	Gauge pressure, {absolute pressure from 0 25 bar abs. (0 360 psi abs.) and vacuum measuring ranges from -1 +24 bar (-14.5 550 psi)} Differential pressure measurement only with CPH62I0-S2, and two model CPT62I0 reference pressure sensors connected					
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{}

Items in curved brackets are optional extras for an additional price. It is defined by the total measurement uncertainty, which is expressed with the coverage factor (k = 2) and includes the following factors: The intrinsic performance of the instrument, the measurement uncertainty of the reference instrument, long-term stability, influence of ambient conditions, drift and temperature effects over the compensated range during a periodic 1)

zero point adjustment. Reference conditions: 15 ... 25 °C (59 ... 77 °F) 2)

Digital indicator model CPH62I	0
Indication	
Display	Large 4 1/2-digit LC display for indication of two pressure values and additional information
Indication range	-19999 19999 digits, depending on sensor used
Pressure units	bar, mbar, psi, Pa, kPa, MPa, mmHg and inHg (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 button press	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, mean value filter
Mean value filter	1 120 seconds, adjustable
Data logger	Individual value logger: Up to 99 recordings incl. time via button 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)
Permissible ambient conditions	
Operating temperature	-10 +50 °C (14 122 °F)
Storage temperature	-20 +70 °C (-4 +158 °F)
Relative humidity	0 95 % r. h. (non-condensing)
Communication	
Interface ³⁾	USB via interface cable
Analogue output ³⁾	DC 0 1 V; configurable (selectable via menu alternative to interface)
Case	
Material	impact-resistant ABS plastic, membrane keyboard, transparent screen, leather case
Electrical connection	Sensor cable: Bayonet connector, 7-pin Interface: Stereo plug, 3.5 mm
Dimensions	See technical drawing
Weight	approx. 160 g (0.35 lbs) (incl. battery)

Reference pressure sensor model CPT62I0					
Process connection ⁴⁾	G 1/2 B; {flush (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 sealing) 3) Flush diaphragm version: Stainless steel {Hastelloy C4}; O-ring: NBR {FKM/FPM or EPDM}				
Internal transmission medium	Synthetic oil (only for measuring ranges to 16 bar (250 psi) or flush diaphragm) {Halocarbon oil for oxygen applications}; {Listed by FDA for food industry}				
Sensor data					
Accuracy ¹⁾	\leq 0.2 % of span at reference conditions ²⁾				
Compensated range	0 80 °C (0 176 °F)				
Mean temperature coefficient ≤ 0.2 % of span/10 K (outside the reference conditions)					

{} Items in curved brackets are optional extras for an additional price.
1 It is defined by the total measurement uncertainty, which is expressed with the coverage factor (k = 2) and includes the following factors: The intrinsic performance of the instrument, the measurement uncertainty of the reference instrument, long-term stability, influence of ambient conditions, drift and temperature effects over the compensated range during a periodic zero point adjustment.
2 Reference conditions: 15...25 °C (59...77 °F)
3 The use of the interface and analogue output is only permitted outside the hazardous area.
4) As an oxygen version, a flush diaphragm model is not available. In an oxygen version, the model CPT62I0 is only available in overpressure 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.

Reference pressure sensor model CPT62I0				
Permissible ambient conditions				
Medium temperature ⁴⁾	-20 +50 °C (-4 +122 °F)			
Operating temperature	-20 +50 °C (-4 +122 °F)			
Storage temperature	-40 +80 °C (-40 +176 °F)			
Relative humidity	0 95 % r. h. (non-condensing)			
Case				
Material	Stainless steel			
Connection to the CPH62I0	via 1 m (3.28 ft) connection cable (plug-and-play); optional: up to 5 m (16.4 ft)			
Ingress protection	IP65 IP67 when connected			
Dimensions	See technical drawing			
Weight	approx. 220 g (0.49 lbs)			

4) As an oxygen version, a flush diaphragm model is not available. In an oxygen version, the model CPT62I0 is only available in overpressure 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.

Safety-related characteristic values				
Connection values CPH62I0				
Max. voltage	U _o = DC 10.38 V			
Max. current	I _o = 93 mA			
Max. power	P _o = 240 mW			
Max. internal capacitance	C _o = 1,240 nF			
Max. internal inductance	L _o negligible			
Power supply circuit CPT62I0				
Max. input voltage	U _i = DC 10.4 V			
Max. input current	l _i = 100 mA			
Max. input power	P _i = 500 mW			
Max. internal capacitance	C _i = 600 nF			
Max. internal inductance	L _i negligible			

Approvals

Logo	Description		Country
€€	 EU declaration of conformity for CPH62I0 EMC directive EN 61326 emission (group 1, class B) and immunity (portable equipment) RoHS directive ATEX directive Hazardous areas Ex i Zone 1 gas II 2G Ex ib IIC T4 (Ta = -10 +50 °C) 		European Union
		BUREAU VERITAS EPS 09 ATEX 1 227 X	
CE	 EU declaration of conform EMC directive EN 61326 emission (grou Pressure equipment directive PS > 200 bar; module A, RoHS directive 	European Union	
€ x	 ATEX directive Hazardous areas Ex i Zone 1 gas 	II 2G Ex ib IIC T4 (Ta = -20 +50 °C) II 2G Ex ib IIC T4 Gb (Ta = -20 +50 °C) DEKRA BVS 10 ATEX E 150 X	

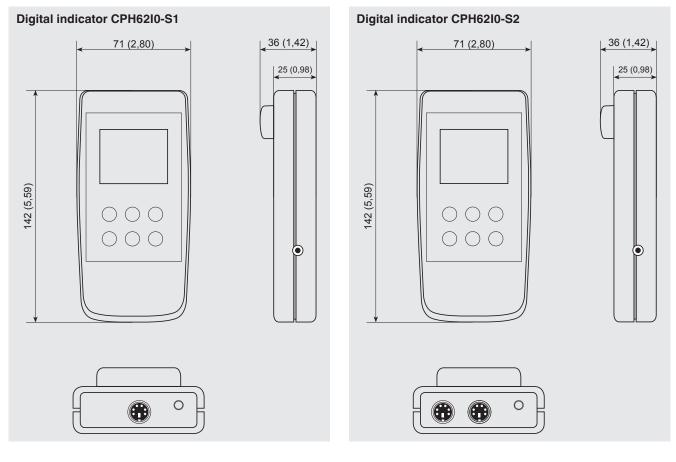
Logo	Description	Country
EHLEx	EAC EMC directive Pressure equipment directive Hazardous areas	Eurasian Economic Community
ß	KazInMetr Metrology, measurement technology	Kazakhstan
-	MTSCHS Permission for commissioning	Kazakhstan
Č	BelGIM Metrology, measurement technology	Belarus
۲	UkrSEPRO Metrology, measurement technology	Ukraine
6	Uzstandard Metrology, measurement technology	Uzbekistan
-	CPA Metrology, measurement technology	China

Certificates

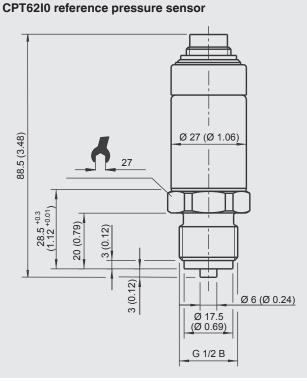
Certificate				
Calibration	Standard: 3.1 calibration certificate per DIN EN 10204 Option: DKD/DAkkS calibration certificate			
Recommended recalibration interval	1 year (dependent on conditions of use)			

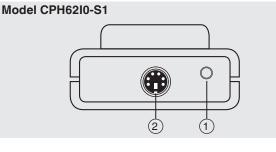
Approvals and certificates, see website

Dimensions in mm (in)

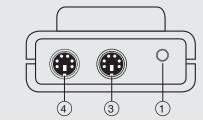


Electrical connections





Model CPH62I0-S2



1 Interface connector or optional analogue output

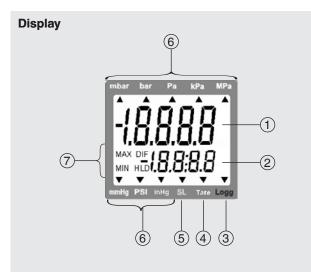
- (2) Connection channel 1 (only with CPH62I0-S1)
- (3) Connection channel 2 (only with CPH62I0-S2)
- (4) Connection channel 1 (only with CPH62I0-S2)

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

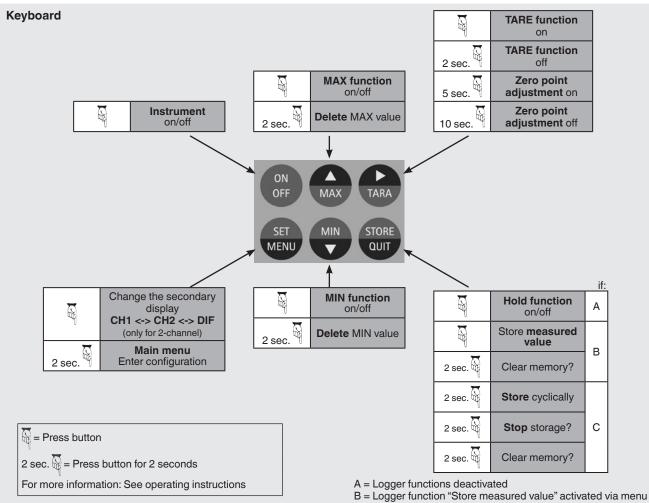
For the CPH62I0 intrinsically safe version, the use of the interface and power supply unit is only permitted outside the hazardous area. The interface connector is located below the Ex protective cover.

Operating functions of the models CPH62I0-S1 and CPH62I0-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) Tare arrow: Tare function was activated
- (5) SL arrow: Height correction (sea level) was activated
- (6) Display arrows for measured value units
- Indication elements for Min./Max. measured value illustration



C = Logger function "Store cyclically" activated via menu

Complete test and service cases

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

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

Available measuring ranges see specifications



Basic version

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 probes, 1 power supply unit, charger and rechargeable battery or battery

For further specifications see data sheet CT 51.01

Calibration case with model CPH62I0 hand-held pressure indicator and model CPP30 hand test pump for pressures of -0.95 ... 35 bar (-28 inHg ... 500 psi), consisting of:

- Plastic service case with foam insert
- Hand-held pressure indicator model CPH62I0
- Pneumatic hand test pump model CPP30; -0.95 ... 35 bar (-28 inHg ... 500 psi)
- Sealing set
- Sensor cable
- Rechargeable battery and charger
- Spaces for several CPT62I0 reference pressure sensors

Available measuring ranges see specifications

Calibration case with model CPH62I0 hand-held pressure indicator and model CPP1000-L hand spindle pump for pressures of 0 ... 1,000 bar (0 ... 14,500 psi), consisting of:

- Transport case with foam insert
- Hand-held pressure indicator model CPH62I0
- Hydraulic hand spindle pump model CPP1000-L;
 0 ... 1,000 bar (0 ... 14,500 psi)
- Sealing set
- Sensor cable
- Rechargeable battery and charger
- Spaces for several CPT62I0 reference pressure sensors

Available measuring ranges see specifications



and/or

Basic version incl. pneumatic pressure generation



Basic version incl. hydraulic pressure generation

GSoft data logger evaluation software

The GSoft data logger evaluation software is used to display the logger data of the model CPH62l0 hand-held pressure indicator on a PC in tabular form and as chart.

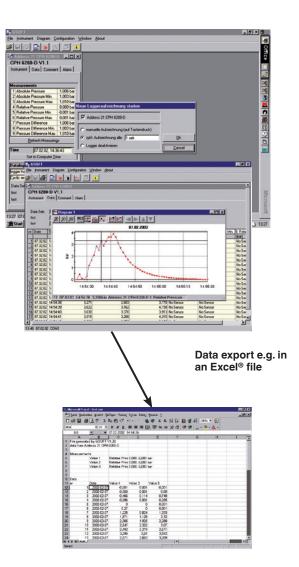
- Easy operation with self-explanatory toolbars
- Data from the pressure and temperature hand-helds (CTH62I0) can be displayed in a single chart (two separate y-axes)
- Chart offers a zoom function
- Operation of the logger function via PC (remote control)
- Data can be exported (Excel[®], etc.)
- Languages: German, English, French, Spanish and Czech

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 interface

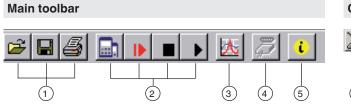
To operate the GSoft software with the CPH62I0, GSoft version 3.0 or later is needed.

Free updates are available for download at www.wika.com.



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

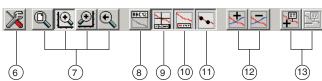
Easy operation with self-explanatory icon buttons



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

Charts toolbar



- 7 Zoom: All, left or right y-axis (via mouse), back
- 8 Rename chart
- (9) Cursor on/off (info footer)
- (10) Legend on/off
- (1) (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 stick with the template has to be purchased.

The pre-installed demo version automatically changes to the selected full version when the USB stick is inserted and remains available as long as the USB stick 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 per 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.

ibration certi	fcate	[WIKA	Calibration certificate Kalibrationsph		٧
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Accessories	Order code
9 V battery	CPH-A-6I-ZZBZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ
Sealing set, consisting of 4 x G $^{1\!\!/_2}$ USIT seals, 2 x G $^{1\!\!/_4}$ USIT seals and plastic box	CPH-A-6I-ZZDZZZZZZ-Z
Sensor connection cable, approx. 1.1 m (3.3 ft) (Ex version)	CPH-A-6I-ZZSZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ
Extension cable for connection of sensors, approx. 3.8 m (12.5 ft) to approx. 5 m (16.4 ft) (Ex version)	CPH-A-6I-ZZVZZZZZZ-Z
Plastic case for 1 x hand-held, 3 x pressure sensors, accessories	CPH-A-6I-ZZKZZZZZZ-Z
Plastic case for 1 x hand-held, 5 x pressure sensors, 1 x pneumatic hand test pump CPP30, accessories	CPH-A-6I-ZZLZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ
Transport case made of aluminium for 1 x hand-held, 5 x pressure sensors, 1 x hydraulic hand spindle pump CPP1000-L, accessories	CPH-A-6I-ZZMZZZZZZ-Z
RS-232 interface cable	CPH-A-6I-ZZRZZZZZZ-Z
USB interface cable	CPH-A-6I-ZZUZZZZZZ-Z
GSoft data logger evaluation software	CPH-A-6I-ZZGZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ
WIKA-Cal calibration software	WIKA-CAL-ZZ-L-Z

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 calibration certificate
- Sensors for oxygen applications



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

Ordering information

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

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

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