

# Next Generation!

With the professional  
Testo data loggers,  
a new age begins for you

Logger series  
testo 174



Logger series  
testo 175



Logger series  
testo 176



## The new generation of data loggers – into the future with USB connection and storage card

A high level of user-friendliness and absolute security characterize the new generation of Testo data loggers. With the current range of a total of 13 data loggers, Testo offers the right solution for various applications. In addition to the eleven new instruments from the testo 175 and testo 176 series, it also includes the two mini data loggers testo 174T and testo 174H.

The testo 175 series consists of four compact data loggers for the measurement of temperature and humidity. The testo 176 series contains seven data loggers which are especially suited to applications in demanding surroundings, such as in laboratories. An absolute innovation in this series is the testo 176 P1, with which absolute pressure can be measured and documented, in addition to temperature and humidity.

All new data loggers from the series testo 175 and testo 176 have a USB and an SD card interface, making readout of the data fast and easy. The considerably higher memory capacity and the power supply using conventional batteries are further plus points of the new products. It goes without saying that the proven one-button menu structure, which offers absolute operating convenience, has been retained in the new generation of data loggers.



## Secure and simple – an overview of the new data loggers testo 175 and testo 176:

### Safety

- **Data security** thanks to non-volatile memory – even when the batteries are spent, the data are not lost
- **Password protection** prevents changes by unauthorized persons
- **Anti-theft lock** – with the help of a wall holder, the loggers can be permanently attached and secured against theft with a padlock
- **Robustness** – three data loggers from the testo 176 series have a **metal housing** which offers optimum protection from impact

### User-friendliness

- **Two standard interfaces** (mini USB and SD card) allow easy programming and readout of the loggers via direct connection to the PC – **an additional interface for the readout is not required**
- **Large display** for non-problematic reading of measurement data – even in badly lit rooms, thanks to backlighting at the press of a button
- **Operating comfort** thanks to one-button menu structure – a click on the “Go” button and the recording of the measurement values begins
- **Longer battery life** due to improved energy management – the loggers testo 176 record data without interruption for up to 8 years
- The **large memory** of the loggers testo 176 collects up to 2 million measurement values – the logger needs to be read out considerable less often

# The right logger software for every application

Three software versions are available for programming and reading out the data loggers, as well as for the analysis of the data. Depending on the requirement, Testo offers the right software solution. The **testo ComSoft Basic 5** with new graphic user interface offers all the basic functions of a standard logger software. Independently of where the data loggers are used – the testo ComSoft Basic 5 facilitates the configuration and readout of the instruments as well as the analysis of the data. User-friendliness and intuitive operation are paramount here. Requirements over and above this, such as the correlation of measurement data which have been recorded at different sites, are optimally fulfilled by the **testo ComSoft Professional 4**. The pharmaceutical industry makes very special demands, whose fulfilment is guaranteed by the **testo ComSoft CFR21 Part 11**.



## testo ComSoft Basic 5 – for easy operation and convenient analysis

- Graphic user interface guides the user step-by-step through the individual procedures
- Convenient export functions, e. g. for further processing of the data in Microsoft Excel, or the generation of a PDF which can be made available to other users
- The testo ComSoft Basic 5 offers all the basic functions of a logger software
- **Free download** of the testo ComSoft Basic 5 with mandatory registration

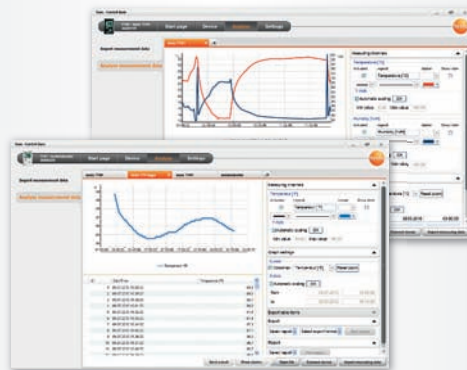


More information:  
[www.testo.com](http://www.testo.com)



CD ComSoft Basic 5, if free,  
registration-mandatory download not  
wanted

Order no.: 0572 0580



## testo ComSoft Professional 4 – for demanding users

- The ComSoft Professional 4 offers analysis and presentation possibilities over and above the basic functions
- Many measurement sites and data loggers can be organized in a clear tree structure, for example

Order no.: 0554 1704

## testo ComSoft CFR 21 Part 11 – specially for the requirements of the pharmaceutical industry

- The ComSoft CFR 21 Part 11 is a validation-capable software, and fulfils all the stipulations of the FDA (Food and Drug Administration) in the framework of a closed system
- Conformity with the CFR guidelines is confirmed by an independent institute

Order no.: 0554 1705



## Logger series testo 174 The small ones...

### testo 174T

1-channel temperature logger with internal sensor (NTC)

- Reliable temperature measurement for the monitoring of cold chains and sensitive products in storage and transport
- Easy readout of the data, and transfer to a PC via Testo USB interface

### testo 174H

2-channel temperature and humidity data logger with internal sensor (NTC/capacitive humidity sensor)

- Low-budget temperature and humidity monitoring for living, work, and storage rooms
- Easy readout of the data, and transfer to a PC via Testo USB interface



#### Technical data

	testo 174T
Sensor	NTC
Channels	1 x internal
Measurement units	°C, °F
Measuring range	-30 to +70 °C
Accuracy ± 1 digit	±0.5 °C (-30 to +70 °C)
Resolution	0.1 °C
Battery life (at +25 °C)	500 days at 15 min. meas. rate
Operating temperature	-30 to +70 °C
Storage temperature	-40 to +70 °C
Dimensions	60 x 38 x 18,5 mm
Battery type	2 x CR 2032 Lithium
Protection class	IP 65
Meas. cycle	1 min - 24 h
Memory	16,000 readings
Software	ComSoft Basic 5 ComSoft Professional 4

#### testo 174T

Order no.: 0572 1560

#### testo 174H

	testo 174H
Sensor	NTC/ capacitive humidity sensor
Channels	2 x internal
Measurement units	°C, °F, %rF, %RH
Measuring range	-20 to +70 °C internal 0 to 100 %RH
Accuracy ± 1 digit	±0.5 °C (-20 to +70 °C) ±3 %RH (2 to 98 %RH) +0.03 %RH/K
Resolution	0.1 °C, 0.1 %RH
Battery life (at +25 °C)	1 year at 15 min. meas. rate
Operating temperature	-20 to +70 °C
Storage temperature	-40 to +70 °C
Dimensions	60 x 38 x 18,5 mm
Battery type	2 x CR 2032 Lithium
Protection class	IP 20
Meas. cycle	1 min - 24 h
Memory	16,000 readings
Software	ComSoft Basic 5 ComSoft Professional 4

#### testo 174H

Order no.: 0572 6560

### testo 175 T1

1-channel temperature logger with internal sensor (NTC)

- Professional temperature monitoring for refrigerated and deep-freeze rooms
- Compact data logger for long-term monitoring of temperature, e. g. during transport of goods

### testo 175 T2

2-channel temperature data logger with internal (NTC), and external sensor connection (NTC)

- Simultaneous monitoring of air and product temperature
- External probe input for easy connection, e. g. of a permitted food probe for measuring the core temperature of the goods

#### testo 175 T1

	testo 175 T1
Sensor	NTC
Channels	1 x internal
Measurement units	°C, °F
Measuring range	-35 to +55 °C internal
Accuracy ± 1 digit	±0.5 °C (-35 to +55 °C)
Resolution	0.1 °C
Battery life (at +25 °C)	3 years at 15 min. meas. rate
Operating temperature	-35 to +55 °C
Storage temperature	-35 to +55 °C
Dimensions	89 x 53 x 27 mm
Battery type	3 x AIMn Type AAA or Energizer
Protection class	IP 65
Meas. cycle	10 sec - 24 h
Memory	1 mio. measurement values
Software	ComSoft Basic 5 ComSoft Professional 4 ComSoft CFR 21 Part 11

#### testo 175 T1

Order no.: 0572 1751

#### testo 175 T2

	testo 175 T2
Sensor	NTC
Channels	1 x internal, 1 x external
Measurement units	°C, °F
Measuring range	-35 to +55 °C internal -40 to +120 °C external
Accuracy ± 1 digit	±0.5 °C (-35 to +55 °C)
Resolution	0.1 °C
Battery life (at +25 °C)	3 years at 15 min. meas. rate
Operating temperature	-35 to +55 °C
Storage temperature	-35 to +55 °C
Dimensions	89 x 53 x 27 mm
Battery type	3 x AIMn Type AAA or Energizer
Protection class	IP 65
Meas. cycle	10 sec - 24 h
Memory	1 mio. measurement values
Software	ComSoft Basic 5 ComSoft Professional 4 ComSoft CFR 21 Part 11

#### testo 175 T2

Order no.: 0572 1752



# Logger series testo 176

## The versatile ones...

### testo 175 T3

2-channel temperature data logger with external sensor connections (TC Type T und Type K)

- Parallel monitoring and recording of two temperature measurement sites
- Easy monitoring and documentation, e. g. of the flow and return temperature of a heating system



### testo 175 H1

2-channel temperature and humidity data logger with external humidity sensor (NTC/capacitive humidity sensor)

- Professional long-term monitoring of temperature and humidity in work and storage rooms
- Fast reaction time thanks to external humidity probe



### testo 176 T1

1-channel temperature logger in metal housing with highly accurate internal sensor (Pt100)

- Highly accurate temperature measurement under extreme conditions
- Robust metal housing protects from mechanical influences such as impact



### testo 176 T2

2-channel temperature logger with connections for highly accurate external sensor (Pt100)

- Highly accurate temperature measurement in the food sector and in laboratories
- Temperature monitoring e. g. in refrigerators with highly accurate Pt100 probes



### testo 176 T3

4-channel temperature data logger in metal housing with external sensor connection (TC Type T, Type K and Type J)

- Parallel temperature measurement at up to four measurement sites using different connectable thermocouple probes for different applications
- Robust metal housing protects from mechanical influences such as impact



### testo 175 T3

TC (Types T and K)
2 x external
°C, °F
-50 to +400 °C (Type T)
-50 to +1000 °C (Type K)
±0.5 °C (-50 to +70 °C)
±0.7 % of mv (+70.1 to +1000 °C)
0.1 °C
3 years
at 15 min. meas. rate
-20 to +55 °C
-20 to +55 °C
89 x 53 x 27 mm
3 x AlMn Type AAA or Energizer
IP 65
10 sec - 24 h
1 mio. measurement values
ComSoft Basic 5
ComSoft Professional 4
ComSoft CFR 21 Part 11

### testo 175 H1

NTC/ capacitive humidity sensor
2 x internal (stump)
°C, °F, %rF, %RH, td, g/m <sup>3</sup>
-20 to +55 °C
-40 to +50 °C <sub>td</sub>
0 to 100 %RH
±2 %RH (2 to 98 %RH)
+0.03 %RH/K
±0.4 °C (-20 to +55 °C)
0.1 °C, 1 %RH
3 years
at 15 min. meas. rate
-20 to +55 °C
-20 to +55 °C
149 x 53 x 27 mm
3 x AlMn Type AAA or Energizer
IP 54
10 sec - 24 h
1 mio. measurement values
ComSoft Basic 5
ComSoft Professional 4
ComSoft CFR 21 Part 11

### testo 176 T1

Pt100 class A
1 x internal
°C, °F
-35 to +70 °C
±0.2 °C (-35 to +70 °C)
0,01 °C
8 years
at 15 min. meas. rate
-35 to +70 °C
-40 to +85 °C
103 x 63 x 33 mm
1 x Lithium (TLH-5903)
IP 68
1 sec - 24 h
2 mio. measurement values
ComSoft Basic 5
ComSoft Professional 4
ComSoft CFR 21 Part 11



### testo 176 T2

Pt100 class A
2 x external
°C, °F
-50 to +400 °C
±0.2 °C (-50 to +200 °C)
±0.3 °C (+200.1 to +400 °C)
0,01 °C
8 years
at 15 min. meas. rate
-35 to +70 °C
-40 to +85 °C
103 x 63 x 33 mm
1 x Lithium (TLH-5903)
IP 65
1 sec - 24 h
2 mio. measurement values
ComSoft Basic 5
ComSoft Professional 4
ComSoft CFR 21 Part 11



### testo 176 T3

TC (Types T , K and J)
4 x external
°C, °F
-200 to +400 °C (Type T)
-195 to +1000 °C (Type K)
-100 to +750 °C (Type J)
±1% of mv (-200 to -100.1 °C)
±0.3 °C (-100 to +70 °C)
±0.5% of mv (+70.1 to +1000 °C)
0.1 °C
8 years
at 15 min. meas. rate
-20 to +70 °C
-40 to +85 °C
103 x 63 x 33 mm
1 x Lithium (TLH-5903)
IP 54
1 sec - 24 h
2 mio. measurement values
ComSoft Basic 5
ComSoft Professional 4
ComSoft CFR 21 Part 11

### testo 175 T3

Order no.: 0572 1753

### testo 175 H1

Order no.: 0572 1754

### testo 176 T1

Order no.: 0572 1761

### testo 176 T2

Order no.: 0572 1762

### testo 176 T3

Order no.: 0572 1763



### testo 176 T4

4-channel temperature data logger with external sensor connections (TC Type T, Type K and Type J)

- Parallel temperature measurement at up to four measurement sites using different connectable thermocouple probes for different applications
- Easy monitoring and documentation, e. g. of the flow and return temperature of an underfloor heating system at up to four measurement sites simultaneously



### testo 176 H1

4-channel temperature and humidity data logger with external sensor connections (NTC/capacitive humidity sensor)

- Parallel temperature and humidity measurement
- Different connectable humidity and temperature probes, e. g. for humidity monitoring in storerooms



### testo 176 H2

4-channel temperature and humidity data logger in metal housing with external sensor connections (NTC/capacitive humidity sensor)

- Parallel temperature and humidity measurement with various connectable humidity and temperature probes for different applications
- Robust metal housing protects from mechanical influences such as impact



### testo 176 P1

5-channel pressure, temperature and humidity data logger with internem sensor (absolute pressure) and external sensor connections (NTC/capacitive humidity sensor)

- Highly accurate and secure documentation of the ambient conditions e. g. in a laboratory
- Internal absolute pressure sensor and connection possibilities for two external humidity probes



#### testo 176 T4

TC (Types T, K and J)
4 x external
°C, °F
-200 to +400 °C (Type T)
-195 to +1000 °C (Type K)
-100 to +750 °C (Type J)
±1% of reading (-200 to 100.1 °C)
±0.3 °C (-100 to +70 °C)
±0.5% of m.v. (+70.1 to +1000 °C)
0.1 °C
8 years
at 15 min. meas. rate
-20 to +70 °C
-40 to +85 °C
103 x 63 x 33 mm
1 x Lithium (TLH-5903)
IP 54
1 sec - 24 h
2 mio. measurement values
ComSoft Basic 5
ComSoft Professional 4
ComSoft CFR 21 Part 11

#### testo 176 T4

Order no.: 0572 1764

#### testo 176 H1

NTC/ capacitive humidity sensor
2 probes, 4 external channels
°C, °F, %rF, %RH, td, g/m³, WB
-20 to +70 °C
-40 to +70 °C <sub>td</sub>
0 to 100 %RH
±0.2 °C (-20 to +70 °C)
±0.4 °C (rest of measuring range)
0.1 °C, 0.1 %RH
8 years
at 15 min. meas. rate
-20 to +70 °C
-40 to +85 °C
103 x 63 x 33 mm
1 x Lithium (TLH-5903)
IP 65
1 sec - 24 h
2 mio. measurement values
ComSoft Basic 5
ComSoft Professional 4
ComSoft CFR 21 Part 11

#### testo 176 H1

Order no.: 0572 1765

#### testo 176 H2

NTC/ capacitive humidity sensor
2 probes, 4 external channels
°C, °F, %rF, %RH, td, g/m³, WB
-20 to +70 °C
-40 to +70 °C <sub>td</sub>
0 to 100 %RH
±0.2 °C (-20 to +70 °C)
±0.4 °C (remaining meas. range)
0.1 °C, 0.1 %RH
8 years
at 15 min. meas. rate
-20 to +70 °C
-40 to +85 °C
103 x 63 x 33 mm
1 x Lithium (TLH-5903)
IP 65
1 sec - 24 h
2 mio. measurement values
ComSoft Basic 5
ComSoft Professional 4
ComSoft CFR 21 Part 11

#### testo 176 H2

Order no.: 0572 1766

#### testo 176 P1

NTC/ capacitive humidity sensor/ absolute pressure sensor
1 x internal, 2 probes, 4 external channels
°C, °F, %rF, %RH, td, g/m³, hPa, mbar, in Hg, in H2O, psi
-20 to +70 °C
-40 to +70 °C <sub>td</sub>
0 to 100 %RH / 600 mbar to 1100 mbar
±0.2 °C (-20 to +70 °C)
±0.4 °C (remaining measuring range)
±3 mbar (0 to 50 °C)
0.1 °C, 0.1 %RH, 1 mbar
8 years
at 15 min. meas. rate
-20 to +70 °C
-40 to +85 °C
103 x 63 x 33 mm
1 x Lithium (TLH-5903)
IP 54
1 sec - 24 h
2 mio. measurement values
ComSoft Basic 5
ComSoft Professional 4
ComSoft CFR 21 Part 11

#### testo 176 P2

Order no.: 0572 1767



## External probes – the right accessories for every application

Probe		Meas. range	Accuracy	t99	Order no.
<b>NTC</b>					
Stump probe, IP 54		-20 to +70 °C	±0.2 °C (-20 to +40 °C) ±0.4 °C (+40.1 to +70 °C)	15 sec	0628 7510
Stationary probe with aluminium sleeve, IP 65		-30 to +90 °C	±0.2 °C (0 to +70 °C) ±0.5 °C (remaining meas. range)	190 sec	0628 7503*
Stainless steel NTC food probe (IP 65) with PUR cable		-50 to +150 °C**	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (rem. meas. range)	8 sec	0613 2211*
Accurate immersion/penetration probe Cable length 1.5 m, IP 67		-35 to +80 °C	±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	5 sec	0628 0006*
Waterproof NTC immersion/penetration probe		-50 to +150 °C	±0.5% of reading (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (rem. meas. range)	10 sec	0613 1212
<b>Thermocouple</b>					
Stationary probe with stainless steel sleeve, TC Type K		-50 to +205 °C	Class 2 ****	20 sec	0628 7533
Pipe wrap probe with Velcro tape for temperature measurements on pipes diameter to max. 120 mm, Tmax. +120 °C, TC Type K		-50 to +120 °C	Class 1 ****	90 sec	0628 0020
Pipe wrap probe for pipe diameters 5 to 65 mm, with exchangeable measuring head, measuring range briefly up to +280 °C, TC type K		-60 to +130 °C	Class 2 ****	5 sec	0602 4592
Magnet probe, adhesion approx. 10 N, with magnets, for higher temperatures, for measurements on metal surfaces, TC type K		-50 to +400 °C	Class 2 ****		0602 4892
Thermocouple with TC plug flexible, length 1500 mm, fibreglass, TC Type K		-50 to +400 °C	Class 2 ****	5 sec	0602 0645
Superfast needle probe for monitoring cooking times in ovens, TC Type T		-50 to +250 °C	± 0.2 °C (-20 to +70 °C) Class 1 (remaining measuring range)****	2 sec	0628 0030
<b>Pt100</b>					
Robust Pt100 Stainless steel food probe (IP 65)		-50 to +400 °C	Class A (-50 to +300 °C), Class B (rem. meas. range)	10 sec	0609 2272*
Robust, waterproof Pt100 immersion/penetration probe		-50 to +400 °C	Class A (-50 to +300 °C), Class B (rem. meas. range)	12 sec	0609 1273*
Laboratory probe Pt100, glass-coated, Glass tube (Duran 50) exchangeable, resistant to corrosive media		-50 to +400 °C	Class A (-50 to +300 °C), Class B (rem. meas. range)	45 sec 12 sec **	0609 7072*
<b>Humidity</b>					
Humidity / temperature probe 12 mm		0 to +40 °C, 0 to +100 %RH	±0.3 °C, ±2 %RH (2 to 98 %RH)		0572 6172
Humidity / temperature probe 4 mm		0 to +40 °C, 0 to +100 %RH	±0.3 °C, ±2 %RH (2 to 98 %RH)		0572 6174

Complete overview of probes:  
[www.testo.com/datenloggers](http://www.testo.com/datenloggers)



- The specified tightness class for data loggers is fulfilled with these probes
- \* Probe tested according to EN 12830 for suitability for the areas of transport and storage
- \*\* without protective glass
- \*\*\* Long-term measuring range to +125 °C, briefly to +150 °C or +140 °C (2 minutes)
- \*\*\*\* Acc. to norm 60584-2, the accuracy of Class 1 refers to -40 to -100 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K)





## Ordering data

### Designation

### Order no.

#### Data loggers

testo 174T	1-channel temperature logger with internal sensor (NTC)	0572 1560
testo 174H	2-channel temperature and humidity data logger with internal sensor (NTC/capacitive humidity sensor)	0572 6560
testo 175 T1	1-channel temperature logger with internal sensor (NTC)	0572 1751
testo 175 T2	2-channel temperature data logger with internal (NTC), and external sensor connection (NTC)	0572 1752
testo 175 T3	2-channel temperature data logger with external sensor connection (TC Type T and Type K)	0572 1753
testo 175 H1	2-channel temperature and humidity data logger with external sensor (NTC/capacitive humidity sensor)	0572 1754
testo 176 T1	1-channel temperature logger in metal housing with highly accurate internal sensor (Pt100)	0572 1761
testo 176 T2	2-channel temperature logger with connections for highly accurate external sensor (Pt100)	0572 1762
testo 176 T3	4-channel temperature data logger in metal housing with external sensor connection (TC Type T, Type K and Type J)	0572 1763
testo 176 T4	4-channel temperature data logger with external sensor connections (TC Type T, Type K and Type J)	0572 1764
testo 176 H1	4-channel temperature and humidity data logger with external sensor connections (NTC/capacitive humidity sensor)	0572 1765
testo 176 H2	4-channel temperature and humidity data logger in metal housing with external sensor connections (NTC/capacitive humidity sensor)	0572 1766
testo 176 P1	5-channel pressure, temperature and humidity data logger with internal sensor (absolute pressure) and external sensor connections (NTC/capacitive humidity sensor)	0572 1767

#### Accessories

testo 174D	USB interface for programming and reading out the loggers testo 174T and testo 174H	0572 0500
USB cable	Cable for connecting the data loggers testo 175 and testo 176 with a PC, mini USB to USB	0449 0047
SD card	SD card for collecting the measurement data from the data loggers testo 175 and testo 176, application range to -20 °C	0554 1700
Wall holder	Wall holder (black) with padlock for testo 175	0554 1702
Wall holder	Wall holder (black) with padlock for testo 176	0554 1703
Battery testo 174	Lithium button battery CR 2032 for testo 174T and testo 174H (please order two batteries per logger)	0515 0028
Battery for testo 175	Application range below -10 °C, alkaline manganese microcells AAA (please order 3 batteries per logger)	0515 0009
Battery for testo 175	Application range below -10 °C, Energizer L92 microcells AAA (please order 3 batteries per logger)	0515 0042
Battery for testo 176	1 x TLH-5903 AA cell	0515 1760

#### Software

ComSoft Basic 5	CD ComSoft Basic 5 (if free, registration-mandatory download not wanted)	0572 0580
ComSoft Professional 4	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

#### Calibration certificates

ISO temperature calibration certificate; temperature probe; calibration points: -18 °C, 0 °C, +40 °C; per channel/instrument	0520 0153
DKD temperature calibration certificate; temperature probe; calibration points: -18 °C, 0 °C, +60 °C; per channel/instrument	0520 0261
ISO humidity calibration certificate; humidity probe; calibration points: 11.3 %RH and 75.3 %RH at +25 °C/+77 °F; per channel/instrument	0520 0076
DKD humidity calibration certificate; humidity probe; calibration points: 11.3 %RH and 75.3 %RH at +25 °C/+77 °F; per channel/instrument	0520 0246
ISO calibration certificate absolute pressure, pressure sensor, 5 calibration points over measuring range	0520 0125
DKD calibration certificate absolute pressure, pressure sensor, 11 calibration points over measuring range	0520 0212

