USB pressure transmitter
With USB adapter and software
Model CPT2500

Applications

- Calibration service companies and service industry
- Quality assurance
- Recording and monitoring of pressure processes
- Measurement of pressure peaks

Special features

- Recording interval can be set from 1 ms ... 10 s
- Measuring ranges from 0 ... 25 mbar to 0 ... 1,000 bar
- Accuracy: 0.2 %, optional 0.1 % (incl. calibration certificate)
- No external voltage supply required
- Software for recording of measured values, calibration and evaluation

Model CPT2500 USB pressure transmitter with model CPA2500 USB adapter

Description

Extensive application possibilities

The CPT2500 USB pressure transmitter is suitable for connection to any PC with a USB port, via the CPA2500 USB adapter.
For the USB adapter there are stainless steel pressure transmitters available with measuring ranges up to 1,000 bar.
The USB adapter automatically detects the measuring range of the currently connected pressure transmitter and ensures a highly accurate pressure measurement.

Functionality

The measurement interval for pressure recording can be set in the range of 1 ms ... 10 s. With a recording interval of more than 5 ms the following data is recorded in addition to the current measured value:

- the mean value over the recording interval
- the maximum and minimum value during the recording interval

Thus pressure peaks within the overall recording interval can be very easily identified.
It is also possible to set start and stop conditions for the recording. In this way it is possible to detect pressure peaks with a resolution of up to 1 ms.
The CPT2500 is a thus very well suited to all applications where, over a limited time span, pressure processes must be recorded and analysed with high resolution.

Software

The USBsoft2500 and USB ScanSoft software are delivered as standard with the USB adapter. With it, all settings for recording the pressure process can be made. The recorded measured values can be graphically displayed and evaluated.
In addition to the USBsoft2500 and USB ScanSoft software, WIKA-CAL calibration software for calibration tasks is also available. Using this software, the data is automatically transferred into a printable calibration certificate.
Furthermore, 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, a USB interface is available.

Data sheets showing similar products and accessories:
Hand-Held pressure indicator; model CPH6200; 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

Complete service case
For easy transport and safe storage, the USB adapter is delivered in a compact transport case, which can also hold one or more pressure transmitters.

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

USB pressure transmitter model CPT2500 (complete measuring chain)

Measuring range	**mbar**	**0 ... 25**	**0 ... 40**	**0 ... 60**	**0 ... 100**	**0 ... 160**	**0 ... 250**	**0 ... 400**	**0 ... 600**
Overpressure limit	mbar	500	500	500	1,000	1,500	2,000	2,000	4,000
Burst pressure	mbar	1,000	1,000	1,000	2,000	2,000	2,400	2,400	4,800
Resolution	dependant on pressure range (max. 4 1/2-digit)								
Measuring range	**bar**	**0 ... 1**	**0 ... 1.6**	**0 ... 2.5**	**0 ... 4**	**0 ... 6**	**0 ... 10**	**0 ... 16**	**0 ... 25**
Overpressure limit	bar	5	10	10	17	35	35	80	50
Burst pressure	bar	6	12	12	20.5	42	42	96	96
Resolution	dependant on pressure range (max. 4 1/2-digit)								
Measuring range	**bar**	**0 ... 40**	**0 ... 60**	**0 ... 100**	**0 ... 160**	**0 ... 250**	**0 ... 400**	**0 ... 600**	**0 ... 1,000**
Overpressure limit	bar	80	120	200	320	500	800	1,200	1,500
Burst pressure	bar	400	550	800	1,000	1,200	1,700	2,400	3,000
Resolution	dependant on pressure range (max. 4 1/2-digit)								
Type of pressure	Relative pressure, {absolute pressure from 0 ... 25 bar abs. and vacuum from -1 ... +24 bar}								
Accuracy of the measuring chain	0.2 % FS (resolution 4-digit); {optional: 0.1 % FS (resolution 4 1/2-digit)}								

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

Rererence pressure sensor model CPT2500

Process connection [1]	G ½ B; {flush diaphragm (G 1 for 0.1 up to 1.6 bar) or various connection adapters on request}
Pressure units	mbar, bar, Pa, kPa, MPa, mmHg, psi, inHg (0 °C), inHg (60 °F), mWs; (depending on the measuring range, selectable)
Material	
Wetted parts	Stainless steel or Elgiloy®, (> 25 bar with additional 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 specification	
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)
Measuring rate	1,000 measurements/s
Permissible ambient conditions	
Medium temperature	-25 ... +100 °C [4]
Operating temperature	-20 ... +80 °C
Storage temperature	-40 ... +100 °C [4]
Relative humidity	0 ... 95 % r. h. (non-condensing)
Case	
Material	Stainless steel
Dimensions	see technical drawings
Weight	approx. 220 g

{ } 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 CPT2500 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.
2) For pressure measuring ranges 0 ... 25 mbar, 0 ... 40 mbar and 0 ... 60 mbar all wetted parts are made of stainless steel, silicium, aluminium, gold, silicone.
3) Reference conditions: 15 ... 25 °C
4) For pressure measuring ranges 0 ... 25 mbar, 0 ... 40 mbar and 0 ... 60 mbar the medium temperature and storage temperature are limited to +80 °C.

USB adapter model CPA2500

Communication	
PC connection	Standard USB connector (type A)
Electrical sensor connection	Circular connector, 7-pin, M16 x 0.75
Recording interval	1 ms ... 10 s, adjustable via software
Recording options	selectable start/stop conditions, pre-trigger, stop-delay
Voltage supply	
Power supply	Supply via USB port
Permissible ambient conditions	
Operating temperature	-25 ... +50 °C
Storage temperature	-25 ... +70 °C
Relative humidity	0 ... 95 % r. h. (non-condensing)
Case	
Dimensions	see technical drawings
Weight	approx. 120 g

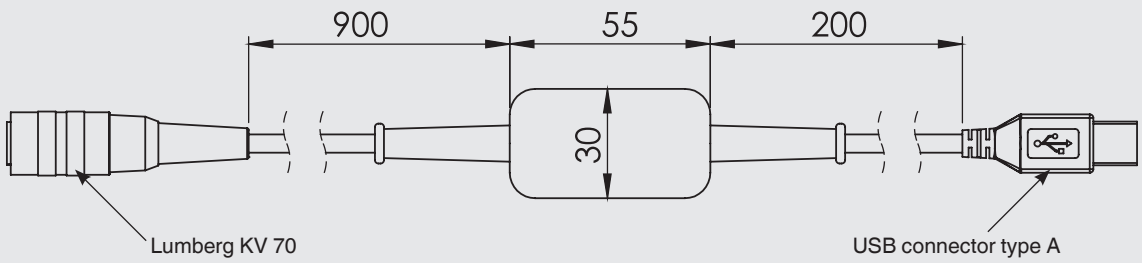
CE conformity, approvals, certificates

CE conformity for the model CPT2500 USB pressure transmitter	
Pressure equipment directive	97/23/EC, module A, pressure accessory
EMC directive	2004/108/EC, EN 61326 Emission (group 1, class B) and interference immunity (commercial applications, laboratories, service centres and workshops)
CE conformity for the model CPA2500 USB adapter	
EMC directive	2004/108/EC, EN 61326 Emission (group 1, class B) and interference immunity (controlled electromagnetic environment)
Approvals	
GOST-R	Import certificate, Russia
Certificates	
Calibration	Standard: 3.1 calibration certificate per DIN EN 10204 Option: DKD/DAkkS calibration certificate

Approvals and certificates, see website

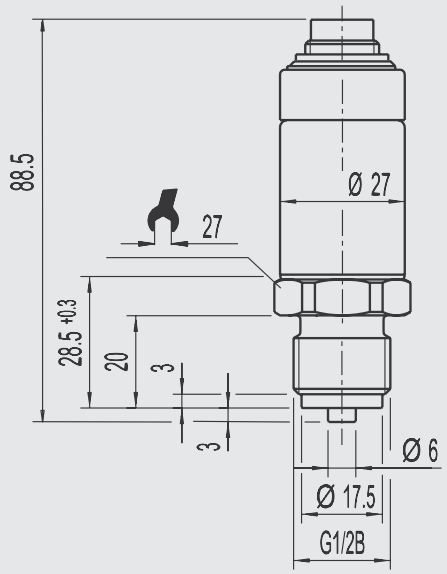
Dimensions in mm

USB adapter model CPA2500



Dimensions in mm

USB pressure transmitter model CPT2500

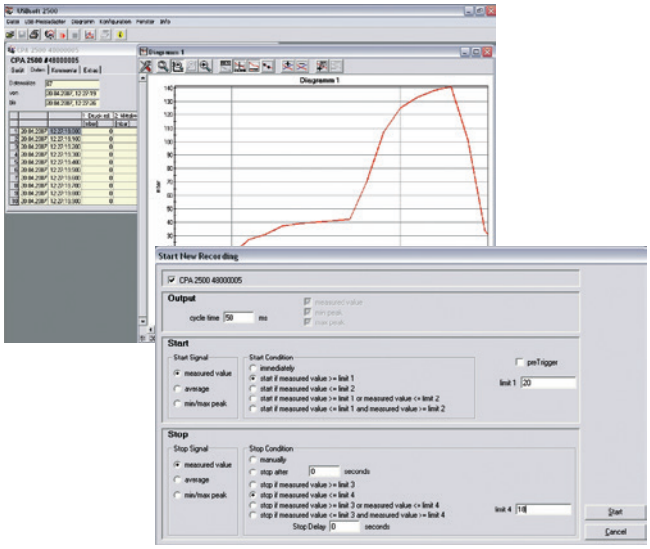


USBsoft2500 and USB ScanSoft configuration and evaluation software

The USBsoft2500 software is required for the operation of the model CPT2500 USB pressure transmitter in connection with the model CPA2500 USB adapter. This enables the configuration of the pressure transmitter as well as the selection of the various recording settings.

The software also allows different start/stop conditions to be defined, in order to easily identify, for example, a single pressure peak.

Graphical evaluation of the measured data (including mean, min- and max-values), in addition the measured data can also be exported to other software.
Several series of measurements can be displayed in a single chart.
Using software USB ScanSoft, several CPT2500 in combination with model CPA2500 USB adapter can be run parallel.
For each CPT2500 one CPA2500 is required.



Performance data

- Recording interval of 1 ms ... 10 s
- Data export to other programs e.g. Excel®
- Languages: German, English, Spanish and Czech

System requirements for USBsoft2500

- CPU with at least 1 GHz
- At least 20 MB free hard disc space
- CD-ROM drive
- At least 256 MB RAM
- Windows® operating system 95, 98, NT 4.0 (with Service Pack 3.0 or higher), 2000, XP, Vista or 7
- USB port

System requirements for USB ScanSoft

- CPU with at least 1.2 GHz
- At least 100 MB free hard disc space
- CD-ROM drive
- At least 1 GB RAM
- Windows® operating system XP (SP 3), Vista (SP2) or 7 (SP1)
- USB port

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.

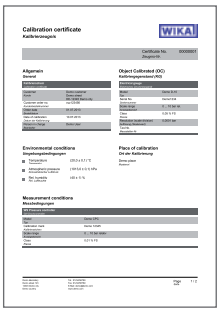
- Creation of calibration certificates for mechanical and electronic pressure measuring instruments
- A calibration assistant guides you through the calibration
- Automatic generation of the calibration steps
- Generation of 3.1 certificates in accordance with DIN EN 10204
- Creation of logger protocols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

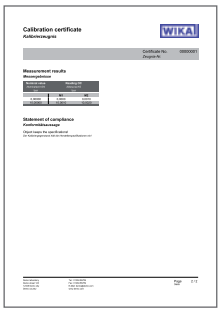
For further information see data sheet CT 95.10

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.

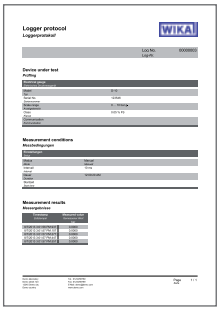
Cal Light
Generation of calibration certificates with no limitations on measuring points, without automatic initiation of pressures via a pressure controller.





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

- USB pressure transmitter model CPT2500
- USB adapter model CPA2500
- Software USBsoft2500 and USB ScanSoft
- Transport case
- Operating instructions
- 3.1 calibration certificate per DIN EN 10204

Options

- DKD/DAkkS certified accuracy
- Sensors for oxygen applications

Accessories

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

Pressure generation
- Pneumatic test pumps
- Hydraulic test pumps

Software
- WIKA-CAL calibration software

Transport case with USB pressure transmitter and USB adapter

Ordering information
Model / Unit / Measuring range / Accuracy / Process connection / Extension cable / Type of certificate / Accessories / Additional order information

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