

Data logger Temperature

testo 176 T3 / testo 176 T4

High data security

Thermocouples Type T, Type K, Type J connectable

Simultaneous measurement at four sites

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 for more robustness (testo 176 T3) or with a large display for a clearer overview (testo 176 T4)



It is often important to check whether the prescribed temperature values in a process are really being adhered to. The testo 176 T3 in its robust metal housing is the right data logger for measuring and recording temperatures simultaneously at four different sites in industrial processes. Thanks to the broad selection of connectable thermocouple probes, the requirements of the most widely differing applications can be fulfilled.

Users of the testo 176 T4 can additionally count on a clear display which provides information on measurement values and limit value violations on site. This allows the user to obtain a quick overview without having to read out the logger on a PC. The free ComSoft Basic software allows fast programming of the data logger and easy data analysis.

Technical data / Accessories

testo 176 T3

testo 176 T3, 4-channel temperature data logger in metal housing with external sensor connection (TC Type T, Type K and Type J) incl. wall holder, lock, batteries and calibration protocol

Part no. 0572 1763



General technical data

| | |
|-----------------------|-------------------------------|
| Channels | 4 x external |
| Battery type | 1 x Lithium (TL-5903) |
| Battery life | 8 years at 15 min. meas. rate |
| Operating temperature | -20 to +70 °C |
| Storage temperature | -40 to +85 °C |
| Dimensions | 103 x 63 x 33 mm |
| Protection class | IP65 |
| Measuring rate | 1 s - 24 h |
| Memory | 2 mio. measurement values |

testo 176 T4

testo 176 T4, 4-channel temperature data logger with external sensor connections (TC Type T, Type K and Type J) incl. wall holder, lock, batteries and calibration protocol

Part no. 0572 1764



Lateral connection of Mini USB cable and SD card



Probe connection at lower end of housing for four thermocouple probes (Type T, K and J)






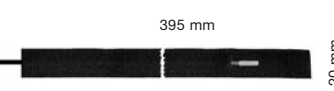
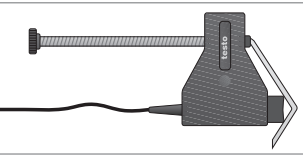

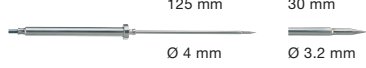
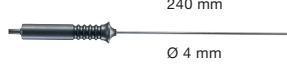


Sensor types

| | Type T (Cu-CuNi) | Type K (NiCr-Ni) | Type J (Fe-CuNi) |
|----------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Measuring range | -200 to +400 °C | -195 to +1000 °C | -100 to +750 °C |
| Accuracy ±1 digit | ±1 % of mv (-200 to -100.1 °C) ±0.3 °C (-100 to +70 °C) ±0.5 % of mv (+70.1 to +1000 °C) | ±1 % of mv (-200 to -100.1 °C) ±0.3 °C (-100 to +70 °C) ±0.5 % of mv (+70.1 to +1000 °C) | ±1 % of mv (-200 to -100.1 °C) ±0.3 °C (-100 to +70 °C) ±0.5 % of mv (+70.1 to +1000 °C) |
| Resolution | 0.1 °C | 0.1 °C | 0.1 °C |

Accessories


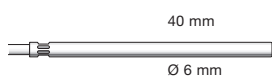
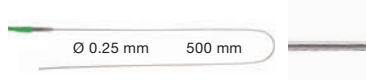
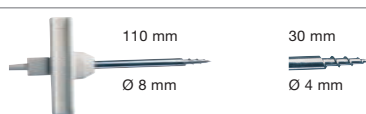
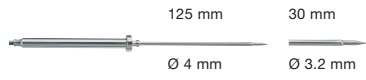
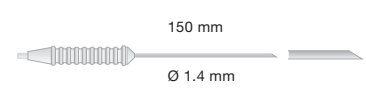

| | Part no. |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Wall holder (black) for testo 176 | 0554 1703 |
| Cable for 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 probe; calibration points -18°C; 0°C; +40°C per channel/instrument | 0520 0153 |
| DAkkS calibration certificate temperature probe; calibration points -20°C; 0°C; +60°C; per channel/instrument | 0520 0261 |

Probes

| Probe type | Dimensions Probe shaft/probe shaft tip | Measuring range | Accuracy | t ₉₉ | Part no. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------------|-----------------|-----------|
| Probes Type K | | | | | |
| Immersion tip, flexible, TC Type K |  Ø 1.5 mm 500 mm | -200 to +1000 °C | Class 1 ¹⁾ | 5 s | 0602 5792 |
| Immersion tip, flexible, TC Type K |  Ø 1.5 mm 500 mm | -200 to +40 °C | Class 3 ¹⁾ | 5 s | 0602 5793 |
| Immersion measurement tip, flexible, for measurements in air/exhaust gases (not suitable for measurements in smelters), TC Type K |  Ø 3 mm 1000 mm | -200 to +1300 °C | Class 1 ¹⁾ | 4 s | 0602 5693 |
| Magnetic probe, adhesive force approx. 20 N, with magnets, for measurements on metal surfaces, TC Type K, Fixed cable |  35 mm Ø 20 mm | -50 to +170 °C | Class 2 ¹⁾ | 150 s | 0602 4792 |
| Magnetic probe, adhesive force approx. 10 N, with magnets, for higher temp., for measurements on metal surfaces, TC Type K, Fixed cable |  75 mm Ø 21 mm | -50 to +400 °C | Class 2 ¹⁾ | | 0602 4892 |
| Pipe wrap probe with velcro strip; for temperature measurement on pipes with diameter up to max. 120 mm; Tmax. +120 °C; TC Type K, Fixed cable 1.5 m |  395 mm 20 mm | -50 to +120 °C | Class 1 ¹⁾ | 90 s | 0628 0020 |
| Pipe wrap probe for pipe diameter 5 to 65 mm, with exchangeable measuring head. Meas. range short-term up to +280°C, TC Type K, Fixed cable 1.2 m |  | -60 to +130 °C | Class 2 ¹⁾ | 5 s | 0602 4592 |
| Clamp probe for measurements on pipes, pipe diameter 15 to 25 mm (max. 1"), meas. range short-term up to +130°C, TC Type K, Fixed cable |  | -50 to +100 °C | Class 2 ¹⁾ | 5 s | 0602 4692 |
| Waterproof food probe made of stainless steel (IP65), TC Type K, Fixed cable |  125 mm 30 mm Ø 4 mm Ø 3.2 mm | -60 to +400 °C | Class 2 ¹⁾ | 7 s | 0602 2292 |
| Waterproof robust immersion/penetration probe with metal protection hose Tmax +230°C, e.g. for monitoring temp. in cooking oil, T/C Type K, Fixed cable |  240 mm Ø 4 mm | -50 to +230 °C | Class 1 ¹⁾ | 15 s | 0628 1292 |
| Thermocouple with TC adapter, flexible, 800 mm long, fibre glass, TC Type K |  800 mm Ø 1.5 mm | -50 to +400 °C | Class 2 ¹⁾ | 5 s | 0602 0644 |
| Thermocouple with TC adapter, flexible, length 1500 mm, fibreglass, TC Type K |  1500 mm Ø 1.5 mm | -50 to +400 °C | Class 2 ¹⁾ | 5 s | 0602 0645 |

1) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K).

Probes

| Probe type | Dimensions Probe shaft/probe shaft tip | Measuring range | Accuracy | t ₉₉ | Part no. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------|-----------------|-----------|
| Probes Type K | | | | | |
| Thermocouple with TC adapter, flexible, 1500 mm long, PTFE, TC Type K |  | -50 to +250 °C | Class 2 ¹⁾ | 5 s | 0602 0646 |
| Stationary probe with stainless steel sleeve, TC Type K, Fixed cable 1.9 m |  | -50 to +205 °C | Class 2 ¹⁾ | 20 s | 0628 7533 |
| Flexible, low-mass immersion measurement tip, ideal for measurements in small volumes such as petri dishes, or for surface measurements (e.g. attached with adhesive tape), TC Type K, 2 m, FEP insulated thermal wire, temperature proof up to 200 °C, oval wire with dimensions: 2.2 mm x 1.4 mm |  | -200 to +1000 °C | Class 1 ¹⁾ | 1 s | 0602 0493 |
| Probes Type T | | | | | |
| Frozen food probe, corkscrew design, T/C Type T, Plug-in cable |  | -50 to +350 °C | ±0.2 °C (-20 to +70 °C) Class 1 (remaining range) ²⁾ | 8 s | 0603 3292 |
| Stainless steel food probe (IP67), with FEP cable to +200 °C, TC Type T, Fixed cable |  | -50 to +350 °C | ±0.2 °C (-20 to +70 °C) Class 1 (remaining range) ²⁾ | 7 s | 0603 3392 |
| Waterproof, super-quick needle probe for measurements without visible penetration hole, T/C Type T, Fixed cable |  | -50 to +250 °C | ±0.2 °C (-20 to +70 °C) Class 1 (remaining range) ²⁾ | 2 s | 0628 0027 |
| Flexible oven probe, Tmax +250 °C, PTFE cable |  | -50 to +250 °C | Class 1 ²⁾ | | 0603 0646 |

1) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K).
 2) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +350 °C (Type T).

0981 3924/msp/A/08.2013

Subject to change without notice.