Be sure. testo

# Data logger Temperature

## testo 176 T1 / testo 176 T2

- High data security
- Highly accurate measurement with Pt100 sensor
- Measurement data memory for 2 million measurement values
- Up to 8 years' battery life
- Data transfer via USB cable or SD card
- In a metal housing and with an internal sensor for more robustness (testo 176 T1) or with a large display and two external sensor connections for a clearer overview (testo 176 T2)

testo 176 EN 12830 ACCORDING TO · HACCP INTERNATIONAL FOOD SAFETY PROGRAMMEN CERTIFICATION · IP68 · IP65

When highly accurate temperature control under extreme conditions is required, the testo 176 T1 is the right choice. In the interior, a precise Pt100 sensor measures the temperature. The testo 176 T1 is excellently suited to the recording of temperatures over long periods. The metal housing is resistant to extreme mechanical influences and hard impacts, making the data logger suitable for use in industrial surroundings. The free ComSoft Basic software allows fast programming of the data logger and easy data analysis.

The testo 176 T2, with its two inputs for external Pt100 probes, is the right data logger for simultaneous measurement at two measurement sites. A reference class data logger which can also be used to calibrate other data loggers.
Like all Testo data loggers for use in the food sector, the testo 176 T1 and testo 176 T2 are tested by the ATP testing section of the TÜV Süd according to DIN EN 12830.

# Technical data

## testo 176 T1

testo 176 T1, 1-channel temperature logger in metal housing with highly accurate internal sensor (Pt100) incl. wall holder, lock, battery and calibration protocol

Part no. 0572 1761

## testo 176 T2

testo 176 T2, 2-channel temperature logger with connections for highly accurate external sensor (Pt100) incl. wall holder, lock, battery and calibration protocol

Part no. 0572 1762

**General technical data**

| | |
|---|---|
| Battery type | 1 x Lithium (TL-5903) |
| Battery life | 8 years (15 min. meas. rate, +25 °C) |
| Operating temperature | -35 to +70 °C |
| Storage temperature | -40 to +85 °C |
| Dimensions | 103 x 63 x 33 mm |
| Weight | approx. 410 g (testo 176 T1)<br>approx. 220 g (testo 176 T2) |
| Protection class | IP68 (testo 176 T1)<br>IP65 (testo 176 T2) |
| Measuring rate | 1 s to 24 h (freely selectable,<br>for online measurement 2 s to 24 h) |
| Memory | 2 mio. measurement values |
| Interface | Mini USB, SD card slot |

| | testo 176 T1 | testo 176 T2 |
|---|---|---|
| **Sensor type** | **Pt100 class A** | **Pt100 class A** |
| Channels | 1 x internal | 2 x external |
| Measuring range | -35 to +70 °C | -100 to +400 °C |
| Accuracy Instrument<br>±1 digit | ±0.4 °C (-35 to +70 °C) | ±0.2 °C (-100 to +200 °C)<br>±0.3 °C (+200.1 to +400 °C) |
| Resolution | 0.01 °C | 0.01 °C |

Lateral connection of Mini USB cable and SD card

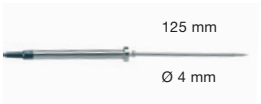
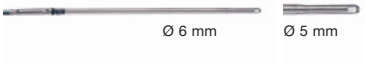
Probe connection at lower end of housing for two Pt100 probes (testo 176 T2 only)

Large, clear display for showing measurement values (testo 176 T2 only)

# 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 (if free download with registration not desired) | 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 | |

# Probes

| Probe type | Dimensions<br>Probe shaft/probe shaft tip | Measuring range | Accuracy | $t_{99}$ | Part no. |
|---|---|---|---|---|---|
| **Pt100 probes** | | | | | |
| Robust, waterproof Pt100 immersion/penetration probe, Fixed cable | 114 mm, Ø 5 mm; 50 mm, Ø 3.7 mm | -50 to +400 °C | Class A (-50 to +300 °C), Class B (remaining range) [1] | 12 s | 0609 1273 |
| Robust, Pt100 stainless steel food probe (IP65), Fixed cable |  125 mm, Ø 4 mm; 15 mm, Ø 3 mm | -50 to +400 °C | Class A (-50 to +300 °C), Class B (remaining range) [1] | 10 s | 0609 2272 |
| Penetration probe Pt100 with ribbon cable, cable length 2 m, IP 54, Fixed cable | 60 mm, Ø 5 mm; 30 mm, Ø 3.6 mm | -85 to +150 °C | Class A | 35 s | 0572 7001 |
| Laboratory probe Pt100, glass-coated, exchangeable glass pipe (Duran 50), resistant to corrosive substances, Fixed cable |  Ø 6 mm; 30 mm, Ø 5 mm | -50 to +400 °C | Class A (-50 to +300 °C), Class B (remaining range) [1] | 45 s<br>12 s Without protective glass | 0609 7072 |
| Efficient, robust air probe, Pt100, Fixed cable | 114 mm, Ø 5 mm; 50 mm, Ø 4 mm | -50 to +400 °C | Class A (-50 to +300 °C), Class B (remaining range) [1] | 70 s | 0609 1773 |

1) According to standard 60751, the accuracies of Class A and B refer to -200 to +600 °C (Pt100)

Be sure. testo

0981 3854/msp/I/01.2018

Subject to change without notice.

www.testo.com

# TRAINING SERVICES

**PAT TESTING TRAINING**

**THERMAL IMAGING TRAINING**

**CABLE AVOIDANCE TRAINING**

**SAFE ISOLATION TRAINING**

**PRODUCT TRAINING**
**Maximise return on investment**

City & Guilds
courses available

# REPAIR & CALIBRATION

Approved Service Centre · ANTON APPROVED SERVICE CENTRE · testo Testo Approved Service Centre · Megger APPROVED SERVICE CENTRE · SEAWARD APPROVED SERVICE CENTRE

**MFT** CALIBRATION

**PAT TESTER** CALIBRATION

**GAS ANALYSER** CALIBRATION

**THERMAL CAMERA** CALIBRATION

**TORQUE WRENCH** CALIBRATION

**HIGH VOLTAGE** CAGE CAPABILITIES