



Instrument Expert **Original factory** packaging www.dorgean.com

Calibration

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





for further approvals see page 5

WIKA data sheet CT 11.02



Applications

- Calibration service companies and service industry
- Measurement and control laboratories
- Pressure tests

Special features

- Intrinsically safe indicator with interchangeable pressure sensors model CPT62I0 (plug-and-play)
- Measuring ranges 0 ... 1,000 bar [0 ... 14,500 psi]
- Type of pressure: Positive and negative overpressure, absolute pressure and differential pressure
- Accuracy: 0.2 %, optionally 0.1 % (incl. calibration) certificate)
- Data logger for recording measured values



Hand-held pressure indicator model CPH62I0-S1 with external reference pressure sensor model CPT62I0

Description

Extensive application possibilities

For the hand-held pressure indicator model CPH62I0, external reference pressure sensors of model CPT62I0 with measuring ranges of up to 1,000 bar [14,500 psi] are available. 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. Pressure units selectable on the instrument 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), mean 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 logger 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 · 12/2019

Data sheets showing similar products and accessories: Hand-held pressure indicator with reference pressure sensor (CPT6200); model CPH6200; see data sheet CT 11.01 Hand-held pressure indicator; model CPH6300; see data sheet CT 12.01 Hydraulic hand spindle pump; models CPP1000-M, CPP1000-L; 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

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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

Model CPH62I0 hand-held press	sure indicator			
Electrical connection for reference pressure sensor				
Measuring inputs	 1 input for CPH62I0-S1 2 inputs for CPH62I0-S2 			
Sensor compatibility	Compatible with model CPT62I0 reference pressure sensors			
Connection to CPH62I0	6-pin, shielded mini DIN female connector with interlocking			
Sensor connection cable	Standard: Cable with 6-pin mini DIN connector and 7-pin bayonet connector, length 1.1 m [3.3 ft] Option: Extension cable, length 3.8 m [12.5 ft], overall cable length approx. 5 m [16.4 ft]			
Indication				
Display	Large 4 1/2-digit LC display for indication of two pressure values and additional information			
Indication range	-19999 19999 digits (dependent upon connected reference pressure sensor)			
Pressure types	 Dependent upon connected reference pressure sensor Gauge pressure, absolute pressure or vacuum Differential pressure measurement only with CPH62I0-S2, and two model CPT62I0 reference pressure sensors connected 			
Pressure units	Freely selectable depending on the measuring range bar kPa mbar MPa psi mmHg Pa inHg			
Functions				
Measuring rate	Measuring rate (can be set via menu) 4/s ("Slo" - slow measurement) 1,000/s filtered ("Fast" - fast measurement) > 1,000/s unfiltered ("P.det" - peak value detection)			
Mean value filter	1 120 seconds (can be set via menu)			
Data logger	 Individual value logger ⇒ Up to 99 recordings incl. time can be accessed via function button Cyclic logger ⇒ automatic recording of up to 10,000 values incl. time ⇒ Cycle time freely adjustable in the range from 1 3,600 seconds 			
Real-time clock	for data logger, (can be set via menu)			
Min./Max. memory	Minimum or maximum measured value (can be accessed via function button)			
Hold	Holding the last measured value (can be accessed via function button)			
Tare	Tare or zero point correction (can be accessed via function button)			
Alarm	Alarm function (can be set via menu) ⇒ Min./Max. alarm (audible/visual)			
Sea level (barometric pressure)	Sea level adjustment -200 +9999 m (can be set via menu)			
Power-off function	Automatic switch-off (can be set via menu) activated (1 120 minutes) deactivated (no automatic switch-off of the instrument)			

Model CPH62I0 hand-held pressure indicator			
Voltage supply			
Supply voltage	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)		
Output signals/interfaces			
Serial interface 1)	RS-232 or USB (instrument-specific interface cable required)		
Analogue output ¹⁾	DC 0 1 V; configurable (can be activated via menu as an alternative to the serial interface, instrument-specific connection cable required)		
Connection	Stereo jack connector, 3.5 mm		
Case			
Material	impact-resistant ABS plastic, membrane keyboard, transparent screen, leather case		
Dimensions	See technical drawing		
Weight	approx. 160 g [0.35 lbs] (incl. battery)		

Reference pressure sensor model CPT62I0						
Measuring range						
Gauge pressure	bar	-0.6 0 ²⁾	-0.4 0 ²⁾	-0.25 0 ²⁾	-1 0 ²⁾	-0.1 +0.1
		-0.25 +0.25 ²⁾	-0.4 +0.4 ²⁾	-0.6 +0.6 ²⁾	-1 1.5 ²⁾	-1 3 ²⁾
		-1 5 ²⁾	-1 9 ²⁾	-1 15 ²⁾	-1 24 ²⁾	-1 39 ²⁾
		0 0.1 ²⁾	0 0.16 ²⁾	0 0.25	0 0.4	00.6
		0 1	0 1.6	0 2.5	0 4	06
		0 10	0 16	0 25	0 40	060
		0 70	0 100	0 160	0 250	0 400
		0 600	0 1,000			
	psi	-15 0 ²⁾	-15 +15 ²⁾	-15 +40 ²⁾	-15 +70 ²⁾	-15 +130 ²⁾
		-3 +3 ²⁾	-5 +5 ²⁾	-8 +8 ²⁾	-8 0 ²⁾	-5 0 ²⁾
		-3 0 ²⁾	05	0 10	0 15	0 20
		0 30	0 50	0 100	0 150	0200
		0 300	0 500	0 1,000	0 1,500	0 2,000
		0 3,000	0 6,000	0 8,000	0 14,500	
Absolute pressure ²⁾	bar abs.	00.25	0 0.4	00.6	0 1	0 1.6
		0 2.5	0 4	06	0 10	
		0 25				
	psi abs.	05	0 10	0 15	020	0 30
		0 50	0 100	0 150	0 200	
Overpressure safety	2 times; > 2	3 times; ≤ 25 bar 2 times; > 25 bar ≤ 600 bar 1.5 times; > 600 bar		3 times; ≤ 360 psi 2 times; > 360 psi ≤ 8,700 psi 1.5 times; > 8,700 psi		

Only use outside the hazardous areas!
 Not available as oxygen version.

Reference pressure sense	or model CPT62I0
Process connection	
G ½ B	for all measuring ranges
G ½ B flush ³⁾	for measuring ranges > 1.6 < 1,000 bar and bar abs. for measuring ranges > 5 < 14,500 psi and psi abs.
G 1 B flush ³⁾	for measuring ranges $\ge 0.1 \dots \le 1.6$ bar and bar abs. for measuring ranges $> 5 \dots \le 20$ psi and psi abs.
Adapters	various connection adapters on request
Material	
Wetted parts	Measuring ranges ≥ 0.1 25 bar [≥ 1.45 360 psi] ■ Stainless steel or ■ Elgiloy [®]
	Measuring ranges > 25 bar [> 360 psi] Stainless steel and sealing from NBR or Elgiloy [®] and sealing from NBR
	Oxygen version, measuring ranges ≥ 0.25 bar [≥ 0.4 psi] ■ Stainless steel or ■ Elgiloy [®]
	Flush version Stainless steel with O-ring from NBR or Stainless steel with O-ring from EPDM or Hastelloy C4 with O-ring from NBR or Hastelloy C4 with O-ring from EPDM
Pressure transmission	for measuring ranges to \leq 16 bar [\leq 250 psi] synthetic oil
medium	for flush version synthetic oil
	for oxygen version halocarbon oil
Permissible ambient condition	ons
Medium temperature	 ■ -20 +50 °C [-4 +122 °F] ■ -10 +50 °C [14 122 °F] (only for oxygen version)
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
Ingress protection	IP65IP67 when connected
Dimensions	See technical drawing
Weight	approx. 220 g [0.49 lbs]
Accuracy of the measuring chain ⁴⁾	 0.2 % FS 0.1 % FS at reference conditions ⁵⁾
Mean temperature coefficient	\leq 0.2 % of span/10 K (outside the reference conditions) $^{5)}$
Compensated range	0 80 °C [0 176 °F]

3) As an oxygen version or oil- and grease-free version, a flush version is not available.
4) 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 correction.
5) Reference conditions: 15 ... 25 °C [59 ... 77 °F]

Safety-related characteristic values

Model CPH62I0 hand-held pressure indicator

Parameters	Connection values CPH62I0
Max. output voltage	U _o = DC 10.38 V
Max. output current	l _o = 93 mA
Max. output power	P _o = 240 mW
Max. internal capacitance	C _o = 1,240 nF
Max. internal inductance	L _o negligible

Reference pressure sensor model CPT62I0

Parameters	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 conform EMC directive EN 61326 emission (group RoHS directive ATEX directive Hazardous areas - Ex i Zone 1 gas	ity for CPH62I0 0 1, class B) and immunity (portable equipment) II 2G Ex ib IIC T4 (Ta = -10 +50 °C) BUREAU VERITAS EPS 09 ATEX 1 227 X	European Union
€ €	 EU declaration of conform EMC directive EN 61326 emission (group Pressure equipment direct PS > 200 bar; module A, p RoHS directive ATEX directive Hazardous areas Ex i Zone 1 gas 	 1, class B) and immunity (portable equipment) ive 	European Union
EAC	EAC (option)Import certificateEMC directive		Eurasian Economic Community
G	GOST (option) Metrology, measurement technology		Russia
ß	KazInMetr (option) Metrology, measurement tech	hnology	Kazakhstan
-	MTSCHS (option) Permission for commissionin	g	Kazakhstan

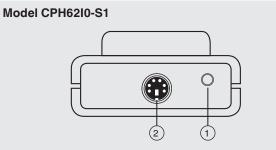
Logo	Description	Country
	BelGIM (option) Metrology, measurement technology	Belarus
\odot	UkrSEPRO (option) Metrology, measurement technology	Ukraine
Ø	Uzstandard (option) Metrology, measurement technology	Uzbekistan
-	CPA (option) Metrology, measurement technology	China

Certificates

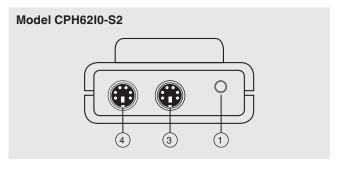
Certificate	
Calibration	Standard: 3.1 calibration certificate per DIN EN 10204 Option: DKD/DAkkS calibration certificate
Recommended recalibration interval	1 year (dependent on conditions of use)

Approvals and certificates, see website

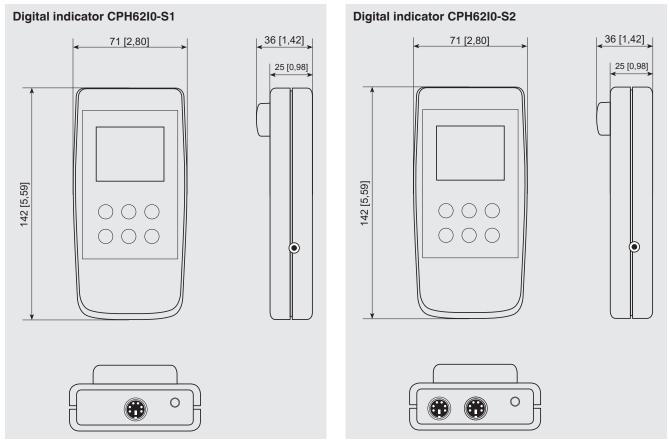
Electrical connections



- (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)

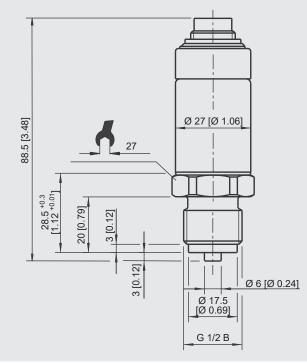


Dimensions in mm [in]



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

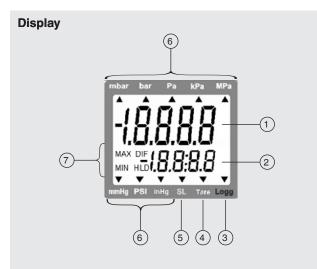
For the CPH62I0 intrinsically safe version, the use of the interface and power supply unit is only permitted outside the hazardous area. The interface connector is located below the Ex protective cover.



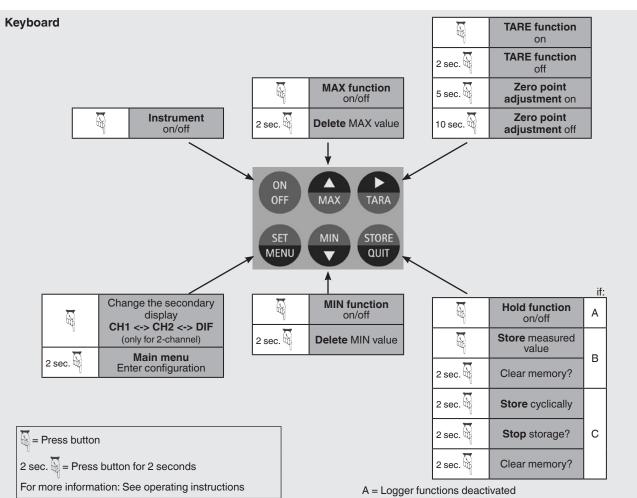
CPT62I0 reference pressure sensor

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:** Altitude correction (sea level) was activated
- (6) Display arrows for measured value units
- Indicating elements for Min./Max. measured value illustration



- B = Logger function "Store measured value" activated via menu
- C = Logger function "Store cyclically" activated via menu

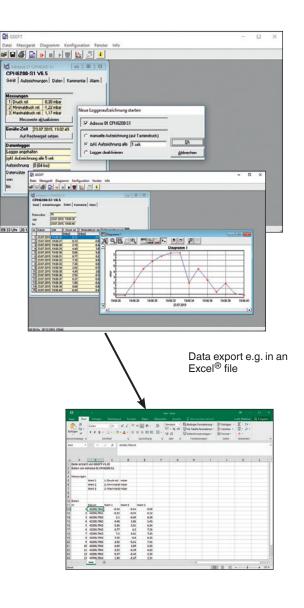
GSoft data logger evaluation software

The GSoft data logger evaluation software is used to display the logger data of 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 (CTH) 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

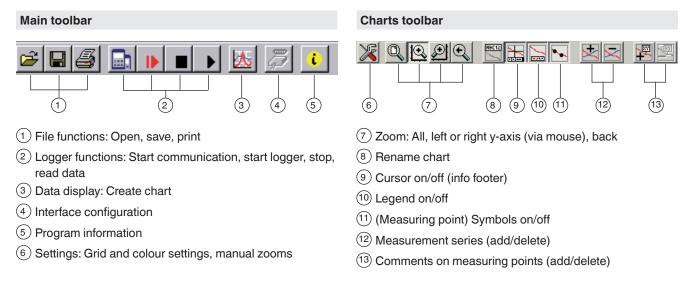
System requirements, GSoft version 3.2

- 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 7, 8, 8.1 or 10
- Mouse
- USB port (via interface cable)



 $\mathsf{Windows}^{\otimes}$ is a registered trademark of Microsoft Corporation in the United States and other countries.

Easy operation with self-explanatory icon buttons



WIKA-Cal calibration software

Easy and fast creation of a high-quality calibration certificate

WIKA-Cal calibration software serves for the creation of calibration certificates or logger protocols for pressure measuring instruments. A demo version is available for free download.

To switch from the demo version to a licenced version, a USB dongle with a valid licence must be purchased.

The pre-installed demo version changes automatically to the selected version when plugging in the USB dongle and remains available as long as the USB dongle is connected to the PC.

- The user is guided through the calibration or logger process
- Management of calibration data and instrument data
- Intelligent preselection via SQL database
- Menu languages: German, English, Italian, French, Dutch, Polish, Portuguese, Romanian, Spanish, Swedish, Russian, Greek, Japanese, Chinese More languages will be due with software updates
- Customer-specific complete solutions possible
- Maximum degree of automation in connection with our CPC series

The supported instruments are continuously expanded and even customer-specific adaptations are possible.

For further information see data sheet CT 95.10



Two WIKA-Cal licences are available together with one hand-held

The WIKA-Cal calibration software is available both for reading the logger data stored in the hand-held as well as for online calibrations together with a PC. The scope of software functions depends on the selected licence. Several licences can be combined on one USB dongle.

Cal-Template (light version)	Log-Template (full version)	
 Semi-automated creation of calibration certificates for mechanical and electronic pressure measuring instruments Creation of calibration certificates 3.1 per DIN EN 10204 Calibration reports can be exported to Excel[®] template or XML file 	 Live measurement recording for a certain period of time with selectable interval, duration and start time Readout of the integrated data logger of the hand-held Creation of logger protocols with graphic and/or tabular representation of the measurement results in PDF format Possibility of exporting measurement results as a CSV file 	
Ordering information for your enquiry:		
WIKA-CAL-LZ-Z-Z	WIKA-CAL-ZZ-L-Z	
WIKA-CA	AL-LZ-L-Z	

Complete test and service cases

The available test and service cases are individually equipped according to your needs. A distinction is made between 5 different variants, which differ in the case size and the number or size of the recesses.

Case variants and existing recesses	1 ¹⁾	2	3	4
Recesses for standard components				
Hand-held pressure indicator, either model CPH62I0-S1 or CPH62I0-S2	х	х	х	х
Sensor connection cable 1.1 m [3.3 ft]	х	х	х	х
9 V battery	х	х	х	х
Sealing set	х	х	х	х
Number of freely selectable reference pressure sensors, model CPT62I0	3	5	5	5
Pneumatic hand test pump model CPP30		х		
Hydraulic hand test pump, either model CPP700-H or CPP1000-H			х	
Hydraulic hand spindle pump model CPP1000-L				х
Recesses for additional accessories				
Sensor extension cable 3.8 m [12.5 ft]	х	х	х	х
Interface cable	х	х	х	х
GSoft data logger evaluation software		х	х	х
USB dongle for WIKA-Cal calibration software	х	х	х	х

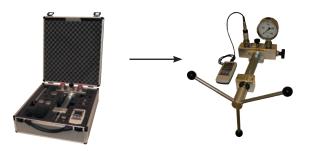
1) Due to its size, this case model may not provide enough space for all available accessories. We will be happy to help you choose the best equipment for your case set.



Variant 1: Calibration case with max. 3 pressure sensors



Variant 2 or 3: Calibration case with max. 5 pressure sensors and incl. hand test pump



Variant 4: Calibration case with max. 5 pressure sensors and incl. hand spindle pump

Accessories

Description		Order code
		CPH-A-6I-
	9 V battery	-B-
	Sealing set Consisting of 4 x G $^{1\!\!/_2}$ USIT seals, 2 x G $^{1\!\!/_4}$ USIT seals and plastic box	-D-
	Plastic case Variant 1 for 1 x hand-held, max. 3 x pressure sensors, accessories Dimensions: 340 x 275 x 83 mm [13.39 x 10.83 x 3.27 in] May not be used in Ex areas!	-К-
	Variant 2 for 1 x hand-held, max. 5 x pressure sensors, 1 x pneumatic hand test pump model CPP30, accessories Dimensions: 450 x 360 x 123 mm [17.72 x 13.78 x 4.84 in] May not be used in Ex areas!	-L-
	Variant 3 for 1 x hand-held, max. 4 x pressure sensors, 1 x hydraulic hand test pump model CPP700-H/CPP1000-H, accessories Dimensions: 450 x 360 x 140 mm [17.72 x 13.78 x 5.51 in] May not be used in Ex areas!	-N-
	Transport case from aluminium Variant 4for 1 x hand-held, max. 5 x pressure sensors, 1 x hydraulic hand spindle pump model CPP1000-L, accessoriesDimensions: 375 x 425 x 170 mm [14.76 x 16.73 x 6.69 in]Image: May not be used in Ex areas!	-M-
	Sensor connection cable approx. 1.1 m [3.3 ft]	-S-
	Extension cable for connection of sensors, approx. 3.8 m [12.5 ft] to approx. 5 m [16.4 ft]	-V-
	Interface cable for RS-232 interfaces May not be used in Ex areas!	-R-
Ò	Interface cable for USB interfaces May not be used in Ex areas!	-U-





Description		Order code
		CPH-A-6I-
	GSoft data logger evaluation software	-G-
Ordering information for your enquiry:		
	1. Order code: CPH-A-6I 2. Option:	↓ []

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
- Optional CPT62I0 reference pressure sensors (must be ordered separately)

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



Hand-held pressure indicator model CPH62I0-S2 with two external reference pressure sensors model CPT62I0

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 / Pressure adapter / Further approvals / Additional ordering information

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