testo 510

Bedienungsanleitung	de
Instruction manual	en
Mode d'emploi	fr
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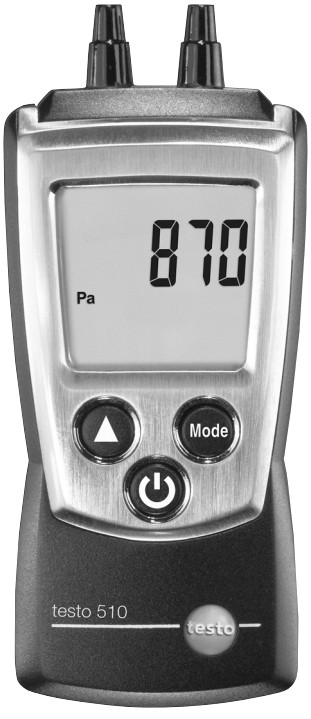

Short manual testo 510

① Protection cap: Park position
② Differential pressure sensor nipple connection
③ Display
④ Control keys
⑤ Battery compartment, holding magnets (on rear)

en

Basic settings

Instrument off >press and hold ⏻ 2s > select with ▲ (▲), confirm with Mode (↵): Unit of pressure/velocity: **hPa, mbar, Pa, mmH2O, mmHg, psi, inH2O, inHG, m/s, fpm** > Density of the medium (**Density**) > Auto off function: **OFF**, **ON**

Switching the instrument on

Press ⏻.

Switching the display light on (for 10s)

Instrument on > press ⏻

Select display mode

Instrument on > select with Mode:
Current reading > **Hold**: Readings are held > **Max**: Maximum values > **Min**: Minimum values > **Hold Avg**: Timed mean value calculation, see below

Timed mean value calculation for flow

Press Mode several times, until **Hold** and **Avg** appear > Hold Mode down until **----** appears > Releasing Mode starts mean value calculation, the current readings are displayed > End measurement: press Mode, the mean value is displayed.

Switching the instrument off:

Instrument on >press and hold ⏻ 2s.

Safety and the environment

About this document

- Please read this documentation through carefully and familiarise yourself with the product before putting it to use. Keep this document to hand so that you can refer to it when necessary. Hand this documentation on to any subsequent users of the product.
- Pay particular attention to information emphasised by the following symbols:

  Important.

Avoid personal injury/damage to equipment

- Only operate the measuring instrument properly, for its intended purpose and within the parameters specified in the technical data. Do not use force.
- Never store the product together with solvents, acids or other aggressive substances.
- Only carry out the maintenance and repair work that is described in the documentation. Follow the prescribed steps when doing so. Use only OEM spare parts from Testo.

Strong magnets. **Damage to other instruments!**

- Keep a safe distance from products which could be damaged by magnetism (e.g. monitors, computers, pacemakers, credit cards).

Protecting the environment

- Take faulty rechargeable batteries as well as spent batteries to the collection points provided for them.
- Send the product back to Testo at the end of its useful life. We will ensure that it is disposed of in an environmentally friendly manner.

Specifications

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Functions and use

The testo 510 is a differential pressure measuring instrument. It is normally used to measure small differences in pressure (e.g. to check filter permeability), gas flow pressure measurement, fine draught measurement as well as flow velocity measurement with a Pitot tube.

Technical data

Measurement data

- Sensor:
  Differential pressure sensor
- Parameters:
  Pa, hPa, mbar, mmH_2O, mmHg, inHG, inH_2O, psi, m/s, fpm
- Measuring ranges:
  0...100 hPa, 0...40.15 inH_2O
- Resolutions:
  0.01 hPa, 0.01 inH_2O
- Accuracies
  (Nominal temperatue 22 °C, ±1 Digit):
  ±0.03 hPa (0...0.30 hPa),
  ±0.05 hPa (0.31...1.00 hPa),
  ±(0.1 hPa+1.5 % of reading)
  (rest of range),
  ±0.01 inH_2O (0...0.12 inH_2O),
  ±0.02 inH_2O (0.13...0.40 inH_2O),
  ±(0.04 inH_2O +1.5 % of reading)
  (rest of range)
- Measuring rate:
  0.5 s

Further instrument data

- Protection class: IP40
- Pitot-factor: 1
- Ambient conditions:
  0...50 °C, 32...122 °F
- Storage/transport conditions:
  -40...70 °C, -40...158 °F
- Voltage supply:
  2x 1.5 V type AAA
- Battery life:
  50 h (without display light)
- Dimensions:
  119x46x25mm / 4.7x1.8x1.0 in (inc. protection cap)
- Weight: 90 g / 3.2 oz (inc. batteries and protection cap)

Directives, standards and tests

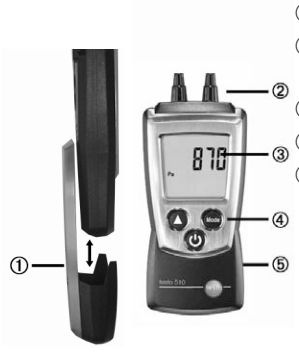
- EC Directive: 2004/108/EEC

Warranty

- Duration: 2 years
- Warranty conditions: see guarantee card

Product description

At a glance



① Protection cap: Park position
② Differential pressure sensor nipple connection
③ Display
④ Control keys
⑤ Battery compartment, holding magnets (on rear)

First steps

➢ Inserting batteries:

1 To open the battery compartment, push the battery cover down.
2 Insert batteries (2x 1.5 V type AAA). Observe the polarity!
3 To close the battery compartment, push the battery cover back on.

➢ Basic settings (configuration mode):

Adjustable functions

- Unit of pressure/velocity: **hPa, mbar, Pa, mmH2O, mmHg, psi, inH2O, inHG, m/s, fpm**
- Only if a unit of velocity is selected:
  Density of the medium (**Density**): Adjust flashing numbers with ▲, change to the next number with Mode.
- Auto off function: **OFF**, **ON** (instrument switches off automatically if no key is pressed for 10 minutes)

1 When switching the instrument on, press and hold ⏻ until ▲ and ↵ appear on the display (configuration mode).
  - The adjustable function is displayed. The current setting flashes.
2 Press ▲ (▲) several times until the desired setting flashes.
3 Press Mode (↵) to confirm the input.
4 Repeat steps **2** and **3** for all functions.
  - The instrument changes to measuring mode.

Using the product

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For velocity to be measured, the unit of density and density value must be set correctly, see chapter 'First steps', section 'Basic settings (configuration mode)'.

➢ Switching the instrument on:

› Press ⏻.
- Measuring mode is opened.

➢ Switching the display light on:

✓ The instrument is switched on.

› Press ⏻.
- The display light goes out automatically if no key is pressed for 10 seconds.

➢ Zeroing the measuring instrument:

The measurement values can be falsified by a change in the position of the measuring instrument. After zeroing, the position of the measuring instrument must not be changed. Carry out zeroing before every measurement in order to compensate faulty positioning or long-term zero-point drift. Zeroing is only possible in a range of 0...25% of the measuring range.

The instrument can only be zeroed in the range up to 10 hPa.

› Press ▲.
- Zeroing takes place.

➢ Changing the display view:

Adjustable views

· Current reading
· **Hold**: Readings are held.
· **Max**: Maximum values since the instrument was last switched on or last reset.
· **Min**: Minimum values since the instrument was last switched on or last reset.
· **Hold Avg**: Timed mean value calculation, see below.

› Press Mode several times until the desired view appears.

➢ Timed mean value calculation for flow:

Function only available when unit m/s or fpm is set.

1 Press Mode several times, until **Hold** and **Avg** appear in the display. The last result of mean value calculation is displayed.
   - If mean value calculation was carried out since the last time the instrument was switched on, the last result is displayed.

2 Hold Mode down until **----** flashes. Releasing Mode starts mean value calculation automatically, the current readings are displayed.

3 End measurement: press Mode. The mean value is displayed.

› For further mean value calculation: hold down Mode.

4 End mean value calculation: press Mode briefly.

➢ Resetting Max/Min values:

1 Press Mode several times until the desired view appears.

2 Press Mode and hold until **----** appears.

3 Repeat steps **1** and **2** for all values that are to be reset.

➢ Switching the instrument off:

› Press ⏻ and hold until the display goes out.

Maintaining the product

➢ Changing batteries:

1 To open the battery compartment, push the battery cover down.

2 Remove used batteries and insert new batteries (2x 1.5 V type AAA). Observe the polarity!

3 To close the battery compartment, push the battery cover back on.

➢ Cleaning the housing:

› Clean the housing with a moist cloth (soap suds) if it is dirty. Do not use aggressive cleaning agents or solvents!