

Portable low-pressure controller Model CPC2000



WIKA data sheet CT 27.51

Applications

- Mobile calibration of low-pressure measuring instruments
- Generation of very low positive or negative pressures
- Accurate measurement of small gauge or differential pressures

Special features

- Pressure ranges: 1 mbar up to 1000 mbar
- Accuracy: up to 0.1% FS
- Integrated, automatic pressure generation
- Portable; no external power supply required
- User-friendly operation



Portable low-pressure controller model CPC2000

Description

Application

The main applications for this instrument are within the heating, ventilation, air-conditioning, filtration, clean-room, and medical industries, either as high-accuracy, precise pressure measuring instruments or for calibration.

Functionality

The CPC2000 is a mains or battery powered pressure controller with automatic, internal pressure generation and pressure reference. The pressure supply comes from an integrated, electric pump, which provides both positive and negative pressure respectively to the two hose connectors. Each time the instrument is powered up, an automatic zero-point adjustment is carried out, so that subsequent measurements are not affected by zero drift.

Each subsequent calibration needs only the minimum of setting up. First, using the MENU key, one of the stored pressure units and adjustable the pressure step size between 0 ... 50 % is selected.

Then, once the end value has been entered in the control mode, the pressure can be easily increased or decreased by the defined pressure step size using the navigation keys. To check whether the calibration assembly and/or the test item has a leak, the LEAK key can be used. With this, the pressure is locked in the test assembly and any subsequent decrease in pressure which occurs is measured and indicated along with the decay time.

Digital interface

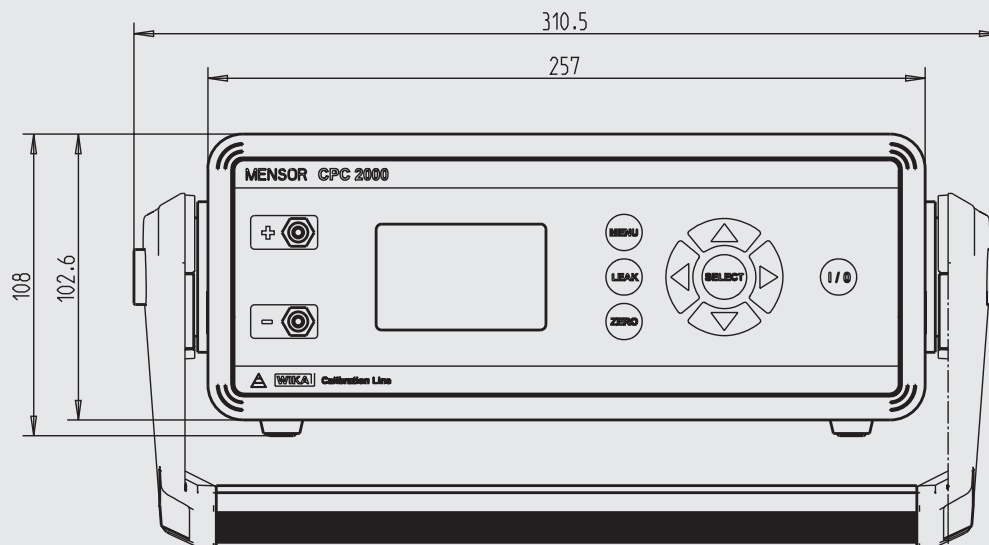
The equipment has an USB and RS-232 interface, enabling communication and data exchange with a PC.

Calibration certificate

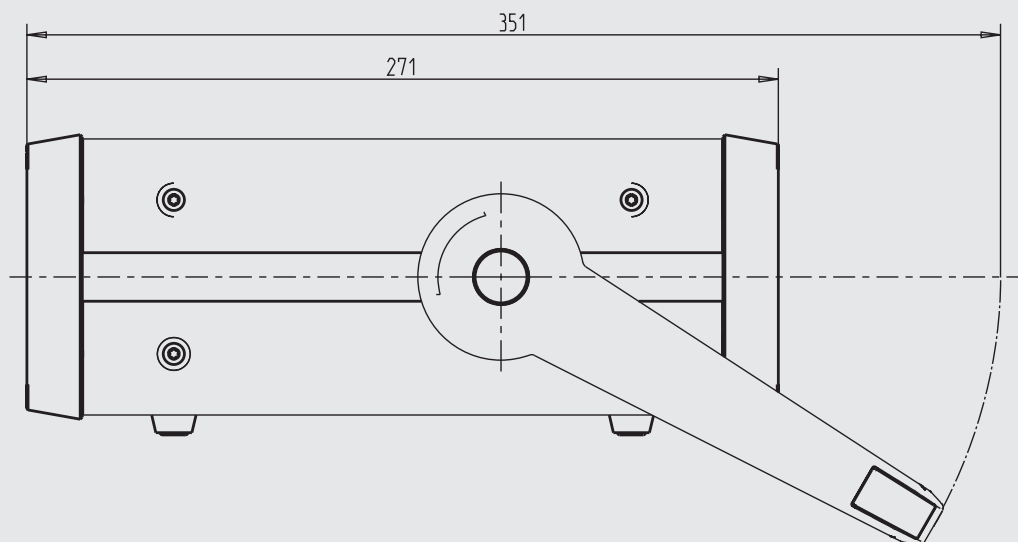
The accuracy of the instrument is certified by a works calibration certificate. If required, a DKD/DAkkS calibration certificate, from our own DKD/DAkkS laboratory, can also be provided for the instrument.

Dimension in mm

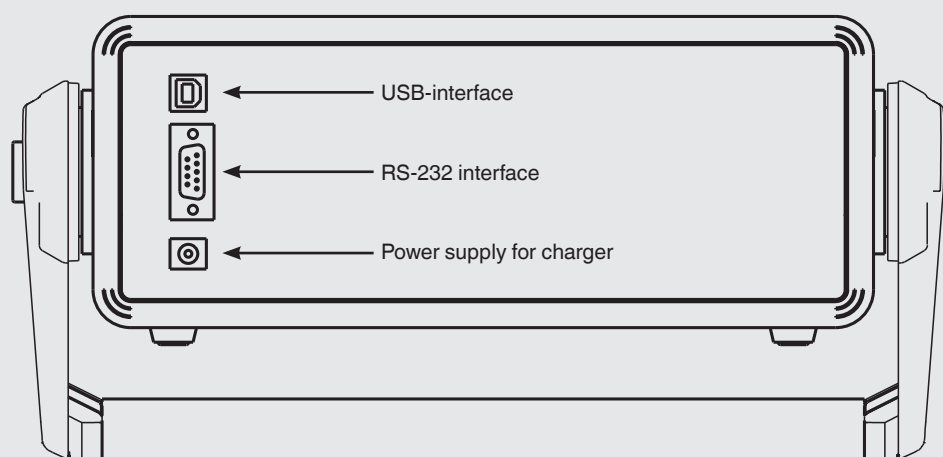
Front view



Side view



Electric connections on the rear



Specifications

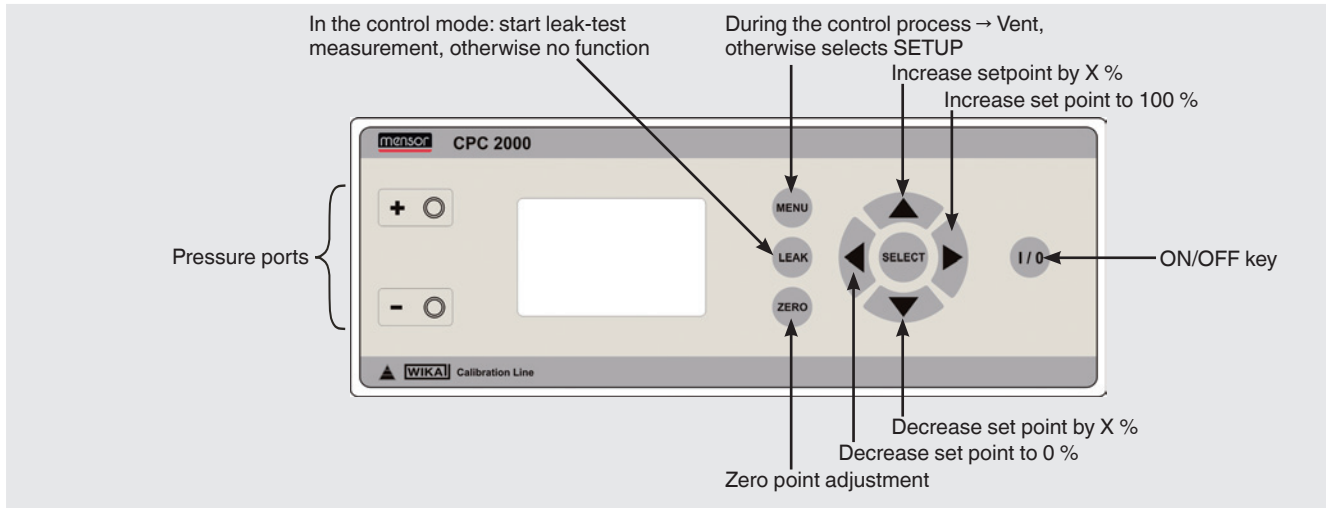
Model CPC2000

Measuring range	mbar	1	10	100	1000
Accuracy	% FS	0.3	0.1	0.1	0.1
Pressure type		positive or negative gauge pressure and/or differential pressure			
Unit		Pa, kPa, hPa, bar, mbar, psi, inH ₂ O, inHg, mmHg, Torr			
Languages		German, English			
Zero point adjustment		automatically (in definable time gaps) manual (ZERO key)			
Control-step size		0 ... 50 % individual adjustable or 100 %			
Control speed	sec.	approx. 5 (depends on the test volume)			
Pressure connections	mm	6.6 x 11 (tube diameter d = 6 mm)			
Material of wetted parts		Ni, Al, CuBe, PU			
Instrument version		bench top with handle			
Display		lighted multiline graphic display			
Resolution	digits	5			
Response time	sec.	1			
Keypad		membrane keypad			
Pressure generation		internal, electric pump			
Digital interface		RS-232 and USB			
Power supply	DC	24 V, 1 A			
Power consumption	VA	24			
Battery type		Li-Ion-cells			
Battery running time	h	approx. 8			
Ingress protection		IP 20			
Permissible					
■ Media		ambient air, non-aggressive and corrosive gases			
■ Operating temperature	°C	10 ... 40			
■ Storage temperature	°C	-10 ... +70			
■ Humidity (relativ)	%	30 ... 80			
Weight	Kg	4.6			
Dimension (W x D x H)	mm	102.6 x 257 x 271 without handle			
CE-Mark		certificate of conformity			
Calibration*		incl. 3.1 calibration report per DIN EN 10204			

* Calibrated, in horizontal position.

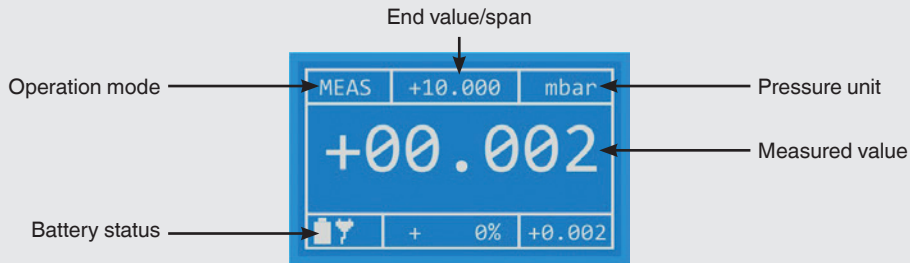
Keypad and display

1.) Keypad description



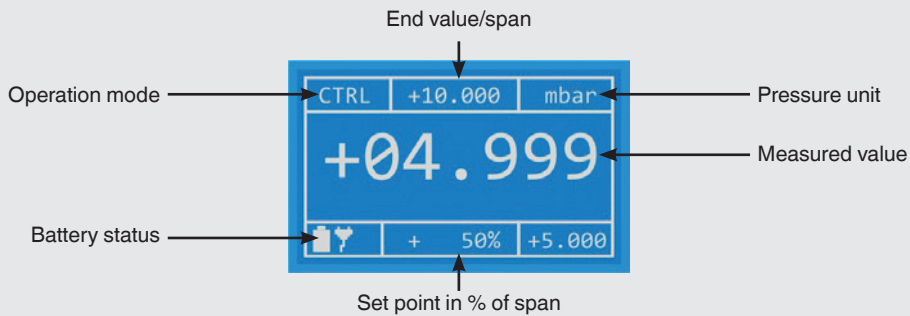
2.) Possible modes and display screens

Measure



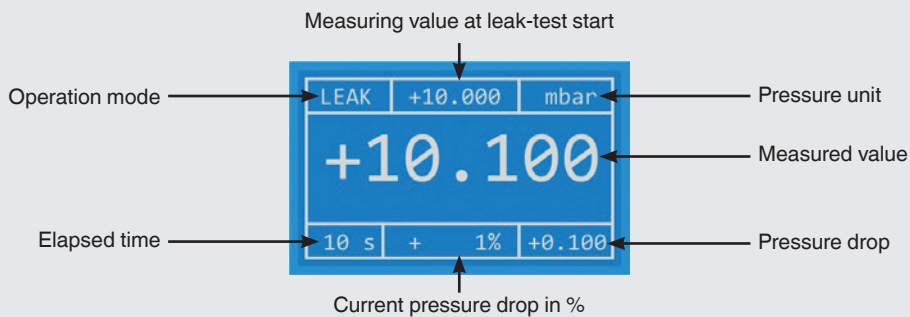
In measuring mode the pressure at the pressure ports is measured precisely.

Control



In control mode very accurate pressures are supplied to the pressure ports. The set value is altered (in selectable pressure step size) through the navigation keys (upwards/downwards).

Leak-test



In test mode the pressure drop/time in the connected test assembly is determined.

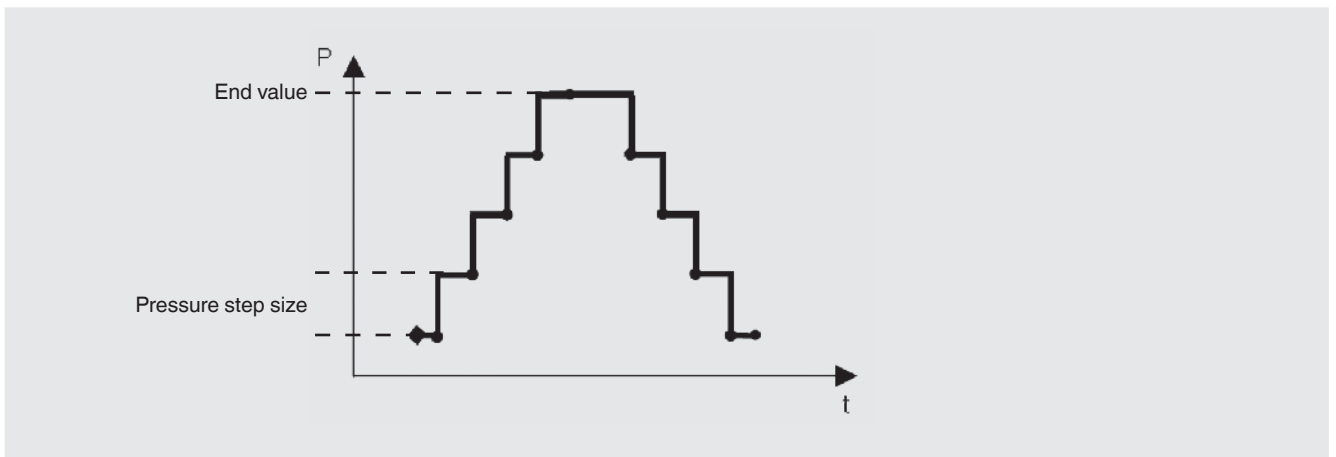
SETUP and calibration procedure

I) General configuration via SETUP menu

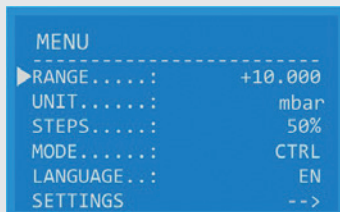
SETUP menu items

- Select **measuring range**
- Select **pressure unit** (Pa, kPa, hPa, bar, mbar, psi, inH₂O, inHg, mmHg, Torr)
- **Pressure step size** free selectable between 0 ... 50 % or 100 %
- Select the **operation mode** of the instrument (MEAS, CTRL, AUTO)
- Choose **languages** (EN, DE)
- General **settings** of the controller (zero, digital interface, display, auto-mode, info)

II) Calibration cycle example



1. Defining the calibration cycle end value (Span)



To configure the end value and step size:

Select the digit via - keys

Change the digit via / - keys

2. Go back to the main screen and run through the calibration cycle in the defined pressure step size (x %)



To change set value by x%:

Change pressure in % via / - keys

Change pressure to 100 % via - key

Change pressure back to 0 % via - key

Directly after changing the set value by (a step size) of x %, using the navigation keys, the controller starts to control the new pressure.

Scope of supply

- Portable low-pressure controller CPC2000
- Charger
- Operating instruction in English and German language
- 3.1 calibration report per DIN EN 10204

Options

- DKD/DAkkS calibration certificate

Accessories

- Interface cable RS-232 or USB
- Rugged carrying case

Products and services within our calibration technology program

- DKD/DAkkS calibration services for pressure
- Repair of calibration units of all makes
- Portable pressure measuring devices for test and calibration tasks
- Precision pressure measuring units and pressure controllers
- Primary standards for pressure
- Testing technology system solutions
- DKD/DAkkS calibration services for temperature
- Portable measuring devices and calibrators
- Dry well temperature calibrators
- Calibration baths and furnaces
- Precision thermometers
- Primary standards for temperature
- Consulting and seminars

The specifications given in this document represent the state of engineering at the time of publishing. We reserve the right to make modifications to the specifications and materials.



WIKAI Alexander Wiegand SE & Co. KG
201 Barnes Drive
San Marcos, Texas 78666
Phone (512) 396-4200
Fax (512) 396-1820
E-mail sales@mentor.com
www.mentor.com