

# Data logger

## Pressure, temperature and humidity

testo 176 P1

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High level of data security

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Internal absolute pressure sensor and connection possibility  
for two external temperature/humidity probes

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Parallel temperature/humidity measurement at two sites

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Measurement data memory 2 million measurement values

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Up to 8 years' battery life

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Data transfer via USB cable or SD card

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hPa

°C

%RH

td

g/m<sup>3</sup>

inch  
H<sub>2</sub>O



IP54

When ambient conditions need to be documented extremely accurately and securely, for example in a laboratory, the testo 176 P1 is the right data logger. It has an internal absolute pressure sensor and connection possibilities for two external temperature/humidity probes.

An integrated dewpoint calculation makes it universally applicable. The free ComSoft Basic software allows fast programming and easy data analysis.

## Technical data / Accessories

### testo 176 P1

testo 176 P1, 5-channel pressure, temperature and humidity data logger with internal sensor (absolute pressure) and external sensor connections (NTC/capacitive humidity sensor) incl. wall holder, lock, battery and calibration protocol

Part no. 0572 1767



#### General technical data

|                       |                                                                             |
|-----------------------|-----------------------------------------------------------------------------|
| Channels              | 1 x internal, 2 probes external, 4 external channels (temperature/humidity) |
| Battery type          | 1 x Lithium (TL-5903)                                                       |
| Battery life          | 8 years (15 min. measuring cycle, +25 °C)                                   |
| Operating temperature | -20 to +70 °C                                                               |
| Storage temperature   | -40 to +85 °C                                                               |
| Dimensions            | 103 x 63 x 33 mm                                                            |
| Weight                | 230 g                                                                       |
| Protection class      | IP54                                                                        |
| Measuring rate        | 1 s to 24 h (freely selectable, for online measurement 2 s to 24 h)         |
| Memory                | 2 mio. measurement values                                                   |
| Interface             | Mini USB, SD card slot                                                      |

#### Sensor types

|                      | NTC                                                  | Testo humid. sensor, cap.   | Absolute pressure sensor |
|----------------------|------------------------------------------------------|-----------------------------|--------------------------|
| Measuring range      | -20 to +70 °C                                        | 0 to 100 %RH*               | 600 to 1100 mbar         |
| Accuracy<br>±1 digit | ±0.2 °C (-20 to +70 °C)<br>±0.4 °C (remaining range) | dependent on probe selected | ±3 mbar (0 to +50 °C)    |
| Resolution           | 0.1 °C                                               | 0.1 %RH                     | 0.1 mbar                 |

\* Not for condensing atmospheres. For continuous applications in high humidity (>80 %RH at ≤30 °C for >12 h, >60 %RH at >30 °C for >12 h), please contact us via our website.



Lateral connection of Mini USB cable and SD card



Probe connection at lower end of housing for two temperature/humidity probes



Large, clear display for showing measurement values

## Accessories

| Accessories for measuring instrument                                                                                                                                                                                                | Part no.  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--|
| Mobile printer for data loggers testo 175/176/184                                                                                                                                                                                   | 0572 0576 |  |
| Wall holder (black) for testo 176                                                                                                                                                                                                   | 0554 1703 |  |
| Cable for connecting the data loggers testo 175 and testo 176 to the PC, Mini-USB to USB                                                                                                                                            | 0449 0047 |  |
| SD card - for collecting the measurement data from the data loggers testo 175 and testo 176; 2 GB; application range to -20 °C                                                                                                      | 0554 8803 |  |
| Battery for testo 176 -1 x TL-5903 AA cell                                                                                                                                                                                          | 0515 1760 |  |
| ComSoft Basic, Basic software for programming and readout of Testo data loggers; graphic and tabular measurement value presentation as well as export function (free download at <a href="http://www.testo.com">www.testo.com</a> ) | 0572 0580 |  |
| ComSoft Professional, Pro software incl. data archiving                                                                                                                                                                             | 0554 1704 |  |
| ComSoft CFR 21 Part 11, Software for requirements according to CFR 21 Part 11 for Testo data loggers                                                                                                                                | 0554 1705 |  |
| ISO calibration certificate temperature<br>temperature probe; calibration points -18 °C; 0 °C; +40 °C per channel/instrument                                                                                                        | 0520 0153 |  |
| DAkkS calibration certificate temperature<br>temp. data logger; cal. points -20°C; 0°C; +60°C; per channel/instrument                                                                                                               | 0520 0261 |  |
| ISO calibration certificate humidity<br>calibration points 11.3 %RH and 75.3 %RH at +25 °C/+77 °F; per channel/instrument                                                                                                           | 0520 0076 |  |
| DAkkS calibration certificate humidity<br>humidity probe; cal. points 11.3 %RH and 75.3 %RH at +25 °C; per channel/instrument                                                                                                       | 0520 0246 |  |
| ISO calibration certificate pressure<br>accuracy 0.1 to 0.6 (% of fsv), 5 points distributed over meas. range                                                                                                                       | 0520 0025 |  |
| DAkkS calibration certificate/pressure<br>diff. and pos. pressure; 11 measuring points distributed over the instr. meas. range                                                                                                      | 0520 0215 |  |

## Probes

| Probe type                                              | Dimensions<br>Probe shaft/probe shaft tip                                           | Measuring<br>range            | Accuracy                                                              | Part no.  |
|---------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------|-----------|
| <b>Humidity/temperature probes</b>                      |                                                                                     |                               |                                                                       |           |
| Humidity/temperature probe 12 mm,<br>cable length 1.2 m |  | -20 to +70 °C<br>0 to 100 %RH | ±0.3 °C<br>±2 %RH at +25 °C (2 to 98 %RH)<br>±0.03 %RH/K<br>± 1 digit | 0572 6172 |
| Humidity/temperature probe 4 mm                         |  | 0 to +40 °C<br>0 to 100 %RH   | ±0.3 °C<br>±2 %RH at +25 °C (2 to 98 %RH)<br>±0.08 %RH/K<br>± 1 digit | 0572 6174 |
| Plug-in humidity/temperature<br>probe 12 mm             |  | -30 to +50 °C<br>0 to 100 %RH | ±0.3 °C<br>±2 %RH at +25 °C (2 to 98 %RH)                             | 0572 2151 |
| Wall surface temperature probe                          |  | -50 to +80 °C                 | ±0.5 °C (-40 to -25 °C)<br>±0.2 °C (-25 to +80 °C)                    | 0628 7507 |

