USB pressure transmitter model CPT2500
with model CPA2500 USB adapter and USBsoft2500 software

WIKA data sheet CT 05.01

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
- USBsoft2500 software for configuration, and the recording and analysis of measured values

Model CPT2500 USB pressure transmitter with model CPA2500 USB adapter

Description

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.

The USBsoft2500 software is 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.

The interval for 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 timespan, pressure processes must be recorded and analysed with high resolution.
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.

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Specifications

USB pressure transmitter model CPT2500								
Measuring range	mbar	**25**	**40**	**60**	**100**	**160**	**250**	**400**	**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	mbar	0.01			0.1				
Measuring range	bar	**1**	**1.6**	**2.5**	**4**	**6**	**10**	**16**	**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	bar	0.001					0.01		
Measuring range	bar	**40**	**60**	**100**	**160**	**250**	**400**	**600**	**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	bar	0.01		0.1					1
Type of pressure	Relative pressure, {absolute pressure from 0 ... 25 bar abs. and vacuum from -1 ... 24 bar}								
Instrument									
Accuracy of the measuring chain	0.2 % FS; optional: 0.1 % FS								
Pressure 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									
1-year stability	≤ 0.2 % of span at reference conditions								
Compensated range	0 ... 80 °C								
Measuring rate	1.000 measurements/s								
Permissible ambient conditions									
Medium temperature	-25 ... +100 °C [3]								
Operating temperature	-20 ... +80 °C								
Storage temperature	-40 ... +100 °C [3]								
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) 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)
Instrument	
Dimensions	see technical drawings
Weight	approx. 120 g

CE conformity, approvals, certificates

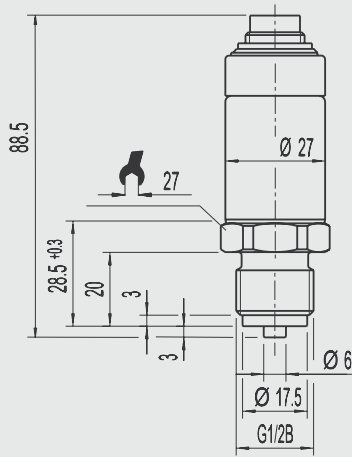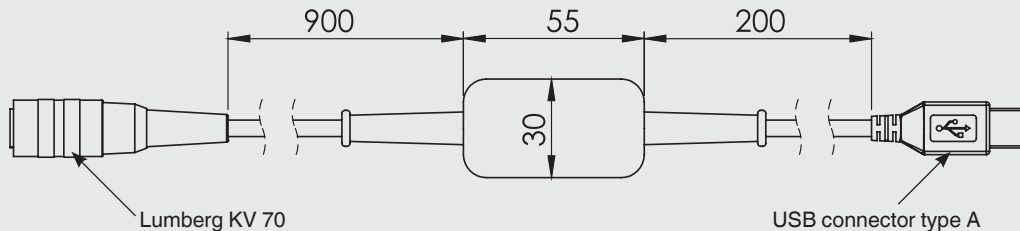| **CE conformity for the model CPT2500 USB pressure transmitter**	
Pressure equipment directive	97/23/EC, module A, pressure accessory
EMC directive	2004/108/EC, EN 61326 Emission (group 1, class B) and interference immunity (commercial applications, laboratories, service centres and workshops)
CE conformity 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 pressure transmitter model CPT2500

USB adapter model CPA2500

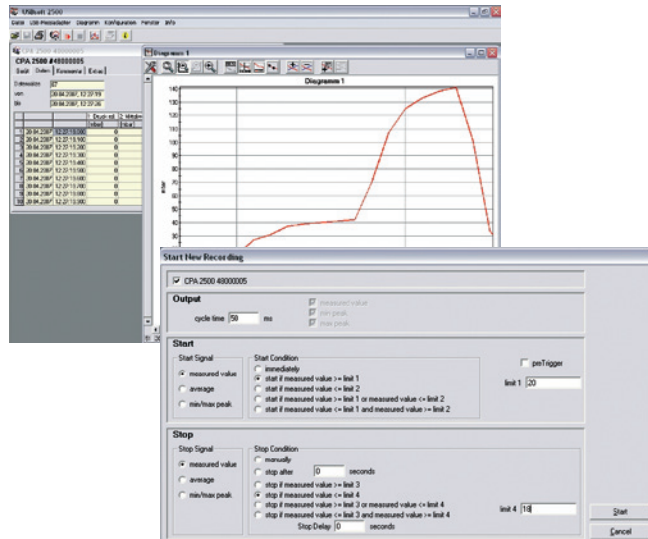Lumberg KV 70

USB connector type A

USBsoft2500 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.

System requirements
- 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
- Mouse
- USB port

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

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

Scope of delivery

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

Options

- DKD/DAkkS certified accuracy of 0.2 % or 0.1 %
- Sensors for oxygen applications

Accessories

Connection adapters
- Various pressure adapters
- "Minimess®" quick-connect process connection system

Pressure generation
- Pneumatic test pumps
- Hydraulic test pumps

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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