

Contact or non-contact measurement?

There are basically two main methods used for contact temperature measurements on objects. In the case of penetration/immersion measurements as well as air temperature measurements, measurement is only possible with contact probes. There are some applications where contact measurement is the most suitable method for measuring surface temperatures while there are other applications where non-contact temperature measurement has proven to be more suitable. A combination of both methods in one instrument is often found to be ideal.

Classical contact applications

1. Objects with high heat capacity
 - Metals
2. Objects with smooth surfaces
 - Polished steel plates
 - Polished heating pipes

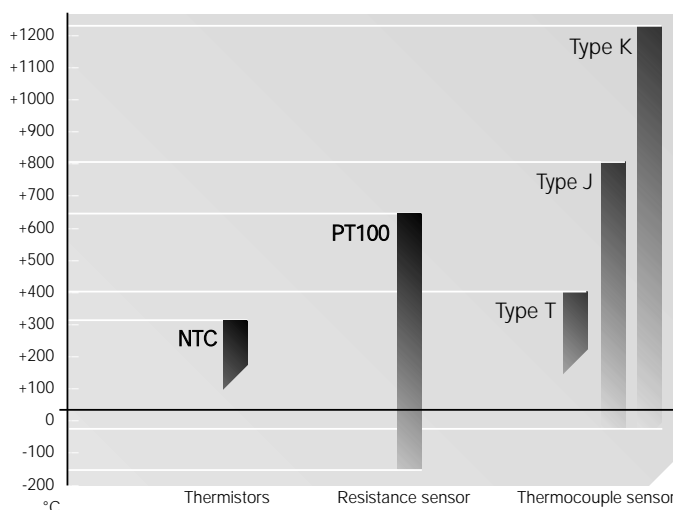
Selecting the right probe

The probe type is determined by the measuring task. The suitable temperature sensor is selected according to the following criteria:

- Measuring range
- Accuracy
- Design
- Response time
- Resistance

Testo has a range of sensor elements and thermometers available in order to be able to supply the probes needed for your applications:

- Thermocouple sensor
- Resistance sensor (PT 100)
- Thermistors (NTC)



Thermocouples

Temperature measurement using thermocouples is based on the thermoelectric effect. Thermocouples consist of two wires welded together. The wires are made of different metals or metal alloys. The basic values of the thermoelectric voltages and the maximum tolerances in thermocouples are defined in the IEC 584 standards. The most common thermocouple is NiCr-Ni (type designation K).

Resistance sensors (Pt100)

When measuring temperature with resistance sensors, use is made of the temperature sensitive resistance change in the platinum "resistance".

The measurement resistance is supplied with a constant current and the voltage drop, which changes with the resistance value via the temperature, is measured. Basic values and tolerances for resistance thermometers are defined in the IEC 751.

Thermistors (NTC)

Temperature measurement with thermistors is also based on a temperature sensitive change in the resistance of the sensor element. Unlike resistance thermometers, thermistors have a negative temperature coefficient (resistance decreases with increasing temperature). Properties and tolerances are not standardised.

Rule-of-thumb

Thermocouple probes are quick and have a wide measuring range. Resistance and NTC probes are slower but more accurate.

The wider the measuring range the more universal the applications.

Measurement range

First cross off the probe type which does not apply to your measuring range. The diagram below shows the application range of different temperature sensors.

Accuracy

Sensor	Temperature range	Class	Maximum tolerances	
			Fixed value	Referred to temperature
Thermocouple	-40 to +1200 °C	2	±2.5 °C	±0.0075 • t
	-40 to +1000 °C	1	±1.5 °C	±0.004 • t
	Type T	1	±0.5 °C	±0.001 • t
Type J	-40 to +750 °C	1	±1.5 °C	±0.004 • t
PT100	-100 to +200 °C	B	± (0.3 + 0.005 • t)	
	-200 to +600 °C	A	± (0.15 + 0.002 • t)	
NTC (Standard)	-50 to -25.1 °C		±0.4 °C	
	-25 to +74.9 °C	-	±0.2 °C	
	+75 to +150 °C		±0.5 % of reading	
NTC (High temp.)	-30 to -20.1 °C		±1 °C	
	-20 to 0 °C	-	±0.6 °C	
	+0.1 to +75 °C		±0.5 °C	
	+75.1 to +275 °C	- °C	±0.5 °C ±0.5 % of reading	

t = Measured temperature

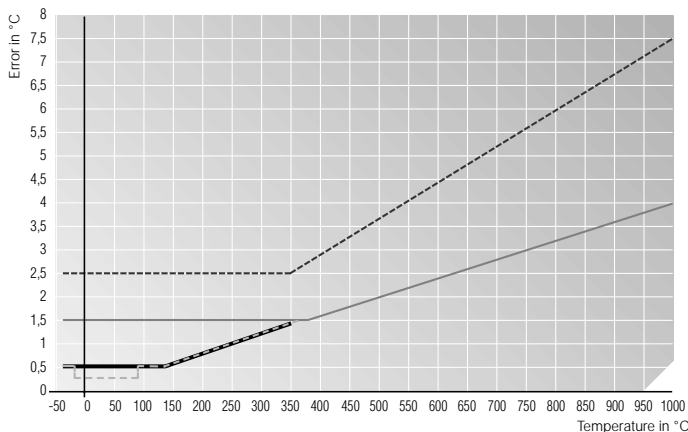
Accuracy: Thermocouple

Data for thermocouples to EN 60584-1 (formerly IEC 584-1). Two values are given. One fixed value in °C and one formula.

The larger value always applies. Data for Pt100 to EN 60751 (formerly IEC 751). There is no standardization for NTC sensors.

In the case of thermocouples, Accuracy Class 1 applies to the measurement range -40 to +1000 °C. In the range -200 to -40.1 °C, Class 3 ± 2.5 °C or 0.015 |t| applies.

- Type J + Type K; Class 1 (Type J only to +750°C)
- - - Type J + Typ K; Class 2 (Type J only to +750°C)
- Type T; Class 1
- - - Type T; Testo probes





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Stationary measurement engineering

Stationary temperature probes	Standard stationary probes and custom-designed stationary probes	Page 50
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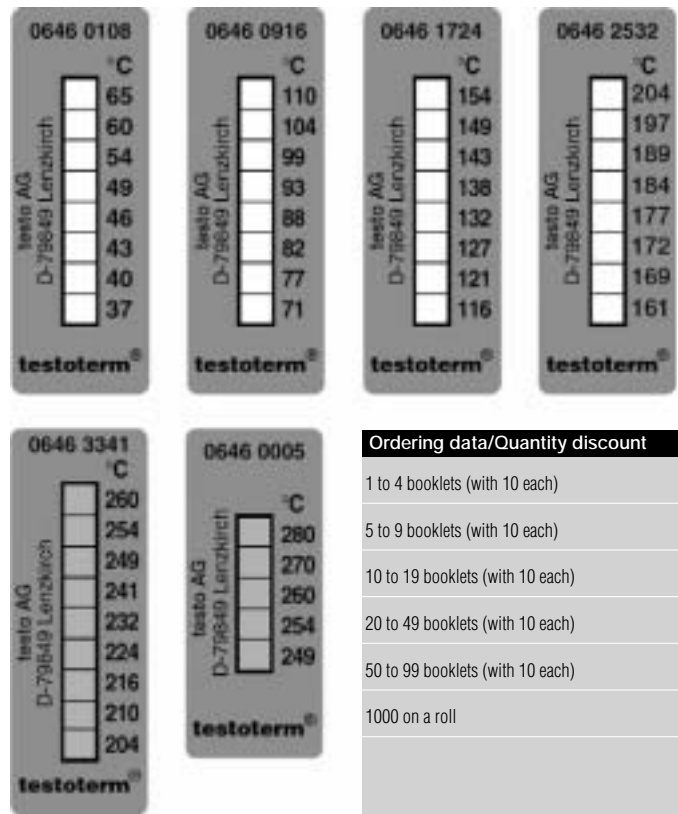
Thermometer strips

testoterm thermometer strips are self-adhesive foils with temperature sensitive elements for temperature control and regulation. Used, for example, for measurements on moving parts, for long-term monitoring and on small parts.

+37 to +65 °C	Part no. 0646 0108
+71 to +110 °C	Part no. 0646 0916
+116 to +154 °C	Part no. 0646 1724
+161 to +204 °C	Part no. 0646 2532
+204 to +260 °C	Part no. 0646 3341
+249 to +280 °C	Part no. 0646 0005

Self-adhesive foils

- Irreversible change in colour within 1 second
- Practical booklet with 10 thermometer strips
- Thermometer strips available on rolls, e.g. for labelling machines



Technical data

Accuracy: From +43°C to +154°C: $\pm 1.5^\circ\text{C}$; from +160°C: $\pm 1\% \pm 1^\circ\text{C}$ of respective temperature reading

Max. operating temperature corresponds to the respective measuring ranges

Storage of clock indicators: Up to +65°C, max. 9 months; other measuring ranges: up to 2 years; max. storage temperature +25°C. Storage in a refrigerator is recommended.

l x w: 50 x 18 mm or 39 x 18 mm

Ordering data/Quantity discount

1 to 4 booklets (with 10 each)
5 to 9 booklets (with 10 each)
10 to 19 booklets (with 10 each)
20 to 49 booklets (with 10 each)
50 to 99 booklets (with 10 each)
1000 on a roll

Actual size

Clock indicators

testoterm clock indicators are self-adhesive, temperature proof foils with temperature sensitive elements for temperature control and regulation. They are particularly suitable for monitoring temperature in small objects.

+40 to +54 °C	Part no. 0646 0071
+60 to +82 °C	Part no. 0646 0072
+88 to +110 °C	Part no. 0646 0073
+116 to +138 °C	Part no. 0646 0074
+143 to +166 °C	Part no. 0646 0075
+171 to +193 °C	Part no. 0646 0076
+199 to +224 °C	Part no. 0646 0077
+232 to +260 °C	Part no. 0646 0078

Self-adhesive foils



- Irreversible change in colour within 1 second
- Practical booklet with 10 clock indicators
- Clock indicators on sheets of 50

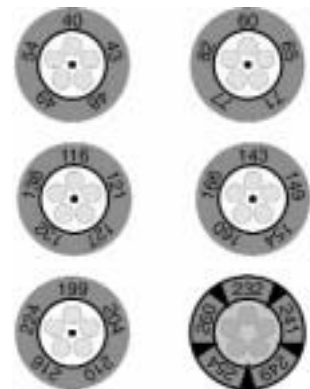
Technical data

Accuracy: From +43°C to +154°C: $\pm 1.5^\circ\text{C}$; from +160°C: $\pm 1\% \pm 1^\circ\text{C}$ of respective temperature reading

Max. operating temperature corresponds to the respective measuring ranges

Storage of clock indicators: Up to +65°C, max. 9 months; other measuring ranges: up to 2 years; max. storage temperature +25°C. Storage in a refrigerator is recommended.

Ø 15 mm



Actual size

Ordering data/Quantity discount

1 to 4 booklets (with 10 each)
5 to 9 booklets (with 10 each)
10 to 19 booklets (with 10 each)
20 to 49 booklets (with 10 each)
50 to 99 booklets (with 10 each)
1000 on sheets of 50

Single indicators

testoterm single indicators are self-adhesive temperature sensitive foils with elements used for control of a given maximum temperature.

Single indicators

Measuring range: +43°C to +260°C

Part no. 0646 1... (...=reading)

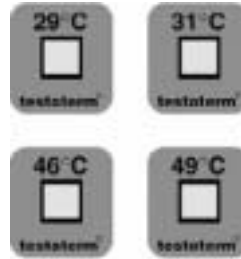
Ordering examples:

Single indicator for +43°C: 0646 1043

Single indicator for +204°C: 0646 1204

Self-adhesive foils

- Irreversible change in colour within 1 second
- Practical single indicator booklet
- Single indicators on sheets of 50



Actual size

Ordering data/Quantity discount

1 to 4 booklets (with 50 each)

5 to 9 booklets (with 50 each)

10 to 19 booklets (with 50 each)

20 to 49 booklets (with 50 each)

50 to 99 booklets (with 50 each)

5000 on sheets of 50

In stock:

71 °C, 77 °C, 82 °C, 110 °C, 143 °C

Delivery time of minimum 4 weeks for orders for more than 10 booklets of other single indicators (See Figure).

Technical data

Accuracy: From +43°C to +154°C: ±1.5°C; from +160°C: ±1% ±1°C of respective temperature reading

Max. operating temperature corresponds to the respective measuring ranges

Storage of clock indicators: Up to +65°C, max. 9 months; other measuring ranges: up to 2 years; max. storage temperature +25°C. Storage in a refrigerator is recommended.

Larger quantities – Ask your Testo sales partner for more details.

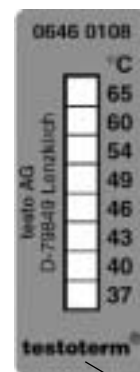


testoterm thermometer strips

Orders for more than 5000 thermometer strips are supplied on rolls (1000 on each roll, see photo).

testoterm clock indicators and testoterm single indicators

Orders for more than 1000 clock indicators or 5000 single indicators are supplied on sheets of 50.



Actual size

Company name

You can have your company name or logo printed on the testoterm thermometer strips and testoterm single indicators if you order more than 10 000 (per temp. value).



Your company name/logo can be printed here

Mini thermometer

The quick-action immersion/penetration thermometer is ideal for measuring the temperature in air, soft or powdery substances and liquids.

1 Mini thermometer, 120 mm long, up to +150°C

Protective sleeve for probe shaft

Part no.

0900 0525

2 Mini thermometer, 200mm long, up to +250°C

Part no.

0900 0526

3 Water-proof mini thermometer

With protection sleeve for probe shaft

Part no.

0900 0528

Quantity discounts available

Mini penetration thermometers

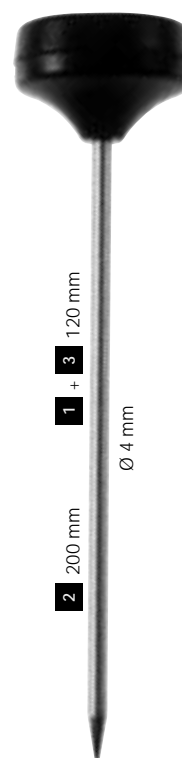
- Easy to read thanks to large display
- Quick and easy battery replacement
- Can be used anywhere



3



1 + 2



1

3

1 + 2

1

3

2

200 mm

120 mm

Ø 4 mm

Technical data

	1	2	3
Meas. range	-50 to +150 °C	-50 to +250 °C	-40 to +230 °C
Accuracy ±1 digit	±1 °C (-10 to +99.9 °C) ±2 °C (-50 to -10.1 °C) ±2% of mv (+100 to +150 °C)	±1 °C (-10 to +99.9 °C) ±2% of mv (+100 to +199.9 °C) ±3% of mv (+200 to +250 °C)	±0.3 °C (+54 to +90 °C) ±1 °C (-20 to +53.9 °C / 90.1 to +180 °C) ±1.5% of mv (remaining range)
Resolution	0.1 °C (-19.9 to +150 °C) 1 °C (remaining range)	0.1 °C (-19.9 to +150 °C) 1 °C (remaining range)	0.1 °C
Oper. temp.	0 to +40 °C	0 to +40 °C	-10 to +50 °C
Storage temp.	-20 to +70 °C	-20 to +70 °C	-40 to +70 °C
Battery type	Button cell LR44	Button cell LR44	Button cell LR44
Battery life	150 h	150 h	150 h
Display	LCD, 1 line	LCD, 1 line	LCD, 1 line
Warranty	2 years	2 years	1 year

Accessories

Button cell batteries, Type LR 44, 1.5 Volt (4 off)

Part no.

0515 0032

Mini thermometer

Affordable. The surface thermometer has a widened measuring tip making it particularly suitable for surface measurements.

Mini surface thermometer with battery

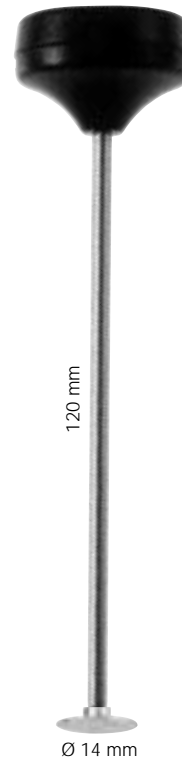
Part no.

0900 0519

Quantity discounts available

Mini surface thermometer

- Easy to read thanks to large display
- Quick and easy battery replacement
- Ideal for surface measurements



120 mm

Ø 14 mm

Technical data

Meas. range	-50 to +250 °C
Accuracy ±1 digit	±1 °C (-10 to +99.9 °C) ±2 °C (-50 to -10.1 °C) ±2% of mv (+100 to +199.9 °C) ±3% of mv (+200 to +250 °C)
Resolution	0.1 °C (-19.9 to +150 °C) 1 °C (remaining range)
Oper. temp.	0 to +40 °C
Storage temp.	-20 to +70 °C
Battery type	Button cell LR44
Battery life	150 h
Display	LCD, 1 line
Warranty	2 years

Accessories

Button cell batteries, Type LR 44, 1.5 Volt (4 off)

Part no.

0515 0032

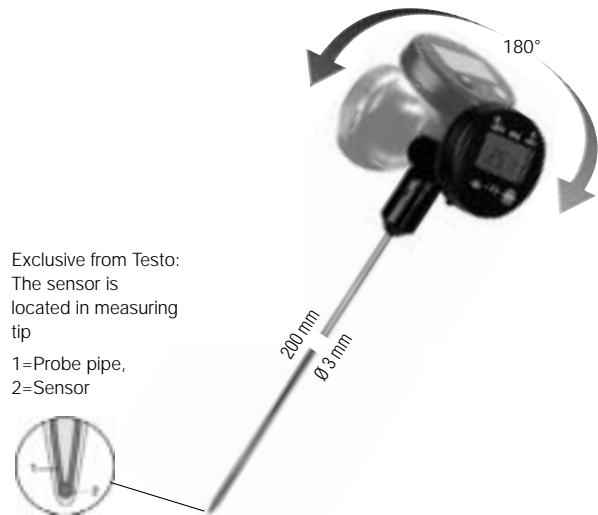
testo 905-T1
Mini penetration stick

testo 905-T1 is one of the fastest mini thermometers available with a wide measuring range from -50 to +350°C, short-term (1-2 minutes) up to +500°C. Particularly in the top measuring range, testo 905-T1 is much more accurate than most thermometers in this price range.

- Professional industrial sensor (type K thermocouple)
- Quick and large display
- High temperature measurement, short-term to 500°C

testo 905-T1 temperature measurement stick incl. multi-function clip, battery

Part no.
0560 9051



Exclusive from Testo:
The sensor is located in measuring tip

1=Probe pipe,
2=Sensor

Technical data

Meas. range	-50 to +350 °C Short-term to +500 °C
Accuracy ±1 digit	±1 °C (-50 to +99.9 °C) ±1% of mv (remaining range)
Resolution	0.1 °C
Oper. temp.	0 to +40 °C
Storage temp.	-20 to +70 °C

Battery type	3V button cell (CR 2032)
Battery life	150 h
Reaction time	10 s
Reaction type	t_{90} (in water)
Display	LCD, 1 line
Weight	110 g
Warranty	2 years

Accessories
Part no.

ISO calibration certificate/Temperature ; For air/immersion probes, calibration point 0°C	0520 0062
ISO calibration certificate/Temperature ; For air/immersion probes, calibration point -18°C	0520 0061
ISO calibration certificate/Temperature ; For air/immersion probes, calibration point +60°C	0520 0063
ISO calibration certificate/Temperature ; For air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001

testo 905-T2
Mini surface stick

testo 905-T2, our latest innovation. A surface thermometer of professional quality at a low price. The sprung, wide thermocouple measuring head guarantees a very quick reaction time and a high accuracy level since it always lies flat on the uneven surface of the object being measured.

- Super-quick measurement
- User-friendly operation
- Auto OFF function

testo 905-T2, surface temperature measurement stick with spring loaded probe, incl. multi-function clip, battery

Part no.
0560 9052



Spring loaded thermocouple adapts itself to every surface

Technical data

Meas. range	-50 to +350 °C Short-term to +500 °C
Accuracy ±1 digit	±(1 °C ±1% of mv) (-50 to +500 °C)
Resolution	0.1 °C (-50 to +500 °C)
Oper. temp.	0 to +40 °C
Storage temp.	-20 to +70 °C

Battery type	3V button cell (CR 2032)
Battery life	150 h
Reaction time	5 s
Reaction type	t_{90}
Display	LCD, 1 line
Weight	120 g
Warranty	2 years

Accessories
Part no.

ISO calibration certificate/Temperature ; Single point calibration for surface thermometer; calibration point +120°C	0520 0073
ISO calibration certificate/Temperature ; Single point calibration for surface thermometer; calibration point +60°C	0520 0072
ISO calibration certificate/Temperature ; Thermometers with surface probe; calibration points +60°C; +120°C; +180°C	0520 0071
ISO calibration certificate/Temperature ; Meas. instruments with surface probe; calibration points selectable from -15 to +480°C	0520 0121

Mini alarm thermometer

The affordable mini thermometer with Min/Max alarm. Small in size but big on quality! The penetration probe is attached to the instrument (80 cm cable) and is suitable for measuring the temperature in air, in soft, powdery substances and in liquids.

Mini thermometer, battery included

Part no.
0900 0530

Mini thermometer with penetration probe and alarm

- Permanently attached probe
- Adjustable Min/Max alarm
- With clip for positioning, for mounting on the wall and for attachment



Technical data

Meas. range	-50 to +150 °C
Accuracy	±1 °C (-10 to +100 °C) ±1 digit ±2 °C (remaining range)
Resolution	0.1 °C (-19.9 to +150 °C) 1 °C (-50 to -20 °C)
Oper. temp.	0 to +50 °C
Storage temp.	-20 to +70 °C

Battery type	2 AAA micro batteries
Battery life	100 h
Display	LCD, 1 line
Material/Housing	ABS
Warranty	2 years

Accessories

Accessories	Part no.
ISO calibration certificate/Temperature ; For air/immersion probes, calibration point -18°C	0520 0061
ISO calibration certificate/Temperature ; For air/immersion probes, calibration point 0°C	0520 0062

testo 915-1

The compact testo 915-1 thermometer has many advantages including a large display, hold button and high accuracy. The probe is particularly suitable for immersion and penetration measurements in the trade sector, industry or in the food industry.

testo 915-1, thermometer with penetration probe and battery

Part no.
0560 9151

Thermometer with robust penetration probe

- Compact instrument with permanently attached probe
- TopSafe protects the instrument from dirt, dust and water
- With calibration protocol



Technical data

Meas. range	-50 to +400 °C
Accuracy	±1% of mv (+100.1 to +400 °C) ±1 digit ±1 °C (-50 to +100 °C)
Resolution	0.1 °C
Oper. temp.	0 to +50 °C
Storage temp.	-20 to +70 °C

Battery type	Alkali manganese
Battery life	500 h
Display	LCD, 1 line
Material/Housing	ABS
Conn.	Fixed cable
Weight	300 g
Protection class	IP65
Warranty	2 years

Accessories

Accessories	Part no.
TopSafe (indestructible protection case) with bench stand	0516 0188
Case for instrument and probes; For safe and orderly storage	0516 0182
ISO calibration certificate/Temperature; For air/immersion probes, calibration points -18°C; 0°C	0520 0041
ISO calibration certificate/Temperature; For air/immersion probes, calibration points 0°C; +60°C	0520 0042

testo 106-T1/-T2
Quick-action penetration thermometer

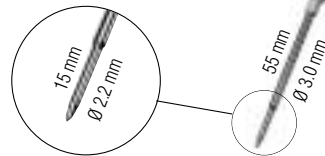
The testo 106 penetration thermometer is ideal for quick, uncomplicated core temperature checks in all industries i.e. caterers, hotels, canteens, supermarkets etc.

testo 106-T2 with audible alarm if limits are exceeded.

- Compact, practical and always ready to hand
- Wide range with high measuring accuracy
- Fast measurements and hardly visible penetration holes using special food probes
- Also available: Practical drill for deep-frozen food
- Quick check using a thin, robust measuring tip

testo 106-T1, penetration thermometer with probe protection cap and battery

Part no.
0560 1061



Technical data	
Meas. range	-50 to +230 °C
Accuracy	±1% of mv (+100 to +230 °C)
±1 digit	±0.5 °C (-30 to +99.9 °C) ±1 °C (-50 to -30.1 °C)
Resolution	0.1 °C
Oper. temp.	-20 to +50 °C
Storage temp.	-40 to +70 °C
Battery type	Lithium battery (2032)
Battery life	250 h
Dimensions	215 x 34 x 19 mm
Display	LCD, 1 line
Material/Housing	ABS
Weight	80 g
Protection class	IP67 with TopSafe
Warranty	2 years

Set	Part no.
testo 106-T1 set, penetration thermometer w. TopSafe (waterproof case, IP67), holding clip, probe cap and battery	0563 1061
testo 106-T2 set, penetration thermometer w. alarm, incl. TopSafe (waterproof protection case, IP67), holding clip, probe cap and battery	0563 1062
Accessories	Part no.
Frozen food drill ; Can be attached to holder clip	0554 0826
TopSafe (indestructible protection case); Waterproof and dishwasher-safe protection case (IP67)	0516 8265
Holder clip with probe protection cap	0554 0825

Accessories	Part no.
ISO calibration certificate/Temperature ; For air/immersion probes, calibration point +60°C	0520 0063
ISO calibration certificate/Temperature ; For air/immersion probes, calibration point -18°C	0520 0061
ISO calibration certificate/Temperature ; For air/immersion probes, calibration point 0°C	0520 0062
ISO calibration certificate/Temperature ; For air/immersion probes, calibration points -18°C; 0°C	0520 0041
ISO calibration certificate/Temperature ; For air/immersion probes, calibration points -8°C; 0°C; +40°C	0520 0181

testo 105
Robust one-hand thermometer

The robust food thermometer with interchangeable measurement tips for control measurements in abattoirs, refrigerated storerooms, lorries etc.

- 2 user-defined limit values, alarm visual or audible
- Built-in backlit display
- Audible key feedback
- 2 line display
- Waterproof (IP 65) and robust



testo 105, One-hand thermometer with standard measurement tip, incl. battery

Part no.
0563 1051



Easy-to-change measurement tips

Technical data	
Meas. range	-50 to +275 °C
Accuracy	±0.5 °C (-20 to +100 °C)
±1 digit	±1 °C (-50 to -20.1 °C) ±1 % (+100.1 to +275 °C)
Resolution	0.1 °C
Oper. temp.	-20 to +50 °C
Storage temp.	-40 to +70 °C
Dimensions	145 x 38 x 195 mm
Display	LCD, 1 line
Weight	139 g
Protection class	IP65
Warranty	2 years

Set	Part no.
One-hand thermometer with standard measurement tip, frozen food tip, long measurement tip and belt/wall holder in aluminium case	0563 1052

Accessories	Part no.
Standard measurement tip, 100 mm long	0613 1051
Frozen food tip, 90 mm long	0613 1052
Long measurement tip, 200 mm long	0613 1053
Aluminium case for the testo 105 one-hand thermometer and accessories	0554 1051
ISO calibration certificate/Temperature For air/immersion probes, calibration points -18°C; 0°C	0520 0041
Button cell batteries, Type LR 44, 1.5 Volt (4 off)	0515 0032

testo 110

testo 110 is a highly accurate thermometer. TopSafe makes testo 110 the ideal instrument for the food, laboratory and refrigeration/freezing sectors. The technology used is specially designed for use in refrigerated store rooms, cabinets and for outdoors.

testo 110, thermometer, with battery and calibration protocol

Part no.
0560 1106

Accurate versatile thermometer

- Highly accurate
- TopSafe, the indestructible, dishwasher-safe protection case
- Ideal for refrigerated storage
- Low batt. display
- Change between °C/°F



Figure with TopSafe

Probes NTC	Illustration	Meas. range	Accuracy	t ₉₉	Part no.
◆ Food probe (IP65) stainless steel, PUR cable can be used at up to +80°C, IP54 plug-in connection	 Conn.: Fixed cable	-50 to +150 °C ²⁾ -25 to +120 °C	±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	8 s	0613 2211
◆ Food probe, stainless steel (IP67), with Teflon cable resistant to temperatures of up to +200°C (short-term to +250°C)	 Conn.: Fixed cable	-50 to +150 °C	±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	8 s	0613 3311
◆ High temperature food probe, stainless steel, can be used at up to +275°C, Teflon cable up to +200°C (short-term up to 250°C)	 Conn.: Fixed cable	0 to +275 °C	±1% of mv (+100.1 to +275 °C) ±(0.3 °C ±0.5% of mv)(0 to +100 °C)	6 s	0613 3411
◆ Robust food penetration probe with special handle, IP 65, reinforced cable (PUR) and reinforced protection against buckling	 Conn.: Fixed cable	-50 to +150 °C ²⁾	±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	7 s	0613 2411
◆ Frozen food probe, corkscrew design	 Conn.: Plug-in cable	-50 to +140 °C ²⁾ -25 to +120 °C	±0.5% of mv (+100 to +140 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	20 s	0613 3211
◆ Waterproof immersion/penetration probe	 Conn.: Fixed cable	-50 to +150 °C ²⁾ -25 to +120 °C	±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	10 s	0613 1211
◆ Laboratory probe, glass-coated, resistant to corrosive substances, glass stem can be replaced	 Conn.: Fixed cable	-50 to +150 °C ²⁾	±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	40 s 10 s*	0613 7011
◆ Pipe probe with Velcro, for pipe diameter of max. 80 mm	 Conn.: Fixed cable	-50 to +70 °C	±0.2 °C (-25 to +70 °C) ±0.4 °C (-50 to -25.1 °C)		0613 4611
◆ Waterproof surface probe with widened measuring tip, for flat surfaces	 Conn.: Fixed cable	-50 to +150 °C ²⁾	±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	35 s	0613 1911
◆ Robust, affordable air probe to check storage temperatures	 Conn.: Fixed cable	-50 to +150 °C ²⁾ -25 to +120 °C	±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	60 s	0613 1711

◆ The measuring instrument inside TopSafe is waterproof with this probe.

* without protective glass

2) Long-term measurement range +125°C, short-term +150°C or +140°C (2 minutes)

testo 110
Practical accessories and recommended sets / Technical data
Recommended set
testo 110, Food set

- testo 110, thermometer, with battery and calibration protocol (Part no. 0560 1106)
- TopSafe (indestructible protection case) with bench stand (Part no. 0516 0187)
- Food probe (IP65) stainless steel, PUR cable can be used at up to +80°C, IP54 plug-in connection (Part no. 0613 2211)

testo 110, Butcher Set

- testo 110, thermometer, with battery and calibration protocol (Part no. 0560 1106)
- TopSafe (indestructible protection case) with bench stand (Part no. 0516 0187)
- Robust food penetration probe with special handle, IP 65, reinforced cable (PUR) and reinforced protection against buckling (Part no. 0613 2411)

Technical data

Probe type	NTC
Meas. range	-50 to +275 °C
Accuracy ±1 digit	±0.5% of mv (+100 to +275 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)
Resolution	0.1 °C (-50 to +199.9 °C) 1 °C (+200 to +275 °C)
Oper. temp.	0 to +40 °C
Storage temp.	-20 to +70 °C
Battery type	Alkali manganese
Battery life	100 h
Dimensions	190 x 57 x 42 mm
Weight	300 g
Material/Housing	ABS
Display	LCD, 1 line
Auto Off	10 min
Warranty	2 years

Accessories
Part no.
Transport and Protection

TopSafe (indestructible protection case) with bench standProtects thermometer from corrosive substances, water, impact...Instrument has IP68 with all probes 0516 0187

Accessories set (for instrument without TopSafe) includes multi-function clip, carrier loop, probe holder 0554 0550

Accessories set (for instrument with TopSafe) includes multi-function clip and probe holder 0554 0552

Case for instrument and probes, For safe and orderly storage 0516 0182

Transport case (plastic) for instrument and accessories, For safe and orderly storage 0516 0184

Additional accessories and spare parts

Glass shaft for immersion/penetration probe to protect from corrosive agents 0554 7072

9V rech. battery for instrument, Instead of battery 0515 0025

Recharger for 9V rechargeable battery, For external recharging of 0515 0025 battery 0554 0025

Calibration certificates

ISO calibration certificate/Temperature, For air/immersion probes, calibration points -18°C; 0°C; +60°C 0520 0001

ISO calibration certificate/Temperature, Thermometers with surface probe; calibration points +60°C; +120°C; +180°C 0520 0071

ISO calibration certificate/Temperature, For air/immersion probes, calibration points -8°C; 0°C; +40°C 0520 0181

ISO calibration certificate/Temperature, For air/immersion probes, calibration points -18°C; 0°C 0520 0041

testo 926

The versatile testo 926 thermometer is the ideal partner for measuring temperatures in the food industry on a daily basis.

The efficient Type T thermocouples provide fast and higher accuracy readings. For this reason, testo 926 is used to check production in canteens, hotels and restaurants.

testo 926, Food thermometer, incl. battery and calibration protocol

Part no.
0560 9260

Food thermometer

- Highly accurate
- TopSafe protects from dirt, water and impact
- TopSafe is dishwasher-safe!
- Probe for every application in the food branch



Probes Type T (Cu-CuNi)	Illustration	Meas. range	Accuracy	t ₉₉	Part no.
<ul style="list-style-type: none"> ◆ Waterproof precision immersion/penetration probe, Tmax handle and cable +70°C 	<p>Conn.: Fixed cable</p>	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	7 s	0603 1292
<ul style="list-style-type: none"> ◆ Affordable precision air probe to check e.g. storage temperature, Tmax handle and cable +70°C 	<p>Conn.: Fixed cable</p>	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	25 s	0603 1792
<ul style="list-style-type: none"> ◆ Waterproof, accurate surface probe with widened measuring tip, e.g. for cooking plates, grill plates, ... 	<p>Conn.: Fixed cable</p>	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	30 s	0603 1992
<ul style="list-style-type: none"> ◆ Robust food penetration probe with special handle, IP 65, reinforced cable (PUR) and reinforced protection from buckling 	<p>Conn.: Fixed cable</p>	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	6 s	0603 2492
<ul style="list-style-type: none"> ◆ Frozen food probe, corkscrew design, Tmax handle and cable +70°C 	<p>Conn.: Plug-in cable</p>	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	8 s	0603 3292
<ul style="list-style-type: none"> ◆ Accurate, waterproof food probe (IP67), made of stainless steel, with 4 mm reinforced PVC cable 	<p>Conn.: Fixed cable</p>	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	7 s	0603 2192
<ul style="list-style-type: none"> ◆ Accurate, waterproof food probe (IP65), made of stainless steel with PVC cable 	<p>Conn.: Fixed cable</p>	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	7 s	0603 2292
<ul style="list-style-type: none"> ◆ Accurate, waterproof food probe (IP67), made of stainless steel, with Teflon cable 	<p>Conn.: Fixed cable</p>	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	7 s	0603 3392
<ul style="list-style-type: none"> ◆ Waterproof, super-quick needle probe for measurements without visible penetration hole. Ideal for hamburgers, steaks etc. 	<p>Conn.: Fixed cable</p>	-50 to +250 °C	±0.2 °C (-20 to +70 °C)	2 s	0628 0027
<ul style="list-style-type: none"> ◆ Waterproof precision immersion/penetration probe for quick measurements w/o visible penetration hole, Tmax handle +70°C 	<p>Conn.: Fixed cable</p>	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	3 s	0603 2692
<ul style="list-style-type: none"> ◆ Robust penetration probe for food, to measure small, thin frozen pieces such as pizza etc., Tmax handle and cable +70°C 	<p>Conn.: Fixed cable</p>	-50 to +250 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	5 s	0628 0028
<ul style="list-style-type: none"> ◆ Quick needle probe to monitor cooking processes in oven. Measurements on vacuum products also possible if special sealing strip is used 	<p>Conn.: Fixed cable</p>	-50 to +250 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	2 s	0628 0030
<ul style="list-style-type: none"> ◆ Flexible incoming goods probe, ideal for quick temperature measurements on incoming goods 	<p>Conn.: Fixed cable</p>	-50 to +350 °C	Class 1	5 s	0628 0023

◆ The measuring instrument inside TopSafe is waterproof with this probe.

testo 926
Practical accessories and recommended sets

Set	Part no.
testo 926 with food thermometer, battery, calibration protocol, TopSafe (incl. benchtop stand) and water-proof precision immersion/penetration probe (Tmax handle and cable +70°C)	0563 9261

Recommended set
The set for tough applications
<ul style="list-style-type: none"> - testo 926, Food thermometer, incl. battery and calibration protocol (Part no. 0560 9260) - TopSafe (protection case) with bench stand (Part no. 0516 0186) - Robust food penetration probe with special handle, IP 65, reinforced cable (PUR) and reinforced protection from buckling (Part no. 0603 2492)

The set for high ambient temperatures
<ul style="list-style-type: none"> - testo 926, Food thermometer, incl. battery and calibration protocol (Part no. 0560 9260) - TopSafe (protection case) with bench stand (Part no. 0516 0186) - Accurate, waterproof food probe (IP67), made of stainless steel, with Teflon cable (Part no. 0603 3392)

Accessories	Part no.
9V rech. battery for instrument, Instead of battery	0515 0025

Recharger for 9V rechargeable battery, For external recharging of 0515 0025 battery 0554 0025

Special sealing strip (4m) for needle probe, For meas. in vacuum products without loss of air-tightness 0554 1030

Transport and Protection	Part no.
TopSafe (protection case) with bench stand, Protects measuring instrument from water, dust, impact..., IP68 with waterproof probes (drop symbol)	0516 0186

Accessories set (for instrument with TopSafe) includes multi-function clip and probe holder 0554 0552

Accessories set (for instrument without TopSafe) includes multi-function clip, carrier loop, probe holder 0554 0550

Case for instrument and probes, For safe and orderly storage 0516 0182

Transport case (plastic) for instrument and accessories, For safe and orderly storage 0516 0184

Calibration certificates

ISO calibration certificate/Temperature, For air/immersion probes, calibration points -18°C; 0°C; +60°C 0520 0001

ISO calibration certificate/Temperature, Thermometers with surface probe; calibration points +60°C; +120°C; +180°C 0520 0071

ISO calibration certificate/Temperature, Single point calibration for surface thermometer; calibration point +60°C 0520 0072

ISO calibration certificate/Temperature, Single point calibration for surface thermometer; calibration point +120°C 0520 0073

ISO calibration certificate/Temperature, Infrared thermometer; calibration points +60°C; +120°C; +180°C 0520 0002

ISO calibration certificate/Temperature, For air/immersion probes, calibration point -18°C 0520 0061

ISO calibration certificate/Temperature, For air/immersion probes, calibration point 0°C 0520 0062

ISO calibration certificate/Temperature, For air/immersion probes, calibration point +60°C 0520 0063

ISO calibration certificate/Temperature, For air/immersion probes, calibration points -8°C; 0°C; +40°C 0520 0181

Technical data			
Probe type	Type T (Cu-CuNi)	Battery type	Alkali manganese
Meas. range	-50 to +350 °C	Battery life	200 h
Accuracy ±1 digit	±0.3 °C (-20 to +70 °C) ±(0.7 °C ±0.5% of mv) (remaining range)	Dimensions	190 x 57 x 42 mm
Resolution	0.1 °C (-50 to +199.9 °C) 1 °C (+200 to +350 °C)	Auto Off	10 min
Oper. temp.	0 to +50 °C	Display	LCD, 1 line
Storage temp.	-20 to +70 °C	Material/Housing	ABS
		Weight	300 g
		Warranty	2 years

testo 925

Versatile thermometer

Affordable and robust.

The versatile testo 925 thermometer is the ideal partner for daily temperature measurements in tough applications. The robust TopSafe case protects the instrument from dirt, water and impact.

- TopSafe, protection case, for tough applications
- More than 25 robust probes for every application



Easy to read thanks to large display

Hold key to freeze reading

testo 925, thermometer, incl. battery and calibration protocol

Part no.
0560 9255

Technical data

Probe type	Type K (NiCr-Ni)
Meas. range	-50 to +1000 °C
Accuracy ±1 digit	±(0.7 °C ±0.5% of mv) (-40 to +900 °C) ±(1 °C ±1% of mv) (remaining range)
Resolution	0.1 °C (-50 to +199.9 °C) 1 °C (remaining range)

Oper. temp.	0 to +50 °C
Storage temp.	-20 to +70 °C
Display	LCD, 1 line
Battery type	Alkali manganese
Battery life	150 h
Dimensions	190 x 57 x 42 mm
Weight	300 g
Warranty	2 years

Recommended set

testo 925, Set up to max. +400 °C

- testo 925, thermometer, incl. battery and calibration protocol (Part no. 0560 9255)
- TopSafe (protection case) with bench stand (Part no. 0516 0186)
- Waterproof immersion/penetration probe (Part no. 0602 1292)
- Waterproof surface probe with widened measuring tip for flat surfaces (Part no. 0602 1992)

For probes see page 16
See next page for accessories

testo 922

Differential thermometer

testo 922 can measure the temperatures of two probes simultaneously and display the differential temperature.

The affordable differential thermometer is protected from dirt and impact by the indestructible TopSafe case.

- TopSafe, protects instrument from dirt and impact



2 probes can be connected (Type K)

HOLD button to freeze reading

Display for T1, T2 and differential temperature

testo 922, thermometer, incl. battery and calibration protocol

Part no.
0560 9224

Technical data

Probe type	Type K (NiCr-Ni)
Meas. range	-50 to +1000 °C
Accuracy ±1 digit	±(0.7 °C ±0.5% of mv) (-40 to +900 °C) ±(1 °C ±1% of mv) (-50 to -40.1 °C) ±(1 °C ±1% of mv) (+900.1 to +1000 °C)
Resolution	0.1 °C (-50 to +199.9 °C) 1 °C (+200 to +1000 °C)

Material/Housing	ABS
Oper. temp.	0 to +50 °C
Storage temp.	-20 to +70 °C
Display	LCD, 1 line
Battery type	Alkali manganese
Battery life	150 h
Dimensions	190 x 57 x 42 mm
Weight	300 g
Chann. external (var.)	2
Warranty	2 years

Recommended set

testo 922, Set for refrigeration

- testo 922, thermometer, incl. battery and calibration protocol (Part no. 0560 9224)
- 2 x Pipe wrap probe for pipe diameter 5 to 65 mm, with exchangeable measuring head. Measuring range short-term to +280°C (Part no. 0602 4592)
- Transport case (plastic) for instrument and accessories (Part no. 0516 0184)

testo 922, Heating Installation Set

- testo 922, thermometer, incl. battery and calibration protocol (Part no. 0560 9224)
- 2 x Clamp probe for measurements on pipes, pipe diameter 15 to 25 mm (max. 1"), meas. range short-term up to +130°C (Part no. 0602 4692)
- Transport case (plastic) for instrument and accessories (Part no. 0516 0184)

For probes see page 16

See next page for accessories

testo 935
Differential thermometer with pressure function

The testo 935 thermometer can measure the temperatures of 2 connected probes and can show them simultaneously on the easy-to-read display. The differential temperature can be called up. Data is printed on site on the Testo printer.

- TopSafe, indestructible case, protects from dirt and impact

testo 935, thermometer, incl. battery and calibration protocol

Part no.
0560 9350



Technical data			
Probe type	Type K (NiCr-Ni)	Type T (Cu-CuNi)	Type J (Fe-CuNi)
Meas. range	-50 to +1000 °C	-50 to +350 °C	-50 to +750 °C
Accuracy ±1 digit	±(0.7 °C ±0.5% of mv) (-40 to +900 °C) ±(1 °C ±1% of mv) (remaining range)	±0.6 °C (-20 to +70 °C) ±(1 °C ±0.5% of mv) (remaining range)	±(0.7 °C ± 0.5% of mv)
Resolution	0.1 °C (-50 to +199.9 °C) 1 °C (+200 to +1000 °C)	0.1 °C (-50 to +199.9 °C) 1 °C (+200 to +350 °C)	0.1 °C (-50 to +199.9 °C) 1 °C (+200 to +750 °C)

Oper. temp.	0 to +50 °C
Storage temp.	-20 to +70 °C
Display	LCD, 2 lines
Battery type	Alkali manganese
Battery life	150 h
Dimensions	190 x 57 x 42 mm
Weight	300 g

Auto Off	10 min
Material/Housing	ABS
Chann. external (var.)	2
Warranty	2 years

Recommended set
testo 935, Professional Set for industry with printer

- testo 935, thermometer, incl. battery and calibration protocol (Part no. 0560 9350)
- TopSafe (protection case) with bench stand (Part no. 0516 0183)
- Waterproof immersion/penetration probe (Part no. 0602 1292)
- Quick-action surface probe with spring-loaded thermocouple, also for rough surfaces, measuring range short-term up to 500°C (Part no. 0602 0392)
- Testo printer with cordless IRDA and infrared interface, 1 roll of thermal paper and 4 round batteries (Part no. 0554 0547)
- Transport case (plastic) for instrument and accessories (Part no. 0516 0184)

For probes see page 16, 17

See testo 926 (Type T, Cu-CuNi) for more probes

Accessories testo 925/922/935
Part no.
Transport and Protection

testo 925: TopSafe (protection case) with bench stand, Protects measuring instrument from water, dust, impact..., IP68 with waterproof probes (drop symbol) 0516 0186

testo 922/935: TopSafe (protection case) with bench stand, Protects instrument from impact and dirt 0516 0183

Accessories set (for instrument without TopSafe) includes multi-function clip, carrier loop, probe holder 0554 0550

Accessories set (for instrument with TopSafe) includes multi-function clip and probe holder 0554 0552

Transport case (plastic) for instrument and accessories, For safe and orderly storage 0516 0184

Transport case (plastic), For transport and secure storage of measuring instrument and accessories 0516 3120

Additional accessories and spare parts

9V rech. battery for instrument, Instead of battery 0515 0025

Recharger for 9V rechargeable battery, For external recharging of 0515 0025 battery 0554 0025

Calibration certificates

ISO calibration certificate/Temperature, For air/immersion probes, calibration points -18°C; 0°C; +60°C 0520 0001

ISO calibration certificate/TemperatureThermometers with surface probe; calibration points +60°C; +120°C; +180°C 0520 0071

ISO calibration certificate/Temperature Measuring instruments with air/immersion probe; calibration points 0°C; +300°C; +600°C 0520 0031

DKD calibration certificate/TemperatureMeas. instr. with air/immersion probe; calibration points -20°C; 0°C; +60°C 0520 0211

Special accessories for testo 935
Part no.

TopSafe (protection case) with bench stand, Protects instrument from impact and dirt 0516 0183

Testo printer with cordless IRDA and infrared interface, 1 roll of thermal paper and 4 round batteries 0554 0547

Recharger for printer (with 4 standard rech. batteries), Rechargeable batteries are recharged externally 0554 0110



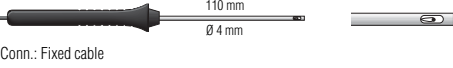



Spare thermal paper for printer (6 rolls) 0554 0569

Spare thermal paper for printer (6 rolls), Measurement data documentation legible for up to 10 years 0554 0568

NiCr-Ni probes	Illustration	Meas. range	Accuracy	t ₉₉	Part no.
<ul style="list-style-type: none"> Waterproof immersion/penetration probe 	<p>110 mm Ø 4 mm 30 mm Ø 3.2 mm</p> <p>Conn.: Fixed cable</p>	-60 to +400 °C	Class 2	7 s	0602 1292
<ul style="list-style-type: none"> Accurate, waterproof food probe made of stainless steel (IP67), resistant to corrosive cleaning agents, oven-proof up to +205°C, (short-term: +250°C) 	<p>125 mm Ø 4 mm 15 mm Ø 3 mm</p> <p>Conn.: Fixed cable</p>	-60 to +400 °C	Class 1	5 s	0602 3392
<ul style="list-style-type: none"> Waterproof food probe made of stainless steel (IP65) 	<p>125 mm Ø 4 mm 30 mm Ø 3.2 mm</p> <p>Conn.: Fixed cable</p>	-60 to +400 °C	Class 2	7 s	0602 2292
<ul style="list-style-type: none"> Waterproof super-quick needle probe, highly accurate measurements without visible penetration hole. Specially for food, ideal for hamburgers, steaks, pizza, eggs etc. 	<p>150 mm Ø 1.4 mm 15 mm Ø 1 mm</p> <p>Conn.: Fixed cable</p>	-60 to +250 °C	Class 1	1 s	0628 0026
<ul style="list-style-type: none"> Robust food penetration probe with special handle, IP 65, reinforced cable (PUR) and reinforced protection from buckling 	<p>115 mm Ø 5 mm 30 mm Ø 3.5 mm</p> <p>Conn.: Fixed cable</p>	-60 to +400 °C	Class 1	6 s	0602 2492
<ul style="list-style-type: none"> Frozen food probe, corkscrew design 	<p>110 mm Ø 8 mm 30 mm Ø 4 mm</p> <p>Conn.: Plug-in cable</p>	-60 to +400 °C	Class 1	15 s	0602 3292
<ul style="list-style-type: none"> Quick-action, waterproof immersion/penetration probe for measurements in viscoplastic material, ideal for plastic, food etc. 	<p>60 mm Ø 3 mm 20 mm Ø 1.5 mm</p> <p>Conn.: Fixed cable</p>	-60 to +800 °C	Class 1	3 s	0602 2692
<ul style="list-style-type: none"> Accurate and quick-action immersion probe, waterproof 	<p>300 mm Ø 1.5 mm 30 mm</p> <p>Conn.: Fixed cable</p>	-60 to +1000 °C	Class 1	2 s	0602 0592
<ul style="list-style-type: none"> Immersion tip, flexible 	<p>500 mm Ø 1.5 mm 30 mm</p>	-200 to +1000 °C	Class 1	5 s	0602 5792
<ul style="list-style-type: none"> Waterproof robust immersion/penetration probe with metal protection hose Tmax 230°C, e.g. for checking the temperature in cooking oil 	<p>240 mm Ø 4 mm 30 mm</p> <p>Conn.: Fixed cable</p>	-50 to +230 °C	Class 1	15 s	0628 1292
<ul style="list-style-type: none"> Stable, robust surface probe with PTFE standing area and metal protection hose Tmax 230°C for cooking surfaces, heating and baking trays 	<p>120 mm Ø 60 mm 30 mm</p> <p>Conn.: Fixed cable</p>	-50 to +230 °C	Class 2	45 s	0628 9992
<ul style="list-style-type: none"> Waterproof surface probe with widened measuring tip for flat surfaces 	<p>110 mm Ø 4 mm 6 mm</p> <p>Conn.: Fixed cable</p>	-60 to +400 °C	Class 2	30 s	0602 1992
<ul style="list-style-type: none"> Quick-action surface probe with spring-loaded thermocouple, also for rough surfaces, measuring range short-term up to 500°C 	<p>150 mm Ø 4 mm 10 mm</p> <p>Conn.: Fixed cable</p>	-60 to +300 °C	Class 2	3 s	0602 0392
<ul style="list-style-type: none"> Quick-action surface probe, bent, with sprung thermocouple strip, also for rough surfaces, measuring range short-term up to +500°C 	<p>80 mm Ø 4 mm 70 mm 10 mm</p> <p>Conn.: Fixed cable</p>	-60 to +300 °C	Class 2	3 s	0602 0992
<ul style="list-style-type: none"> Magnetic probe, adhesive force approx. 20 N, with magnets, for measurements on metal surfaces 	<p>35 mm Ø 20 mm</p> <p>Conn.: Fixed cable</p>	-50 to +170 °C	Class 2		0602 4792
<ul style="list-style-type: none"> Magnetic probe, adhesive force approx. 10 N, with magnets, for higher temp., for measurements on metal surfaces 	<p>75 mm Ø 21 mm</p> <p>Conn.: Fixed cable</p>	-50 to +400 °C	Class 2		0602 4892
<ul style="list-style-type: none"> Accurate, waterproof surface probe with a small measuring head for smooth surfaces 	<p>150 mm Ø 2.5 mm 4 mm</p> <p>Conn.: Fixed cable</p>	-60 to +1000 °C	Class 1	20 s	0602 0692
<ul style="list-style-type: none"> Accurate, waterproof surface probe, bent, with small measuring head for smooth surfaces 	<p>130 mm Ø 2.5 mm 4 mm 20 mm</p> <p>Conn.: Fixed cable</p>	-60 to +1000 °C	Class 1	20 s	0602 0792
<ul style="list-style-type: none"> Pipe wrap probe for pipe diameter 5 to 65 mm, with exchangeable measuring head. Measuring range short-term to +280°C 	<p>35 mm 15 mm</p> <p>Conn.: Fixed cable</p>	-60 to +130 °C	Class 2	5 s	0602 4592
<ul style="list-style-type: none"> Spare meas. head for pipe wrap probe 	<p>35 mm 15 mm</p>	-60 to +130 °C	Class 2	5 s	0602 0092

◆ The measuring instrument inside TopSafe is waterproof with this probe.

testo 925/922/935
Suitable probes at a glance

NiCr-Ni probes	Illustration	Meas. range	Accuracy	t ₉₉	Part no.
Clamp probe for measurements on pipes, pipe diameter 15 to 25 mm (max. 1"), meas. range short-term up to +130°C	 Conn.: Fixed cable	-50 to +100 °C	Class 2	5 s	0602 4692
Pipe wrap probe with Velcro strip, for temperature measurement on pipes with diameter up to max. 120 mm, T _{max} +120°C	 Conn.: Fixed cable	-50 to +120 °C	Class 1	90 s	0628 0020
◆ Robust, affordable air probe	 Conn.: Fixed cable	-60 to +400 °C	Class 2	25 s	0602 1792
Thermocouple, flexible, 800mm long, fibre glass	 800 mm Ø 1.5 mm	-50 to +400 °C	Class 2	5 s	0602 0644
Thermocouple, flexible, 1500mm long, fibre glass	 1500 mm Ø 1.5 mm	-50 to +400 °C	Class 2	5 s	0602 0645
Thermocouple, flexible, 1500mm long, Teflon	 1500 mm Ø 1.5 mm	-50 to +250 °C	Class 2	5 s	0602 0646

◆ The measuring instrument inside TopSafe is waterproof with this probe.

See **testo 926 (Type T, Cu-CuNi)** for more probes

Accessories for temperature probes	Part no.
Handle for attachable measurement tips:	0409 1092
Extension cable, 5m, for Type K thermocouple probe	0554 0592
Silicone heat paste (14g), T _{max} = +260°C, Improves heat transfer in surface probes	0554 0004

testo 720

testo 720 is resistant to corrosive substances when used with the indestructible TopSafe case.

The wide measuring range and accurate four wire technology make it an ideal instrument for everyday laboratory work.

The glass coated laboratory probe with exchangeable glass pipe is resistant to corrosive substances.

testo 720, thermometer, incl. battery and calibration protocol

Part no.
0560 7206

Pt100 laboratory thermometer

- Resistant to corrosive substances when used with TopSafe
- TopSafe with integrated bench stand
- With calibration protocol



Figure with TopSafe

Probes	Illustration	Meas. range	Accuracy	t ₉₉	Part no.
◆ Laboratory probe, glass-coated, exchangeable glass pipe, resistant to corrosive substances	 200 mm Ø 6 mm 30 mm Ø 5 mm Conn.: Fixed cable	-50 to +400 °C	Class A	45 s 12 s*	0609 7072
Glass pipe for laboratory probe					0554 7072
◆ Robust, waterproof immersion/penetration probe	 110 mm Ø 4 mm 30 mm Ø 3.2 mm Conn.: Fixed cable	-50 to +400 °C	Class A	12 s	0609 1272
◆ Robust, accurate food probe (IP 65), stainless steel, PUR cable can be used at up to +80°C, IP 54 plug-in connection	 125 mm Ø 4 mm 15 mm Ø 3 mm Conn.: Fixed cable	-50 to +400 °C	Class A	10 s	0609 2272
◆ Robust, waterproof surface probe with widened measuring tip, for smooth surfaces	 110 mm Ø 4 mm Ø 9 mm Conn.: Fixed cable	-50 to +400 °C	Class B	40 s	0609 1972
◆ Robust, affordable air probe	 110 mm Ø 4 mm Conn.: Fixed cable	-50 to +400 °C	Class A	70 s	0609 1772

◆ The measuring instrument inside TopSafe is waterproof with this probe.

* Without protective glass

Accessories	Part no.
Transport and Protection	
TopSafe (indestructible protection case) with bench stand, Protects thermometer from corrosive substances, water, impact...Instrument has IP68 with all probes	0516 0187
Accessories set (for instrument without TopSafe) includes multi-function clip, carrier loop, probe holder	0554 0550
Accessories set (for instrument with TopSafe) includes multi-function clip and probe holder	0554 0552
Case for instrument and probes, For safe and orderly storage	0516 0182
Additional accessories and spare parts	
9V rech. battery for instrument, Instead of battery	0515 0025
Recharger for 9V rechargeable battery, For external recharging of 0515 0025 battery	0554 0025
Calibration certificates	
ISO calibration certificate/Temperature, For air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001
ISO calibration certificate/Temperature, Thermometers with surface probe; calibration points +60°C; +120°C; +180°C	0520 0071

Recommended set
testo 720, Laboratory set with corrosion-proof probe
- testo 720, thermometer, incl. battery and calibration protocol (Part no. 0560 7206)
- TopSafe (indestructible protection case) with bench stand (Part no. 0516 0187)
- Laboratory probe, glass-coated, exchangeable glass pipe, resistant to corrosive substances (Part no. 0609 7072)

Technical data	
Probe type	Pt100
Meas. range	-100 to +800 °C
Accuracy	±0.2% of mv (+200 to +800 °C) ±1 digit ±0.2 °C (-100 to +199.9 °C)
Resolution	0.1 °C (-100 to +199.9 °C) 1 °C (+200 to +800 °C)
Oper. temp.	0 to +50 °C
Storage temp.	-20 to +70 °C
Battery type	Alkali manganese
Battery life	100 h
Dimensions	190 x 57 x 42 mm
Weight	300 g
Display	LCD, 1 line
Material/Housing	ABS
Other features	Change between °C/°F
Warranty	2 years

Ex-Pt 720

Ex-Pt 720 for fast and accurate temperature measurements in hazardous areas up to Zone 0.

Ex-Pt 720 is the ideal measuring instrument for control measurements on account of its wide measuring range and accurate four-wire technology.

Ex-Pt 720, temperature measuring instrument with holder strap, incl. battery and calibration protocol

Part no.
0560 7236

Highly accurate Ex-Pt thermometer

- Highly accurate
- Wide range of probes
- Fast custom-designed probes service
- Approval in accordance with European and American Standards



Easy to read thanks to large display



LSI, Class I Div 1 A/B/C/D T4

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Probes	Illustration	Meas. range	Accuracy	t ₉₀	Part no.
Robust, water-proof immersion/penetration probe for Zone 1 and 2	 Conn.: Fixed cable	-50 to +400 °C	Class A	12 s	0628 1232
Robust, water-proof surface probe for Zone 1 and 2, with widened measuring tip for flat surfaces	 Conn.: Fixed cable	-50 to +400 °C	Class B	40 s	0628 1932
Robust immersion/penetration probe (IP 65) for Zone 0, 1 and 2, stainless steel, PUR cable can be used for up to +80°C, IP 54 plug-in connection	 Conn.: Fixed cable	-50 to +400 °C	Class A	10 s	0628 2232
Robust immersion probe (IP 67), for Zone 0, 1 and 2, stainless steel, FEP cable can be used at up to 205°C. Application: temperature measurement in petrol and oil tanks. Cable: 25 m long	 Conn.: Fixed cable	-50 to +400 °C	Class A	15 s	0628 2432

Accessories	Part no.
Transport and Protection	
Leather case for thermometer incl. probe holder and positioning clip	0516 0133
Case for instrument and probes	0516 0182
Not for use in Ex-zone	
Transport case (plastic) for instrument and accessories	0516 0184
Not for use in Ex-zone	
Calibration certificates	
ISO calibration certificate/Temperature, For air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001
ISO calibration certificate/Temperature, Measuring instruments with air/immersion probe; calibration points 0°C; +150°C; +300°C	0520 0021
ISO calibration certificate/Temperature Measuring instruments with air/immersion probe; calibration points 0°C; +300°C; +600°C	0520 0031
DKD calibration certificate/Temperature Meas. instr. with air/immersion probe; calibration points -20°C; 0°C; +60°C	0520 0211
DKD calibration certificate/Temperature Meas. instr. with air/immersion probe; cal. points 0°C; +100°C; +200°C	0520 0221
ISO calibration certificate/Temperature Thermometers with surface probe; calibration points +60°C; +120°C; +180°C	0520 0071
DKD calibration certificate/Temperature Contact surface temperature probes; calibration points +100°C; +200°C; +300°C	0520 0271

Technical data	
Probe type	Pt100
Meas. range	-50 to +400 °C
Accuracy	±0.2% of mv (+200 to +400 °C) ±1 digit ±0.2 °C (-50 to +199.9 °C)
Resolution	0.1 °C (-50 to +199.9 °C) 1 °C (+200 to +400 °C)
Oper. temp.	-10 to +50 °C
Storage temp.	-20 to +70 °C
Battery type	9 V, IEC 6LR61
Battery life	100 h
Dimensions	190 x 57 x 42 mm
Weight	200 g
Material/Housing	Housing: ABS, coated
Other features	°C/°F
Warranty	2 years

testo 805

Mini infrared thermometer, pocket-size

The compact 80 mm infrared thermometer fits into any pocket and is always within reach e.g. for measurements in Incoming goods and for checking the cold shelves in supermarkets. Also ideal for rapid measurements in the food industry and in the home.

- Practical and compact, pocket-size
- High accuracy in the critical range for food
- Water-proof and robust on account of dishwasher-safe protection sleeve TopSafe (IP65)
- Minimum and maximum value display
- Scan mode for long-term measurements



testo 805, Mini infrared thermometer and battery

Part no.
0560 8051

Technical data

Probe type	Integrated infrared sensor
Meas. range	-25 to +250 °C
Accuracy	±3 °C (-25 to -21 °C)
±1 digit	±2 °C (-20 to -2.1 °C) ±1 °C (-2 to +40 °C) ±1.5 °C (+40.1 to +150 °C) ±2% of mv (+150.1 to +250 °C)
Resolution	0.1 °C (-9.9 to +199.9 °C) 1 °C (remaining range)

Oper. temp.	0 to +50 °C
Storage temp.	-20 to +65 °C
Material/Housing	ABS
Battery type	1 x lithium type: CR 2032
Battery life	40 h (typical)
Reaction time	< 1.0 s
Emissivity	0.95 (adjustable to 0.95 or 1.00)
Dimensions	80 x 31 x 19 mm
Weight	28 g

Set

Set for fast inspections	Part no.
testo 805 Mini infrared thermometer, TopSafe and battery	0563 8051

Accessories

Accessories	Part no.
TopSafe, robust, waterproof protection case (IP65)	0516 8051
ISO calibration certificate/Temperature, Infrared thermometers, calibration points 0°C, +60°C	0520 0452

testo 830-T1

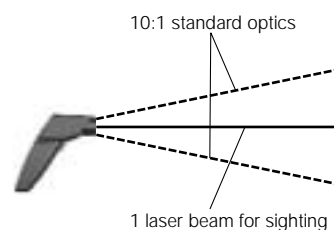
Fast infrared thermometer with laser sighting

The fast and universal infrared thermometer with 1 point laser sighting in ergonomic "pistol design"

- Fast readings
- Laser sighting
- Adjustable alarm limits
- Audible and optical alarm if limits are exceeded
- User-friendly thanks to "Pistol design"
- Backlit display
- Adjustable emission factor (0.2 to 1.0)

testo 830-T1, Infrared thermometer with 1 point laser sighting, adjustable limit values and alarm function

Part no.
0560 8301



Technical data

Probe type	Infrared
Meas. range	-30 to +400 °C
Accuracy	±1.5 °C or 1.5 % of mv
±1 digit	(+0.1 to +400 °C) ±2 °C or 2 % of mv (-30 to 0 °C) The larger value applies
Resolution	0.5 °C

Oper. temp.	-20 to +50 °C
Storage temp.	-40 to +70 °C
Battery type	9V block battery
Battery life	15 h
Dimensions	190 x 75 x 38 mm
Weight	200 g

Accessories

Accessories	Part no.
Adhesive tape e.g. for polished surfaces (roll, 10 m long, 25 mm wide), E = 0.93, temperature resistant up to +300°C	0554 0051
Leather case to protect measuring instrument, including belt holder	0516 8302
ISO calibration certificate/Temperature, Infrared thermometer; calibration points +60°C; +120°C; +180°C	0520 0002

testo 830-T2
Infrared thermometer with laser sighting and probe socket

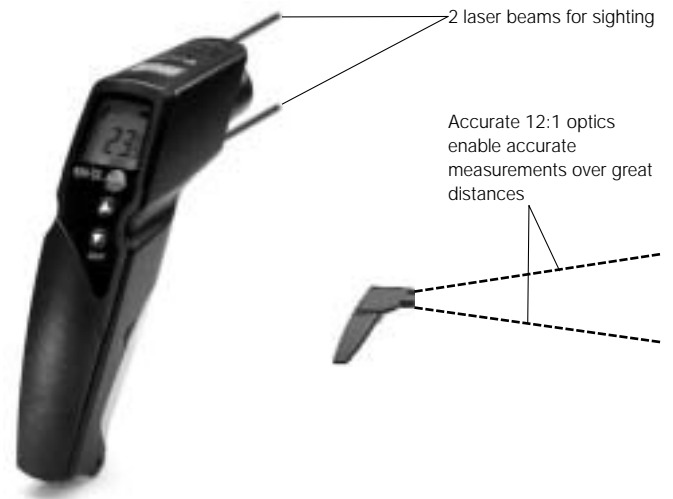
The fast and universal infrared thermometer with 2 point laser sighting and connection option for external Type K probe for contact measurement.

In addition to the benefits of testo 830-T1:

- Accurate 2 point sighting
- Connection of external temperature probes
- Emissivity measurement with external T/C probe

testo 830-T2, Infrared thermometer with 2 point laser sighting, adjustable limit values, alarm function and connection of external probes

Part no.
0560 8302



Technical data		
Probe type	Infrared	Type K (NiCr-Ni)
Meas. range	-30 to +400 °C	-50 to +500 °C
Accuracy ±1 digit	±1.5 °C or 1.5 % of mv (+0.1 to +400 °C) ±2 °C or 2 % of mv (-30 to 0 °C) The larger value applies	±(0.5 °C ±0.5 % of mv)
Resolution	0.5 °C	0.1 °C

Oper. temp.	-20 to +50 °C
Storage temp.	-40 to +70 °C
Battery type	9V block battery
Battery life	15 h
Dimensions	190 x 75 x 38 mm
Weight	200 g

Set	Part no.
testo 830-T2 Set	
- testo 830-T2, Infrared thermometer with 2 point laser sighting, adjustable limit values, alarm function and connection of external probes	0563 8302
- Quick-action surface probe with spring-loaded thermocouple, also for rough surfaces, measuring range short-term up to 500°C	
- Leather case to protect measuring instrument, including belt holder	

Accessories	Part no.
Adhesive tape e.g. for polished surfaces (roll, 10 m long, 25 mm wide), E = 0.93, temperature resistant up to +300°C	0554 0051
Leather case to protect measuring instrument, including belt holder	0516 8302
ISO calibration certificate/Temperature, Infrared thermometer; calibration points +60°C; +120°C; +180°C	0520 0002
ISO calibration certificate/Temperature, For air/immersion probes, calibration point +60°C	0520 0063
ISO calibration certificate/Temperature, For air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001
ISO calibration certificate/Temperature, Thermometers with surface probe; calibration points +60°C; +120°C; +180°C	0520 0071

NiCr-Ni probes	Illustration	Meas. range	Accuracy	t ₉₀	Part no.
Waterproof immersion/penetration probe	 Conn.: Fixed cable	-60 to +400 °C	Class 2	7 s	0602 1292
Quick-action surface probe with spring-loaded thermocouple, also for rough surfaces, measuring range short-term up to 500°C	 Conn.: Fixed cable	-60 to +300 °C	Class 2	3 s	0602 0392
Robust, affordable air probe	 Conn.: Fixed cable	-60 to +400 °C	Class 2	25 s	0602 1792

For additional probes see testo 922/925/935

testo 826-T1

Food infrared thermometer

testo 826-T1 for non-contact and quick temperature checks on food - packaging is not damaged. The adjustable alarm (flashing display) indicates immediately if a limit value has been exceeded.

testo 826-T1, Infrared thermometer without sighting, with TopSafe and wall/belt holder

Part no.
0563 8261

- Screening test - measurement, without damaging the packaging
- Small and practical
- Upper and lower limit value monitoring with optical alarm (flashing display)
- Included: TopSafe (IP67) protection case, robust and hygienic, dishwasher-safe
- TopSafe case protects the instrument from dust, dirt and water ingress
- Wall/belt holder included
- Water-proof and robust thanks to TopSafe (IP67)



Technical data	
Meas. range	-50 to +300 °C
Accuracy ±1 digit	±1.5 °C (-20 to +100 °C) ±2 °C or 2% of mv (remaining range)
Resolution	0.5 °C
Oper. temp.	0 to +50 °C
Storage temp.	-40 to +70 °C

Battery type	2 lithium batteries (CR2032)
Battery life	Approx. 150 h
Dimensions	148 x 34.4 x 19 mm
Display	LCD, 1 line
Weight	80 g
Warranty	2 years

Accessories	Part no.
ISO calibration certificate/Temperature, For air/immersion probes, calibration point -18°C	0520 0061
ISO calibration certificate/Temperature, For air/immersion probes, calibration point 0°C	0520 0062
ISO calibration certificate/Temperature, Infrared thermometers, calibration points -18°C, 0°C, +60°C	0520 0401

testo 825-T2
Infrared thermometer with laser sighting

In addition to the above-mentioned advantages of testo 825-T1, testo 825-T2 also has laser sighting and an audible alarm which sounds if the limit value is exceeded.

- All the advantages of testo 825-T1

testo 825-T2, infrared thermometer with laser sighting and audible alarm, incl. TopSafe and wall/belt holder

Part no.
0560 8256


Technical data

Meas. range	-50 to +400 °C
Accuracy ±1 digit	±2% of mv (+100.1 to +400 °C) ±2 °C (-50 to +100 °C)
Resolution	0.5 °C (-50 to +400 °C)

Oper. temp.	0 to +50 °C
Storage temp.	-40 to +70 °C
Battery type	2 AAA micro batteries
Battery life	20 h
Dimensions	184 x 43.4 x 19 mm
Display	LCD, 1 line
Weight	80 g
Warranty	2 years

Accessories

Accessories	Part no.
Adhesive tape e.g. for polished surfaces (roll, 10 m long, 25 mm wide), E = 0.93, temperature resistant up to +300°C	0554 0051
ISO calibration certificate/Temperature, Infrared thermometers, calibration point +60°C	0520 0473
ISO calibration certificate/Temperature, Infrared thermometers, calibration points -18°C, 0°C, +60°C	0520 0401

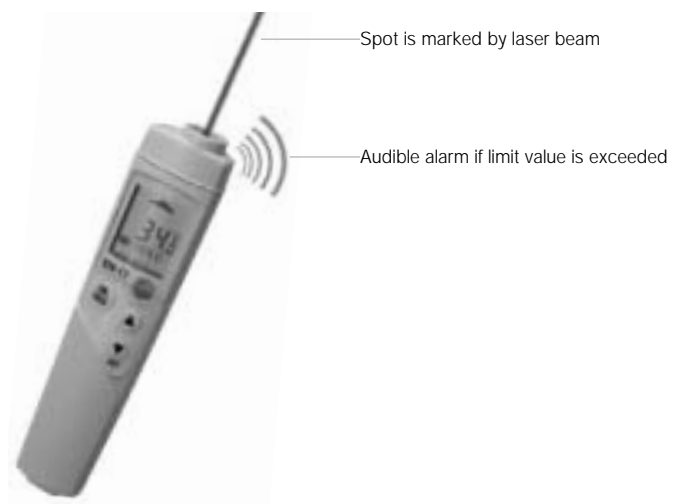
testo 826-T2
Food infrared thermometer with laser sighting

In addition to the above advantages of testo 826-T1, testo 826-T2 has laser sighting and an audible alarm which signals when a fixed limit value has been exceeded.

- All of the advantages of testo 826-T1

testo 826-T2, Infrared thermometer with laser sighting and audible alarm, incl. TopSafe and wall/belt holder

Part no.
0563 8262


Technical data

Meas. range	-50 to +300 °C
Accuracy ±1 digit	±1.5 °C (-20 to +100 °C) ±2 °C or 2% of mv (remaining range)
Resolution	0.5 °C
Oper. temp.	-20 to +50 °C

Storage temp.	-40 to +70 °C
Battery type	2 AAA micro batteries
Battery life	Approx. 20 h
Dimensions	148 x 34.4 x 19 mm
Display	LCD, 1 line
Weight	80 g
Warranty	2 years

Accessories

Accessories	Part no.
ISO calibration certificate/Temperature, For air/immersion probes, calibration point -18°C	0520 0061
ISO calibration certificate/Temperature, For air/immersion probes, calibration point 0°C	0520 0062
ISO calibration certificate/Temperature, For air/immersion probes, calibration points -18°C; 0°C	0520 0041
ISO calibration certificate/Temperature, Infrared thermometers, calibration points -18°C, 0°C, +60°C	0520 0401

testo 826-T3

Infrared thermometer with penetration probe

testo 826-T3, quick non-contact measurement and core temperature measurement in one instrument. The surface temperature is measured with the infrared side while the measuring tip on the penetration side is used to determine the core temperature.

testo 826-T3, 2 in 1 thermometer incl. TopSafe, wall/belt holder, probe protection cap and frozen food drill

Part no.
0563 8263

- Penetration thermometer and non-contact infrared thermometer in one compact instrument
- Spot check with infrared side without damaging packaging
- Core temperature measurement with thin, robust measuring tip
- Upper and lower limit value monitoring with optical alarm (flashing display)
- TopSafe case protects instrument from dust, dirt, impact and water ingress



Technical data			
Probe type	Infrared	NTC	
Meas. range	-50 to +300 °C	-50 to +230 °C	
Accuracy ±1 digit	±1.5 °C (-20 to +100 °C) ±2 °C or 2% of mv (remaining range)	±0.5 °C (-20 to +99.9 °C) ±1 °C or 1% of mv (remaining range)	
Resolution	0.5 °C	0.1 °C	
Oper. temp.	0 to +50 °C	Display	LCD, 1 line
Storage temp.	-40 to +70 °C	Weight	80 g
Battery type	2 lithium batteries (CR2032)	Dimensions	148 x 34.4 x 19 mm
Battery life	Approx. 100 h	Warranty	2 years

Accessories	Part no.
ISO calibration certificate/Temperature, For air/immersion probes, calibration point -18°C	0520 0061
ISO calibration certificate/Temperature, For air/immersion probes, calibration point 0°C	0520 0062
ISO calibration certificate/Temperature, For air/immersion probes, calibration points -18°C; +60°C	0520 0043
ISO calibration certificate/Temperature, For air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001

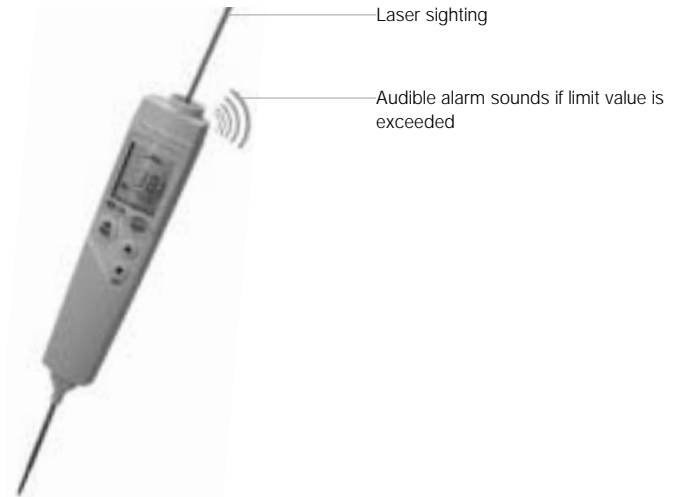
testo 826-T4
Infrared thermometer with penetration probe and laser sighting

testo 826-T4 is the top model from the testo 826 series. In addition to the above-mentioned benefits of testo 826-T3, testo 826-T4 also has a laser sighting and a reliable audible alarm.

- All the advantages of testo 826-T3

testo 826-T4, 2 in 1 thermometer with laser and alarm, TopSafe, wall/belt holder, protection cap and frozen food drill

Part no.
0563 8264


Technical data

Probe type	Infrared	NTC
Meas. range	-50 to +300 °C	-50 to +230 °C
Accuracy ±1 digit	±1.5 °C (-20 to +100 °C) ±2 °C or 2% of mv (remaining range)	±0.5 °C (-20 to +99.9 °C) ±1 °C or 1% of mv (remaining range)
Resolution	0.5 °C	0.1 °C

Oper. temp.	-20 to +50 °C
Storage temp.	-40 to +70 °C
Battery type	2 AAA micro batteries
Battery life	Approx. 15 h

Display	LCD, 1 line
Weight	80 g
Dimensions	148 x 34.4 x 19 mm
Warranty	2 years

Accessories

Accessories	Part no.
ISO calibration certificate/Temperature, For air/immersion probes, calibration point -18°C	0520 0061
ISO calibration certificate/Temperature, For air/immersion probes, calibration point 0°C	0520 0062
ISO calibration certificate/Temperature, For air/immersion probes, calibration points -18°C; +60°C	0520 0043
ISO calibration certificate/Temperature, For air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001

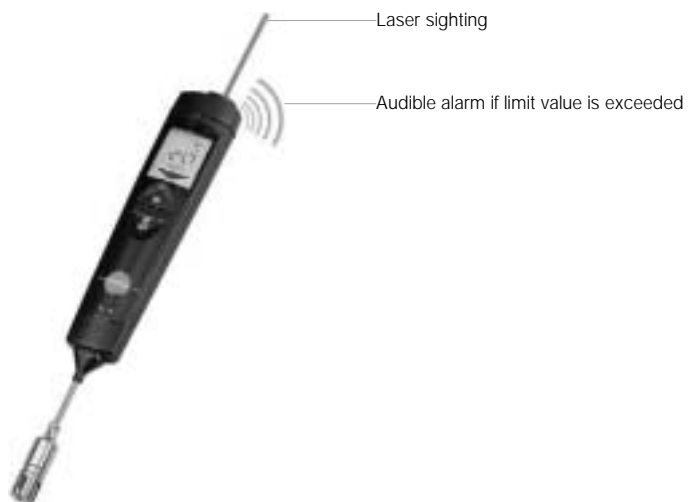
testo 825-T4
Infrared thermometer with surface probe and laser sighting

testo 825-T4, the top model in the testo 825 series. In addition to the above-mentioned advantages of testo 825-T3, testo 825-T4 also has laser sighting and a reliable audible alarm.

- All the advantages of testo 825-T3

testo 825-T4, 2 in 1 thermometer with laser and alarm, incl. TopSafe and wall/belt holder

Part no.
0560 8258


Technical data

Probe type	Infrared	Type K (NiCr-Ni)
Meas. range	-50 to +400 °C	-50 to +250 °C
Accuracy ±1 digit	±2% of mv (+100.1 to +400 °C) ±2 °C (-50 to +100 °C)	±(1 °C ±1% of mv) (-50 to +250 °C)
Resolution	0.5 °C (-50 to +400 °C)	0.1 °C (-50 to +250 °C)

Oper. temp.	0 to +50 °C
Storage temp.	-40 to +70 °C
Battery type	2 AAA micro batteries
Battery life	20 h

Display	LCD, 1 line
Weight	80 g
Dimensions	184 x 43.4 x 19 mm
Warranty	2 years

Accessories

Accessories	Part no.
Adhesive tape e.g. for polished surfaces (roll, 10 m long, 25 mm wide), E = 0.93, temperature resistant up to +300°C	0554 0051
ISO calibration certificate/Temperature, Thermometers with surface probe; calibration points +60°C; +120°C; +180°C	0520 0071
ISO calibration certificate/Temperature, Single point calibration for surface thermometer; calibration point +120°C	0520 0073
ISO calibration certificate/Temperature, Infrared thermometer; calibration points +60°C; +120°C; +180°C	0520 0002

testo 850-1

Infrared thermometer with mini spot

The compact infrared thermometer testo 850-1 with optical LED sighting is suitable for measurements on electronic components, for example.

- Small LED spot, Ø 2.5mm at distance of 30mm

- For sighting objects at short distances
- Freely adjustable emissivity from 0.10 to 1.00
- Alarm function, audible and optical



testo 850-1, infrared thermometer, with LED sighting, case and battery

Part no.
0560 8501

Technical data			
Meas. range	-50 to +500 °C	Reaction time	1 s
Accuracy ±1 digit	±1% of mv (+200 to +400 °C)	Reaction type	t_{99}
	±2 °C (0 to +199 °C)	Display	LCD, 1 line
	±(2 °C ±10% of mv) (-30 to -1 °C)	Weight	140 g
Resolution	1 °C (-50 to +500 °C)	Dimensions	165 x 35 x 30 mm
Oper. temp.	0 to +40 °C	Warranty	2 years
Storage temp.	-20 to +70 °C	LED sighting. Spot/distance: diameter of 2.5mm at distance of 30mm. Emissivity setting: 0.10 to 1.00. Response time less than 1.5 s. Accuracy, typical: ±1°C (-30 to +199°C); ±1% (+200 to +500°C).	
Battery type	4 AAA micro batteries		
Battery life	100 h		

Accessories	Part no.
Adhesive tape e.g. for polished surfaces (roll, 10 m long, 25 mm wide), E = 0.93, temperature resistant up to +300°C	0554 0051
Rech. batt. set for instr. (4 x 1.24V), instead of batteries	0515 0088
Recharger, for external recharging of batteries	0554 0114
ISO calibration certificate/Temperature, Infrared thermometer; calibration points +60°C; +120°C; +180°C	0520 0002

testo 850-2

Infrared thermometer with teleoptics

The compact testo 850-2 infrared thermometer has an optical laser sighting with 2 laser beams for large distances from the object being measured.

- Laser spot - Diameter of 72mm at distance of 1000mm

- Small sighting circle even at large distance from object
- Freely adjustable emissivity from 0.10 to 1.00
- Alarm function, audible and optical



testo 850-2, infrared thermometer, with laser sighting, case and battery

Part no.
0560 8502

Technical data			
Meas. range	-50 to +500 °C	Reaction time	1 s
Accuracy ±1 digit	±1% of mv (+200 to +400 °C)	Reaction type	t_{99}
	±2 °C (0 to +199 °C)	Display	LCD, 1 line
	±(2 °C ±10% of mv) (-30 to -1 °C)	Weight	140 g
Resolution	1 °C (-50 to +500 °C)	Dimensions	165 x 35 x 30 mm
Oper. temp.	0 to +40 °C	Warranty	2 years
Storage temp.	-20 to +70 °C	Sighting with 2 laser beams. Meas. spot/Distance: 72mm diameter at a distance of 1000mm. Emissivity setting: 0.10 to 1.00. Response time less than 1.5 s. Accuracy, typical: ±1°C (-30 to +199°C); ±1% (+200 to +500°C).	
Battery type	4 AAA micro batteries		
Battery life	100 h		

Accessories	Part no.
Adhesive tape e.g. for polished surfaces (roll, 10 m long, 25 mm wide), E = 0.93, temperature resistant up to +300°C	0554 0051
Rech. batt. set for instr. (4 x 1.24V), instead of batteries	0515 0088
Recharger, for external recharging of batteries	0554 0114
ISO calibration certificate/Temperature, Infrared thermometer; calibration points +60°C; +120°C; +180°C	0520 0002

testo 860-T1
Infrared thermometer with laser sighting

The testo 860-T1 measures a temperature range from -30 to +900°C quickly and without contact. The laser sighting shows the area being measured so you always know exactly where you are measuring.

The 60:1 focus optics ratio makes accurate long distance measurements possible. The display automatically charts the last ten temperature points using maximum and minimum values to establish the trend.

- Alarm function, audible and visual
- Freely adjustable emissivity 0.10 to 1.00
- Easy-to-read display
- Materials table (preset emissivities)



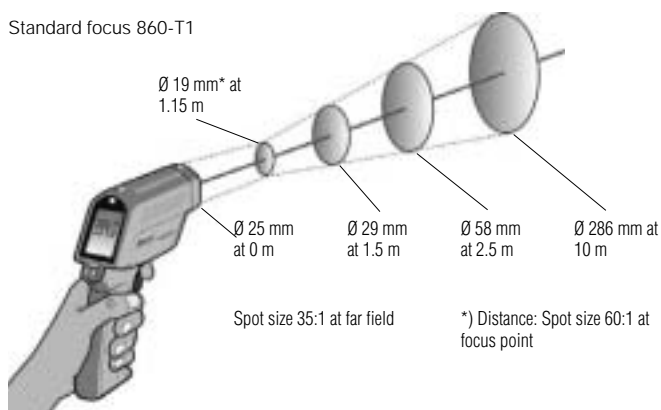
testo 860-T1, infrared thermometer with standard focus, incl. transport case and batteries

Part no.
0560 8601

Technical data	
Probe type	Infrared
Meas. range	-30 to +900 °C
Accuracy ±1 digit	±0.75% of mv (+75 to +900 °C) ±0.75 °C (-4.9 to +74.9 °C) ±2 °C (-30 to -5 °C)
Resolution	0.1 °C (-30 to +900 °C)
Oper. temp.	0 to +45 °C
Storage temp.	-20 to +50 °C
Battery type	2 AAA micro batteries
Battery life	10 h
Reaction type	t_{95}
Reaction time	0.25 s
Oper. humidity	+10 to +95 %RH
Display	LCD graphics display
Material/Housing	ABS
Dimensions	200 x 170 x 50 mm
Weight	480 g
Warranty	2 years
Reproducibility: ±0.5% of reading or ±1°C, the larger value applies	
Spectral sensitivity: 8 to 14 µm	

Accessories	Part no.
Adhesive tape e.g. for polished surfaces (roll, 10 m long, 25 mm wide), E = 0.93, temperature resistant up to +300°C	0554 0051
ISO calibration certificate/Temperature, Infrared thermometer; calibration points +60°C; +120°C; +180°C	0520 0002
ISO calibration certificate/Temperature, Infrared thermometers, calibration points -18°C, 0°C, +60°C	0520 0401
ISO calibration certificate/Temperature, Infrared thermometers, calibration points -18°C, 0°C	0520 0451
ISO calibration certificate/Temperature, Infrared thermometers, calibration points 0°C, +60°C	0520 0452
ISO calibration certificate/Temperature, Infrared thermometers, calibration points -18°C, +60°C	0520 0453
ISO calibration certificate/Temperature, Infrared thermometers, calibration point -18°C	0520 0471
ISO calibration certificate/Temperature, Infrared thermometers, calibration point +60°C	0520 0473

Standard focus 860-T1



testo 174

Mini datalogger

The testo 174 mini temperature data logger is ideal for accompanying transports. The logger is simply placed beside the product e.g. in aeroplanes, containers, refrigerated rooms etc. and constantly monitors the fluctuations in temperature unobtrusively.

- Secure Data - even if battery is spent
- Current reading is shown on large display
- Data upload to PC or notebook via interface (optional)
- Fast data transfer - Data is read out from memory in 10 s.



testo 174, Mini temperature data logger, 1 channel, incl. wall holder, lock and battery

Part no.
0563 1741

Technical data

Probe type	NTC
Meas. range	-30 to +70 °C
Accuracy ±1 digit	±0.5 °C (-20 to +39.9 °C) ±0.8 °C (remaining range)
Resolution	0.1 °C
Oper. temp.	-30... +70 °C
Storage temp.	-40... +70 °C
Battery type	3V button cell (CR 2032)
Battery life	500 days (typical)
Protection class	IP65
Measuring rate	1 min to 4 h (selectable)

Memory	3900 readings
Display	LCD, 1 line
Weight	24 g
Dimensions	55 x 35 x 14 mm
Battery life:	500 days (typical)
Meas. rate:	1 min to 4 h (selectable)
Software:	Microsoft Windows 95b / 98 / ME / NT2-Sp4 / 2000 / XP

Set

testo 174 Mini temperature data logger, 1 channel, ComSoft 3 Basic, wall holder, lock, interface incl. PC connection cable, battery

Part no.

0563 1742

Accessories

Spare Li cell to save RAM data, When changing battery or rechargeable battery

Part no.

0515 0028

Transport case for up to 10 testo 174 dataloggers and accessories

0516 1740

ComSoft 3 - Professional with data management, Incl. database, analysis and graphics function, data analysis, trend curve

0554 0830

Interface, suitable for testo 174 datalogger, incl. PC connection cable

0554 1746

ISO calibration certificate/Temperature, Temperature datalogger, calibration points -18°C, +60°C

0520 0443



testo 175-T1

Compact data logger

The testo 175-T1 temperature data logger, ideal for accompanying goods, guarantees uninterrupted documentation of the complete refrigeration chain.

The testo 575 fast printer provides proof that the goods have adhered to the specified temperature. All of the data which have been collected by the testo 580 data collector can be sent to your PC for analysis, if required.

- Provides quick overview of current reading, last value saved, max/min value, number of times limits exceeded
- Non-volatile memory for secure data, even if battery is spent
- On-site: Fast documentation with infrared printer, 6 lines/s
- On site: Reset and boot up

testo 175-T1, temperature data logger, 1 channel with internal sensor, incl. wall holder and calibration protocol

Part no.
0563 1754



Actual size

Accessories Part no.

Transport and Protection	
Transport case for up to 5 testo 175 dataloggers, testo 575 printer, testo 580 data collector and accessories	0516 1750
Lock for wall holder for testo 175/177 dataloggers	0554 1755

Additional accessories and spare parts

Battery, 3.6 V/1.9 Ah 1AA, for testo 175-T1/175-T2 and all testo 177 loggers	0515 0177
testo 580 data collector including readout holders, For testo 175/177 dataloggers	0554 1778
testo 581 alarm signal output, floating, for testo 175/177, Forwards information efficiently when limits are exceeded to e.g. horns, lamps, PLC etc.	0554 1769

Printer and accessories

Fast testo 575 printer, incl. 1 roll of thermal paper and batteries, Infrared thermal line printer with graphics function	0554 1775
Spare thermal paper for printer (6 rolls)	0554 0569
Spare thermal paper for printer (6 rolls), Measurement data documentation legible for up to 10 years	0554 0568
Label thermal paper (Testo patent) for testo 575 printer (6 rolls), can be applied directly	0554 0561

Software and accessories

ComSoft 3 Set - Basic with RS 232 interface, Basic software with diagram and table function, incl. desk-top holder, PC connection cable	0554 1759
ComSoft 3 - Basic Set with USB interface for testo 175, Basic software with diagram and table function, incl. desk-top holders, PC connection cable	0554 1766
ComSoft 3 - Professional with data management, Incl. database, analysis and graphics function, data analysis, trend curve (without interface)	0554 0830
ComSoft 3 - For requirements to CFR 21 Part 11, Incl. database, analysis and graphics function, data analysis, trend curve	0554 0821
RS 232 interface for testo 175/177 incl. desk-top holders, PC connection cable, (please also order for ComSoft 3 - Professional)	0554 1757
USB interface, for testo 175/177 incl. desk-top holders, PC conn. cable, (Please order with ComSoft 3 - Professional)	0554 1768
Ethernet adapter, RS 232 - Ethernet incl. software driver, mains unit, Facilitates data communication in network	0554 1711
Calibration certificates	
ISO calibration certificate/Temperature, Temp. datalogger; calibration points -18°C; 0°C; +60°C per channel/instrument	0520 0151
DKD calibration certificate/Temperature, Temp. datalogger; cal. points -20°C; 0°C; +60°C; per channel/instrument	0520 0261

Recommended set

testo 175-T1, Starter Set	
- testo 175-T1, temperature data logger, 1 channel with internal sensor, incl. wall holder and calibration protocol (Part no. 0563 1754)	
- Lock for wall holder for testo 175/177 dataloggers (Part no. 0554 1755)	
- ComSoft 3 Set - Basic with RS 232 interface, Basic software with diagram and table function, incl. desk-top holder, PC connection cable (Part no. 0554 1759)	

Technical data

Probe type	NTC (internal)	Measuring rate	10 s ... 24 h
Meas. range	-35 to +70 °C	Memory	7800
Accuracy	±0.5 °C (-20 to +70 °C) ±1 digit	Weight	90 g
Resolution	0.1 °C (-20 to +70 °C) 0.3 °C (-35 to -20.1 °C)	Dimensions	82 x 52 x 30 mm
Oper. temp.	-35 to +70 °C	Warranty	2 years
Storage temp.	-40 to +85 °C	Battery life: 2.5 years at a measuring cycle of 15 min (-10 to +50°C)	
Battery type	Lithium battery	Measuring cycle: 10 s to 24 h	
Material/Housing	ABS	Software: Microsoft Windows 95b / 98 / ME / NT4-Sp4 / 2000 / XP	
Protection class	IP68		

testo 175-T2

With an additional external probe connection, the testo 175-T2 temperature datalogger provides a further temperature measurement option.

The datalogger is attached to the wall to monitor air temperature, for example, and the separate probe is placed by the goods. testo 175-T2 provides information on the connection between ambient and product temperature.

Temperature datalogger, 2 channels, with internal sensor and external probe socket, wall holder and calibration protocol

Part no.
0563 1755

Log temperature – Simultaneously at two sites

- Monitors 2 temperatures simultaneously
- Fast overview of the current reading, the value last saved, the max/min values, the number of limits exceeded
- User-friendly operation, convenient analysis
- Collect data on site, upload to PC and analyse
- Tamper-proof with wall holder and lock (optional)
- On site: Reset and reboot



Actual size

Probes (NTC)	Illustration	Meas. range	Accuracy	t ₉₉	Part no.
◆ Stub probe, IP 54	35 mm Ø 3 mm	-20 to +70 °C	±0.2 °C (-20 to +40 °C) ±0.4 °C (+40.1 to +70 °C)	15 s	0628 7510
◆ Mounting probe with aluminium sleeve, IP 65	40 mm Ø 6 mm Conn.: Fixed cable; Cable/Length: 2.4 m	-30 to +90 °C	±0.2 °C (0 to +70 °C) ±0.5 °C (remaining range)	190 s	0628 7503*
◆ Refrigeration storeroom probe with aluminium sleeve, IP 54, with silicone insulated ribbon cable	40 mm Ø 3 mm	-40 to +90 °C (Short-term to +105 °C)	±0.2 °C (0 to +70 °C) ±0.4 °C (-35 to 0 °C) ±0.5 °C (remaining range)	190 s	0628 0042*
◆ Accurate imm./pen. probe, 6m cable, IP 67	40 mm Ø 3 mm Conn.: Fixed cable; Cable/Length: 6 m	-35 to +80 °C	±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	5 s	0610 1725*
◆ Accurate immersion/penetration probe, cable: 1.5 m long, IP 67	40 mm Ø 3 mm Conn.: Fixed cable; Cable/Length: 1.5 m	-35 to +80 °C	±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	5 s	0628 0006*
◆ Screw-in probes for measurements at hard-to-access points, M6 thread, IP 54	40 mm Conn.: Fixed cable; Cable/Length: 2 m	-50 to +80 °C	±0.5% of mv	70 s	0628 7514*
Probe for surface measurement	40 mm 8 x 8 mm Conn.: Fixed cable; Cable/Length: 2 m	-50 to +80 °C	±0.2 °C (0 to +70 °C)	150 s	0628 7516*
Wall surface temperature probe, e.g. to prove damage in building material	40 mm Conn.: Fixed cable; Cable/Length: 3 m	-50 to +80 °C	±0.2 °C (0 to +70 °C)	20 s	0628 7507
Pipe probe with Velcro, for pipe diameter of max. 80 mm	300 mm 30 mm Conn.: Fixed cable; Cable/Length: 1.5 m	-50 to +70 °C	±0.2 °C (-25 to +70 °C) ±0.4 °C (-50 to -25.1 °C)		0613 4611
◆ Food probe (IP65) stainless steel, PUR cable can be used at up to +80°C, IP54 plug-in connection	125 mm Ø 4 mm Conn.: Fixed cable; Cable/Length: 1.5 m	-50 to +150 °C ²⁾	±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	8 s	0613 2211*
◆ Robust food penetration probe with special handle, IP 65, reinforced cable (PUR) and reinforced protection against buckling	115 mm Ø 5 mm Conn.: Fixed cable; Cable/Length: 1.4 m	-50 to +150 °C ²⁾	±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	7 s	0613 2411*
◆ Frozen food probe, corkscrew design	110 mm Ø 8 mm Conn.: Plug-in cable	-50 to +140 °C ²⁾	±0.5% of mv (+100 to +140 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	20 s	0613 3211*

◆ The specified seal class of the dataloggers is achieved with these probes.

* Probe tested to EN 12830 for suitability in the transport and storage sectors
2) Long-term measurement range +125°C, short-term +150°C or +140°C (2 minutes)

For additional probes see testo 945

testo 175-T2
Accessories / Technical data

Probes (NTC)	Illustration	Meas. range	Accuracy	t ₉₉	Part no.
Robust, affordable air probe to check storage temperatures		-50 to +150 °C ²⁾	±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	60 s	0613 1711*
Robust industrial penetration probe for compost, hay, silage and earth measurements		-35 to +120 °C	To UNI curve	16 s	Included in set, see above, Part no. 0628 0134

* Probe tested to EN 12830 for suitability in the transport and storage sectors
2) Long-term measurement range +125°C, short-term +150°C or +140°C (2 minutes)

For additional probes see testo 945

Accessories	Part no.
Transport and Protection	
Transport case for up to 5 testo 175 dataloggers, testo 575 printer, testo 580 data collector and accessories	0516 1750
Lock for wall holder for testo 175/177 dataloggers	0554 1755

Additional accessories and spare parts	Part no.
Battery, 3.6 V/1.9 Ah 1AA, for testo 175-T1/175-T2 and all testo 177 loggers	0515 0177
testo 580 data collector including readout holders, For testo 175/177 dataloggers	0554 1778
testo 581 alarm signal output, floating, for testo 175/177, Forwards information efficiently when limits are exceeded to e.g. horns, lamps, PLC etc.	0554 1769

Printer and accessories	Part no.
Fast testo 575 printer, incl. 1 roll of thermal paper and batteries, Infrared thermal line printer with graphics function	0554 1775
Spare thermal paper for printer (6 rolls)	0554 0569
Spare thermal paper for printer (6 rolls), Measurement data documentation legible for up to 10 years	0554 0568
Label thermal paper (Testo patent) for testo 575 printer (6 rolls), can be applied directly	0554 0561

Software and accessories	Part no.
ComSoft 3 Set - Basic with RS 232 interface, Basic software with diagram and table function, incl. desk-top holder, PC connection cable	0554 1759
ComSoft 3 - Basic Set with USB interface for testo 175, Basic software with diagram and table function, incl. desk-top holders, PC connection cable	0554 1766
ComSoft 3 - Professional with data management, Incl. database, analysis and graphics function, data analysis, trend curve	0554 0830
ComSoft 3 - For requirements to CFR 21 Part 11, Incl. database, analysis and graphics function, data analysis, trend curve	0554 0821
RS 232 interface for testo 175/177 incl. desk-top holders, PC connection cable, (please also order for ComSoft 3 - Professional)	0554 1757
USB interface, for testo 175/177 incl. desk-top holders, PC conn. cable, (Please order with ComSoft 3 - Professional)	0554 1768
Ethernet adapter, RS 232 - Ethernet incl. software driver, mains unit, Facilitates data communication in network	0554 1711

Calibration certificates	Part no.
ISO calibration certificate/Temperature, Temp. datalogger; calibration points -18°C; 0°C; +60°C per channel/instrument	0520 0151
DKD calibration certificate/Temperature, Temp. datalogger; cal. points -20°C; 0°C; +60°C; per channel/instrument	0520 0261

Set	Part no.
testostor 175-2, temperature data logger, 2 channels, with internal sensor, robust industrial penetration probe 1.5 m, handles, protection case PP, battery	0628 0134

Recommended set
testo 175-T2, Starter Set
- Temperature datalogger, 2 channels, with internal sensor and external probe socket, wall holder and calibration protocol (Part no. 0563 1755)
- Lock for wall holder for testo 175/177 dataloggers (Part no. 0554 1755)
- Mounting probe with aluminium sleeve, IP 65 (Part no. 0628 7503)
- ComSoft 3 Set - Basic with RS 232 interface (Part no. 0554 1759)

testo 175-T2, Monitoring Set with External Probe
- Temperature datalogger, 2 channels, with internal sensor and external probe socket, wall holder and calibration protocol (Part no. 0563 1755)
- Lock for wall holder for testo 175/177 dataloggers (Part no. 0554 1755)
- Food probe (IP65) stainless steel, PUR cable can be used at up to +80°C, IP54 plug-in connection (Part no. 0613 2211)
- ComSoft 3 Set - Basic with RS 232 interface (Part no. 0554 1759)

testo 175-T2, Set for Logging 2 Temperatures
- Temperature datalogger, 2 channels, with internal sensor and external probe socket, wall holder and calibration protocol (Part no. 0563 1755)
- Lock for wall holder for testo 175/177 dataloggers (Part no. 0554 1755)
- Accurate immersion/penetration probe, cable: 1.5 m long, IP 67 (Part no. 0628 0006)
- ComSoft 3 Set - Basic with RS 232 interface (Part no. 0554 1759)

Technical data	Chann. intern		Channel, external
	Probe type	NTC	NTC
Meas. range	-35 to +70 °C	-40 to +120 °C	
Accuracy ±1 digit	±0.5 °C (-20 to +70 °C) ±1 °C (remaining range)	±0.3 °C (-25 to +70 °C) ±0.5 °C (remaining range)	
Resolution	0.1 °C (-20 to +70 °C) 0.3 °C (remaining range)	0.1 °C (-25 to +70 °C) 0.3 °C (remaining range)	

Oper. temp.	-35 to +70 °C	Dimensions	82 x 52 x 30 mm
Storage temp.	-40 to +85 °C	Warranty	2 years
Battery type	Lithium battery	Battery life: 2.5 years at measuring cycle of 15 min (-10 to +50°C)	
Material/Housing	ABS	Measuring cycle: 10 s to 24 h	
Protection class	IP68	Software: Microsoft Windows 95b / 98 / ME / NT4-Sp4 / 2000 / XP	
Memory	16000		
Weight	84 g		

Testo printer

The universal printer with IRDA and infrared interface saves you time since it saves the print data prior to printing. Data transfer is completed within 2 seconds. The instrument is then immediately ready for operation.

The readings are saved black on white with date and time.

Testo printer with cordless IRDA and infrared interface, 1 roll of thermal paper and 4 round batteries

Part no.
0554 0547

Versatile infrared printer



Technical data

Printer type	Infrared-controlled thermal printer, adjustable contrast, prints graphics
Reception radius	Max. 2 m
Dimensions	147 x 77 x 47 mm

Oper. temp.	0 to +50 °C
Storage temp.	-40 to +60 °C
Power supply	4 round cell batteries, 1.5 V or NC rechargeable batteries
Weight	430 g

Accessories

	Part no.
Spare thermal paper for printer (6 rolls)	0554 0569
Spare thermal paper for printer (6 rolls), Measurement data documentation legible for up to 10 years	0554 0568
Recharger for printer (with 4 standard rech. batteries), Rechargeable batteries are recharged externally	0554 0110

testo 575

testo 575 is the practical fast-action printer for all printing Testo measuring instruments. The country's language can be set.

In addition to its use as a convenient printer, testo 575 can also be used for logger control.

Fast testo 575 printer, incl. 1 roll of thermal paper and batteries

Part no.
0554 1775

Fast printer and logger control in one

Print functions

- Fast-action print mechanism, 6 lines/s
- Prints tables/graphics
- Brief info. or full memory can be printed as required
- Determine section to be printed
- Your language can be set
- Self-adhesive Testo paper can also be used

Control functions

- Stops testo 175/177 loggers
- Reboots logger with saved parameters (reprogramming)
- Both buttons can be blocked by PC software



Technical data

Printer: Infrared thermal line printer with graphics function	30°C)
Contrast: Can be adjusted	Storage temperature: -30 to +70°C
Paper width: 56 mm	Power: 6x round cell 1AA
Roll diameter: Up to 35 mm	Battery life: Up to 40,000 print lines
Paper: Standard paper and two-layer adhesive	Battery change: By user
Number of characters per line: 24	Housing: ABS (black), with "Soft-Protect" inserts
Graphics resolution: 203 dpi	
Operating temp.: -5 to +50°C (for 5 min at -	

Accessories

	Part no.
Spare thermal paper for printer (6 rolls)	0554 0569
Spare thermal paper for printer (6 rolls), Measurement data documentation legible for up to 10 years	0554 0568
Label thermal paper (Testo patent) for testo 575 printer (6 rolls), can be applied directly	0554 0561



testo 580

Compact data collector for reading out on site

The compact testo 580 data collector transfers data from loggers on-site for PC download

- Downloads the complete memory of a testo 175/177 logger at the touch of a button
- Displays all status information
- Can transfer up to 25 full testo 175 or 10 full testo 177 loggers
- Downloads the collected data to PC via Testo's ComSoft 3.



Technical data

Memory capacity: 1 MB (approx. 500,000 values)
Read out time in logger: Approx. 400 readings/s
Read out time in PC: Approx. 1,500 readings/s
Logger interface: Infrared transfer, bidirectional
PC interface: RS 232 (Sub_D socket)
Operating temperature: -30 to +70°C
Storage temperature: -40 to +85°C
On/Off switch: Off: AutoOFF to 1 min

Functions

Display: Logger memory used, testo 580 memory used, Logger battery life, testo 580 battery life, Data transfer in progress, Data transfer ok or defective, Wraparound display
 Other: Data secure even if battery is spent
 Power: 3x micro AAA cells
 Housing: ABS (black)

testo 580 data collector including readout holders, For testo 175/177 dataloggers

Control functions

- Stops logger
- Reboots logger
- Both control functions can be blocked via PC

Part no.
0554 1778

testo 581

Alarm signal output to send alarm messages

The alarm signal output testo 581 makes it possible to send alarm messages to external components, e.g.: horns, lamps, PLC.

The external components are connected via a terminal strip in the battery compartment of the testo 581, the signal is transferred via the floating signal output. This can be set as an NC or NO contact.

Alarm is triggered when:

- Programmed limit values in the data logger are exceeded
- Logger is stopped due to spent battery
- Probe is disconnected
- Alarm unit battery is spent

The control functions

You will be informed directly at the touch of a button, if the alarm has already been triggered. The alarm of the external components, e.g. the horn, can be reset using the reset button.



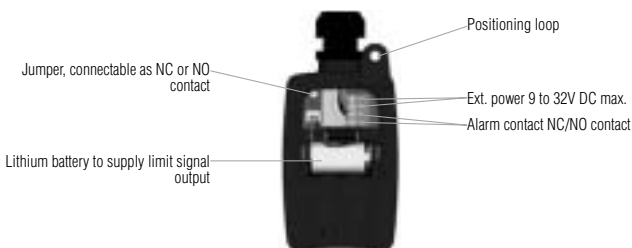
Technical data

Signal	Floating signal output, can be set as NC or NO contact
No./switch. chann.	1 channel
Power limit signal output	Battery (Included) or 9 to 32V DC max. (external)
Max. switching voltage	60V DC/25V AC (SELV/PELV switch circuits)
Max. duration switch-off current	1A DC/AC
Max. switch power	30W/30VA
Conn.	Via terminal strip in battery compartment (output and power)
Oper. temp.	-40 to +70 °C
Storage temp.	-40 to +85 °C
Battery type	Lithium (1/2 AA)
Battery life	Approx. 5 years
Material/Housing	Polycarbonate (black)
Dimensions	82 x 52 x 30 mm
Protection class	IP68

testo 581 alarm signal output, floating, for testo 175/177

Part no.
0554 1769

Connection assignment (back of limit signal output)



testo 581 can be used together with all testo 175/177 dataloggers. Once connected to the datalogger wall holder, communication between testo 175/177 and the limit signal output takes place via the infrared interface.

ComSoft 3 - Basic

The Basic version has all the functions needed to monitor, analyse, save and print data. The data loggers are programmed and read out using the instrument drivers available. The limit values to be monitored can be defined as required; short titles, text fields and channel names ensure clear allocation if several loggers are in use.

Once read out, the data can be shown in table or line graphics and then analysed.

The e-mail address can be entered when programming so that data can be easily forwarded through your locally installed e-mail program by simply clicking on "Send...". The saved e-mail address is then entered in the address box.

User-friendly operation and convenient analysis

Additional functions:

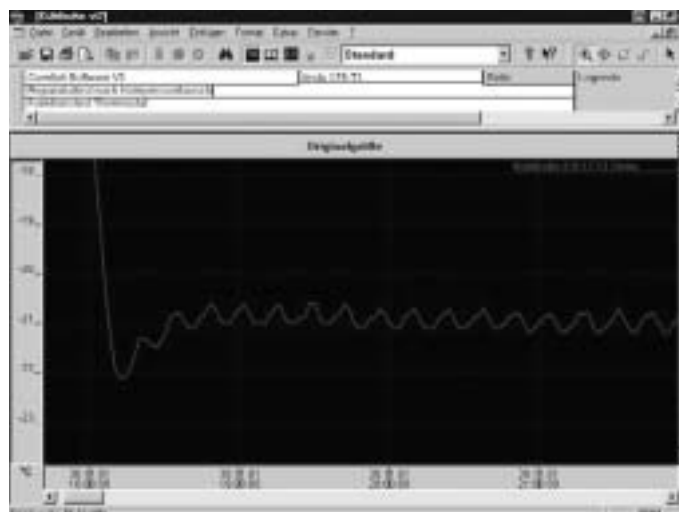
- Axes can be scaled as required
- Frequently used scales can be saved for future use
- Min/Max and mean calculation in tables
- Printout as table or graphic on all printers compatible with Windows
- Data export to other applications via clipboard
- Automatic search for instrument driver during initial operation (Autodetect)
- Crosshair function, fast scanning in graphics with direct value display



Programming the logger

Comsoft 3 -Basic for:

- Data loggers from the testo 175 and testo 177 series



Analysing measurement data

ComSoft 3 Set - Basic with RS 232 interface

Basic software with diagram and table function, incl. desk-top holder, PC connection cable

Part no.

0554 1759

ComSoft 3 - Basic Set with USB interface for testo 175

Basic software with diagram and table function, incl. desk-top holders, PC connection cable

Part no.

0554 1766

Kühlraum 2	Datum	Uhrzeit	PCI Kanal 1
1	13.02.02	16:43:58	23,2
2	13.02.02	16:55:58	23,1
3	13.02.02	17:07:58	23,1
4	13.02.02	17:19:58	22,9
5	13.02.02	17:31:58	22,9
6	13.02.02	17:43:58	22,9
7	13.02.02	17:55:58	22,9
8	13.02.02	18:07:58	22,9

Table view/Documentation

Accessories	Part no.
RS 232 interface for testo 175/177 incl. desk-top holders, PC connection cable, (please also order for ComSoft 3 - Professional)	0554 1759
USB interface, for testo 175/177 incl. desk-top holders, PC conn. cable, (Please order with ComSoft 3 - Professional)	0554 1768
Interface, attachable to datalogger	0554 1781

ComSoft 3 - Professional

In addition to all the functions of the Basic version, the Professional also has extra display options (e.g. digit box, bar chart, analog instrument, xy plot) and **convenient data filing**. Measurement data can be stored in their own folders so that, for example, several data loggers from different locations can be organised in a tree structure. It is particularly recommended for instruments, which can manage many measurement logs e.g. the testo 580 data collector. The driver in this instrument is set up such that the directory structure of the Professional software is supported. The result is clear and comprehensible data handling.

ComSoft 3 - Professional with data management

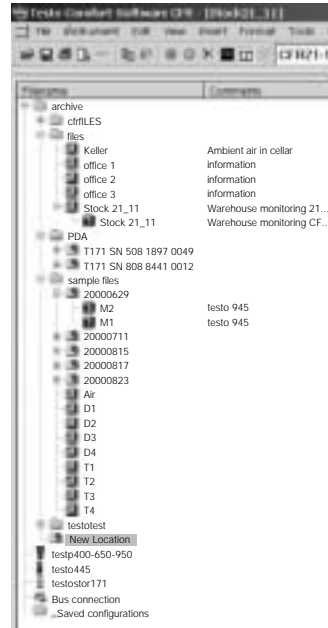
Incl. database, analysis and graphics function, data analysis, trend curve

Part no.
0554 0830

Professional Software including Data Filing

Additional functions:

- Adapt menus and range of functions
- Select different print heads when printing tables and graphics
- Extended display options such as digit box, bar chart, analog instrument and xy plot
- Input of mathematical functions with calculation on a new measurement channel
- Compensation functions 0 (mean) to 7th degree
- Developer ToolBox with functions for integrating the instrument driver in non-Testo software



Structured filing of measured data and parameters in folders, locations, logs and channels

Comsoft 3 -Professional for:

- Data loggers from the testo 175, testo 177 and testostor 171 series
- testo 945, testo 645, testo 445 and testo 545 monitoring instruments
- testo 950, testo 650, testo 400 (as version also for testo 454 and testo 350) reference measuring instruments

Accessories	Part no.
RS 232 interface for testo 175/177 incl. desk-top holders, PC connection cable, (please also order for ComSoft 3 - Professional)	0554 1757
USB interface, for testo 175/177 incl. desk-top holders, PC conn. cable, (Please order with ComSoft 3 - Professional)	0554 1768
Interface, attachable to datalogger	0554 1781

CFR 21 Part 11

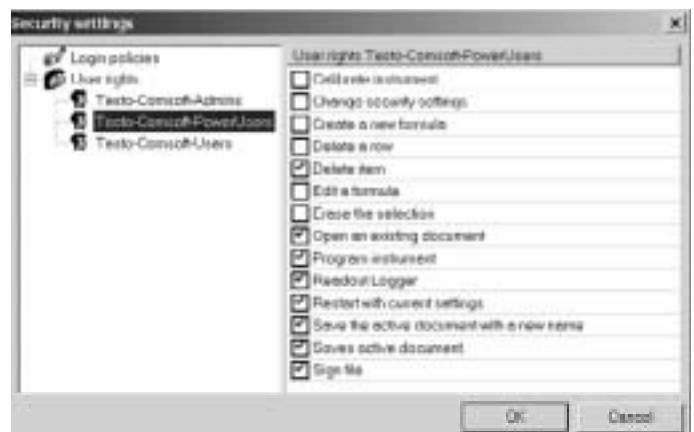
A validation-compatible ComSoft 3.3 Version 21 CFR 11 has been developed especially for the management and filing of process data. All FDA requirements can be fulfilled if used as part of a cohesive system:

ComSoft 3 - For requirements to CFR 21 Part 11
Incl. database, analysis and graphics function, data analysis, trend curve

Part no.
0554 0821

Software for requirements in accordance with CFR 21 Part 11

- Identification of damaged or modified raw data
- Recognition of transfer errors using proof totals
- Inactivity lockout to prevent unauthorised access
- Monitors logins and logouts, successful/failed use of digital signatures and modification of raw data with the aid of Audit Trail
- Complete integration in the Windows 2000 security system (certificates, rights management, user and password management, user authentication)
- Option of data export in generally readable PDF file format e.g. to send to the FDA validation point responsible or to display during a company audit.

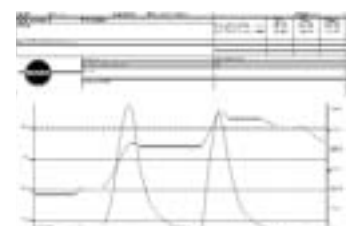


User management in groups

- User management in User Groups by Administrator (using Windows 2000 Rights management and three additional ComSoft-specific user groups)
- Save raw data in tamper-proof file format



Display: Limit value violation in table format



Graphic display of readings

Ethernet adapter

With Testo measuring instruments in Ethernet

The new Ethernet adapter facilitates:

- Measurements on site, e.g. production, warehouses, incoming goods
- Measuring instrument remains on site, transport not necessary
- Data can be checked from office
- Centralised data filing

Ethernet offers:

- Fast transfer of readings
- Use of an existing network without additional cabling
- Long transmission paths
- Identification of measuring instruments in system network

Ethernet adapter, RS 232 - Ethernet incl. software driver, mains unit
Facilitates data communication in network (not for use in Ex-zone)

Part no.
0554 1711

Long-term monitoring of climate data

The parameters temperature and humidity are logged and saved on site by the data logger. Using the Ethernet adapter, the measurement data saved in the logger can be read out and filed via the PC network. The data is easily analysed and checked on the PC in your office.

The Ethernet adapter has the following benefits:

- Affordable handling since it is not necessary to read the data on location or to take the logger into the office
- Short access times because you can quickly access the current measurement data at any time.



Multi-point checks on site

Spot checks are carried out on site in production halls or in incoming goods departments using Testo handheld measuring instruments. The measurement data can be sent immediately to a central office via the Ethernet adapter. This facilitates fast reaction times if further actions are required.

Accessories	Part no.
System accessories: testo 400, testo 650, testo 950	
ComSoft 3 - Professional with data management, Incl. database, analysis and graphics function, data analysis, trend curve	0554 0830
RS232 cable, Connects instrument to PC (1.8 m) for data transfer	0409 0178
System accessories: testo 175, testo 177	
ComSoft 3 - Professional with data management, Incl. database, analysis and graphics function, data analysis, trend curve	0554 0830
RS 232 interface for testo 175/177 incl. desk-top holders, PC connection cable, (please also order for ComSoft 3 - Professional)	0554 1757
System accessories: testo 171	
ComSoft 3 - Professional with data management, Incl. database, analysis and graphics function, data analysis, trend curve	0554 0830
Interface, attachable to datalogger	0554 1781

Technical data		Management and software config.	Internet Browser e.g. from Netscape or Microsoft Telnet
Dimensions	45 x 48 x 14 mm		
Oper. temp.	+0 to +70 °C		
Software	Microsoft Windows 2000 / NT 4.0 / ME / 98 / 95	Interface	Serial interface on computer board with terminal program Provision of a local virtual COM port (Windows systems)
Power supply	Mains unit, 5 Volt app. 230 mA		
Humidity class	F to DIN 40040		
EMC	Radio interference/Fault free op.		
Interface	25 pin RS 232 connection with adapter 25/9pin		
Logs	TCP/IP, LPR, Telnet, SNMP, DHCP DDNS, ARP, BOOTP, ICMP		



testo 945

The testo 945 measuring instrument can be connected to quick-action and efficient thermocouple probes or Pt100 high accuracy probes.

Measured data can be saved with locations and the corresponding limit values and analysed on your PC or printed on location on the Testo printer.

testo 945, temperature measuring instrument, with TopSafe, battery and calibration protocol

Part no.

0563 9450

Alarm and logger thermometer

- Location-specific audible and visual alarms
- System calibration - adjusts a quick-action thermocouple probe to a reference value
- Set with TopSafe



Channel 1: Type K/T/S probes
Channel 2: Pt100/NTC probes

4-line display

Mains connection and battery recharging in instrument

Print at the touch of a button

Save up to 3000 readings

Select up to 99 sites

HOLD; MAX/MIN values; Mean calculation

User-friendly operation with cursor

Recommended set

testo 945, Professional set for industry with save and print function

- testo 945, temperature measuring instrument, with TopSafe, battery and calibration protocol (Part no. 0563 9450)
- Waterproof immersion/penetration probe (Part no. 0602 1292)
- Quick-action surface probe with spring-loaded thermocouple, also for rough surfaces, measuring range short-term up to 500°C (Part no. 0602 0392)
- Testo printer with cordless IRDA and infrared interface, 1 roll of thermal paper and 4 round batteries (Part no. 0554 0547)
- Transport case (plastic) for measuring instrument, probes and accessories (Part no. 0516 0445)

testo 945, Precision set for laboratories

- testo 945, temperature measuring instrument, with TopSafe, battery and calibration protocol (Part no. 0563 9450)
- Testo printer with cordless IRDA and infrared interface, 1 roll of thermal paper and 4 round batteries (Part no. 0554 0547)
- Waterproof immersion/penetration probe (Part no. 0602 1292)
- Quick-action surface probe with spring-loaded thermocouple, also for rough surfaces, measuring range short-term up to 500°C (Part no. 0602 0392)
- Laboratory probe, glass-coated, exchangeable glass pipe, resistant to corrosive substances (Part no. 0609 7072)
- Transport case (plastic) for measuring instrument, probes and accessories (Part no. 0516 0445)

testo 945
Accessories / Technical data

Accessories	Part no.
Transport and Protection	
Transport case (plastic) for measuring instrument, probes and accessories, Now bigger for safe and orderly storage	0516 0445
Accessories set (for instrument without TopSafe) includes multi-function clip and probe holder	0554 0552
TopSafe (indestructible protection case) incl. bench stand and belt clip, Protects instrument from water, dust, impact..., IP 65 only with waterproof probes (drop symbol)	0516 0442
Additional accessories and spare parts	
Plug-in mains unit, For mains operation and recharging battery in instrument	0554 0088
9V rech. battery for instrument, Instead of battery	0515 0025
Printer and accessories	
Testo printer with cordless IRDA and infrared interface, 1 roll of thermal paper and 4 round batteries	0554 0547
Fast testo 575 printer, incl. 1 roll of thermal paper and batteries, Infrared thermal line printer with graphics function	0554 1775
Recharger for printer (with 4 standard rech. batteries), Rechargeable batteries are recharged externally	0554 0110
Spare thermal paper for printer (6 rolls)	0554 0569
Spare thermal paper for printer (6 rolls), Measurement data documentation legible for up to 10 years	0554 0568
Label thermal paper (Testo patent) for testo 575 printer (6 rolls), can be applied directly	0554 0561
Software and accessories	
ComSoft 3 - Professional with data management, Incl. database, analysis and graphics function, data analysis, trend curve	0554 0830
RS232 cable, Connects instrument to PC (1.8 m) for data transfer	0409 0178
Calibration certificates	
ISO calibration certificate/Temperature, For air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001
ISO calibration certificate/Temperature, Thermometers with surface probe; calibration points +60°C; +120°C; +180°C	0520 0071
ISO calibration certificate/Temperature, Measuring instruments with air/immersion probe; calibration points 0°C; +150°C; +300°C	0520 0021
DKD calibration certificate/Temperature, Meas. instr. with air/immersion probe; calibration points -20°C; 0°C; +60°C	0520 0211
DKD calibration certificate/Temperature, Meas. instr. with air/immersion probe; cal. points 0°C; +100°C; +200°C	0520 0221
DKD calibration certificate/Temperature, Contact surface temperature probes; calibration points +100°C; +200°C; +300°C	0520 0271

Technical data			
Probe type	Type K (NiCr-Ni)	Type S (Pt10Rh-Pt)	Type T (Cu-CuNi)
Meas. range	-200 to +1370 °C	-50 to +1700 °C	-50 to +400 °C
Accuracy ±1 digit	±0.5% of mv (-200 to -60.1 °C) ±0.5% of mv (+60.1 to +1370 °C) ±0.3 °C (-60 to +60 °C)		±0.5% of mv (+60.1 to +400 °C) ±0.3 °C (-50 to +60 °C)
Resolution	0.1 °C (-200 to +1370 °C)	0.1 °C (-50 to +1700 °C)	0.1 °C (-50 to +400 °C)

Probe type	Pt100	NTC
Meas. range	-200 to +800 °C	-50 to +150 °C
Accuracy ±1 digit	±0.1% of mv (+200.1 to +800 °C) ±0.2 °C (-200 to +200 °C)	±0.5% of mv (-50 to -25.1 °C) ±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (+75 to +99.9 °C)
Resolution	0.1 °C (-200 to +800 °C)	0.1 °C (-50 to +150 °C)

Oper. temp.	0 to +50 °C	PC	RS232 interface
Storage temp.	-20 to +70 °C	Memory	3000
Display	LCD, 4 lines	Material/Housing	ABS
Battery type	Alkali manganese	Warranty	2 years
Battery life	45 h/8 h		
Dimensions	215 x 68 x 47 mm		
Weight	255 g		
Auto Off	10 min		

Type K (NiCr-Ni)	Illustration	Meas. range	Accuracy	t ₉₉	Part no.
◆ Waterproof immersion/penetration probe	110 mm 30 mm Ø 4 mm Ø 3.2 mm Conn.: Fixed cable	-60 to +400 °C	Class 2	7 s	0602 1292
◆ Accurate, waterproof food probe made of stainless steel (IP67), resistant to corrosive cleaning agents, oven-proof up to +205°C, (short-term: +250°C)	125 mm 15 mm Ø 4 mm Ø 3 mm Conn.: Fixed cable	-60 to +400 °C	Class 1	5 s	0602 3392
◆ Waterproof food probe made of stainless steel (IP65)	125 mm 30 mm Ø 4 mm Ø 3.2 mm Conn.: Fixed cable	-60 to +400 °C	Class 2	7 s	0602 2292
◆ Waterproof super-quick needle probe, highly accurate measurements without visible penetration hole. Specially for food, ideal for hamburgers, steaks, pizza, eggs etc.	150 mm 15 mm Ø 1.4 mm Ø 1 mm Conn.: Fixed cable	-60 to +250 °C	Class 1	1 s	0628 0026
◆ Robust food penetration probe with special handle, IP 65, reinforced cable (PUR) and reinforced protection from buckling	115 mm 30 mm Ø 5 mm Ø 3.5 mm Conn.: Fixed cable	-60 to +400 °C	Class 1	6 s	0602 2492
◆ Frozen food probe, corkscrew design	110 mm 30 mm Ø 8 mm Ø 4 mm Conn.: Plug-in cable	-60 to +400 °C	Class 1	15 s	0602 3292
◆ Quick-action, waterproof immersion/penetration probe for measurements in viscoplastic material, ideal for plastic, food etc.	60 mm 20 mm Ø 3 mm Ø 1.5 mm Conn.: Fixed cable	-60 to +800 °C	Class 1	3 s	0602 2692
◆ Accurate and quick-action immersion probe, waterproof	300 mm Ø 1.5 mm Conn.: Fixed cable	-60 to +1000 °C	Class 1	2 s	0602 0592
Immersion tip, flexible	500 mm Ø 1.5 mm	-200 to +1000 °C	Class 1	5 s	0602 5792
◆ Waterproof surface probe with widened measuring tip for flat surfaces	110 mm 110 mm Ø 4 mm Ø 6 mm Conn.: Fixed cable	-60 to +400 °C	Class 2	30 s	0602 1992
◆ Quick-action surface probe with spring-loaded thermocouple, also for rough surfaces, measuring range short-term up to 500°C	150 mm 150 mm Ø 4 mm Ø 10 mm Conn.: Fixed cable	-60 to +300 °C	Class 2	3 s	0602 0392
◆ Quick-action surface probe, bent, with sprung thermocouple strip, also for rough surfaces, measuring range short-term up to +500°C	80 mm 70 mm Ø 4 mm Ø 10 mm Conn.: Fixed cable	-60 to +300 °C	Class 2	3 s	0602 0992
Magnetic probe, adhesive force approx. 20 N, with magnets, for measurements on metal surfaces	35 mm Ø 20 mm Conn.: Fixed cable	-50 to +170 °C	Class 2		0602 4792
Magnetic probe, adhesive force approx. 10 N, with magnets, for higher temp., for measurements on metal surfaces	75 mm Ø 21 mm Conn.: Fixed cable	-50 to +400 °C	Class 2		0602 4892
◆ Accurate, waterproof surface probe with a small measuring head for smooth surfaces	150 mm 150 mm Ø 2.5 mm Ø 4 mm Conn.: Fixed cable	-60 to +1000 °C	Class 1	20 s	0602 0692
◆ Accurate, waterproof surface probe, bent, with small measuring head for smooth surfaces	130 mm 130 mm Ø 2.5 mm Ø 4 mm 20 mm Conn.: Fixed cable	-60 to +1000 °C	Class 1	20 s	0602 0792
Pipe wrap probe for pipe diameter 5 to 65 mm, with exchangeable measuring head. Measuring range short-term to +280°C	35 mm 15 mm Conn.: Fixed cable	-60 to +1000 °C	Class 1	5 s	0602 4592
Spare meas. head for pipe wrap probe	35 mm 15 mm	-60 to +130 °C	Class 2	5 s	0602 0092
Clamp probe for measurements on pipes, pipe diameter 15 to 25 mm (max. 1"), meas. range short-term up to +130°C	35 mm Conn.: Fixed cable	-50 to +100 °C	Class 2	5 s	0602 4692
Pipe wrap probe with Velcro strip, for temperature measurement on pipes with diameter up to max. 120 mm, Tmax +120°C	395 mm 20 mm Conn.: Fixed cable	-50 to +120 °C	Class 1	90 s	0628 0020
◆ Robust, affordable air probe	110 mm 110 mm Ø 4 mm Conn.: Fixed cable	-60 to +400 °C	Class 2	25 s	0602 1792

◆ The measuring instrument inside TopSafe is waterproof with this probe.

testo 945
Suitable probes at a glance

Type K (NiCr-Ni)	Illustration	Meas. range	Accuracy	t ₉₉	Part no.
Thermocouple, flexible, 800mm long, fibre glass	800 mm Ø 1.5 mm	-50 to +400 °C	Class 2	5 s	0602 0644
Thermocouple, flexible, 1500mm long, fibre glass	1500 mm Ø 1.5 mm	-50 to +400 °C	Class 2	5 s	0602 0645
Thermocouple, flexible, 1500mm long, Teflon	1500 mm Ø 1.5 mm	-50 to +250 °C	Class 2	5 s	0602 0646
Pt100	Illustration	Meas. range	Accuracy	t ₉₉	Part no.
◆ Laboratory probe, glass-coated, exchangeable glass pipe, resistant to corrosive substances	200 mm Ø 6 mm 30 mm Ø 5 mm Conn.: Fixed cable	-50 to +400 °C	Class A	45 s 12 s*	0609 7072
◆ Robust, waterproof immersion/penetration probe	110 mm Ø 4 mm 30 mm Ø 3.2 mm Conn.: Fixed cable	-50 to +400 °C	Class A	12 s	0609 1272
◆ Robust, accurate food probe (IP 65), stainless steel, PUR cable can be used at up to +80°C, IP 54 plug-in connection	125 mm Ø 4 mm 15 mm Ø 3 mm Conn.: Fixed cable	-50 to +400 °C	Class A	10 s	0609 2272
◆ Robust, waterproof surface probe with widened measuring tip, for smooth surfaces	110 mm Ø 4 mm 15 mm Ø 9 mm Conn.: Fixed cable	-50 to +400 °C	Class B	40 s	0609 1972
◆ Robust, affordable air probe	110 mm Ø 4 mm 30 mm Ø 3 mm Conn.: Fixed cable	-50 to +400 °C	Class A	70 s	0609 1772
NTC	Illustration	Meas. range	Accuracy	t ₉₉	Part no.
◆ Food probe (IP65) stainless steel, PUR cable can be used at up to +80°C, IP54 plug-in connection	125 mm Ø 4 mm 15 mm Ø 3 mm Conn.: Fixed cable	-50 to +150 °C ²⁾ -25 to +120 °C	±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	8 s	0613 2211
◆ Food probe, stainless steel (IP67), with Teflon cable resistant to temperatures of up to +200°C (short-term to +250°C)	125 mm Ø 4 mm 15 mm Ø 3 mm Conn.: Fixed cable	-50 to +150 °C	±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	8 s	0613 3311
◆ Robust food penetration probe with special handle, IP 65, reinforced cable (PUR) and reinforced protection against buckling	115 mm Ø 5 mm 30 mm Ø 3.5 mm Conn.: Fixed cable	-50 to +150 °C ²⁾	±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	7 s	0613 2411
◆ Frozen food probe, corkscrew design	110 mm Ø 8 mm 30 mm Ø 4 mm Conn.: Plug-in cable	-50 to +140 °C ²⁾ -25 to +120 °C	±0.5% of mv (+100 to +140 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	20 s	0613 3211
◆ Waterproof immersion/penetration probe	110 mm Ø 4 mm 30 mm Ø 3.2 mm Conn.: Fixed cable	-50 to +150 °C ²⁾ -25 to +120 °C	±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	10 s	0613 1211
◆ Laboratory probe, glass-coated, resistant to corrosive substances, glass stem can be replaced	200 mm Ø 6 mm 30 mm Ø 5 mm Conn.: Fixed cable	-50 to +150 °C ²⁾	±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	40 s 10 s*	0613 7011
◆ Pipe probe with Velcro, for pipe diameter of max. 80 mm	30 mm Conn.: Fixed cable	-50 to +70 °C	±0.2 °C (-25 to +70 °C) ±0.4 °C (-50 to -25.1 °C)		0613 4611
◆ Waterproof surface probe with widened measuring tip, for flat surfaces	110 mm Ø 4 mm 15 mm Ø 6 mm Conn.: Fixed cable	-50 to +150 °C ²⁾	±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	35 s	0613 1911
◆ Robust, affordable air probe to check storage temperatures	110 mm Ø 4 mm 15 mm Ø 3 mm Conn.: Fixed cable	-50 to +150 °C ²⁾ -25 to +120 °C	±0.5% of mv (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	60 s	0613 1711

◆ The measuring instrument inside TopSafe is waterproof with this probe.

2) Long-term measurement range +125°C, short-term +150°C or +140°C (2 minutes)

* without protective glass

Accessories for temperature probes
Part no.

Handle for attachable measurement tips:	0409 1092
Extension cable, 5m, for Type K thermocouple probe	0554 0592

Accessories for temperature probes
Part no.

Silicone heat paste (14g), T _{max} = +260°C, Improves heat transfer in surface probes	0554 0004
Glass shaft for immersion/penetration probe to protect from corrosive agents	0554 7072

Additional probes Type T (CuCu-Ni), See testo 926

testo 946

testo 946 monitors sites and documents temperatures during the production, storage, delivery or distribution of food products; with data available for food inspectors.

Measurement data can be saved according to product and analysed on your PC or printed on site on the Testo printer. An alarm limit value (audible and visual) can be stored for each product.

testo 946, food thermometer, with TopSafe, battery and calibration protocol

Part no.
0563 9460

Alarm and logger thermometer

- Product-related alarm values can be set (audible and optical alarm)
- Product/batch-related data storage and documentation
- Convenient data analysis on PC, RS232 interface (electrically isolated)
- Up to 99 product names can be saved in the instrument using a PC
- TopSafe, the protection case for your instrument, protects from dirt, water and is dishwasher-safe
- Mains connection and batt. recharging in instrument



Figure with TopSafe

Probes Type T	Illustration	Meas. range	Accuracy	t ₉₉	Part no.
◆ Waterproof precision immersion/penetration probe, Tmax handle and cable +70°C	110 mm Ø 4 mm 30 mm Ø 3.2 mm Conn.: Fixed cable	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	7 s	0603 1292
◆ Affordable precision air probe to check e.g. storage temperature, Tmax handle and cable +70°C	110 mm Ø 4 mm 30 mm Ø 3.2 mm Conn.: Fixed cable	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	25 s	0603 1792
◆ Waterproof, accurate surface probe with widened measuring tip, e.g. for cooking plates, grill plates, ...	110 mm Ø 4 mm 30 mm Ø 6 mm Conn.: Fixed cable	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	30 s	0603 1992
◆ Robust food penetration probe with special handle, IP 65, reinforced cable (PUR) and reinforced protection from buckling	115 mm Ø 5 mm 30 mm Ø 3.5 mm Conn.: Fixed cable	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	6 s	0603 2492
◆ Frozen food probe, corkscrew design, Tmax handle and cable +70°C	110 mm Ø 8 mm 30 mm Ø 4 mm Conn.: Plug-in cable	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	8 s	0603 3292
◆ Accurate, waterproof food probe (IP67), made of stainless steel, with 4 mm reinforced PVC cable	125 mm Ø 4 mm 30 mm Ø 3.2 mm Conn.: Fixed cable	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	7 s	0603 2192
◆ Accurate, waterproof food probe (IP65), made of stainless steel with PVC cable	125 mm Ø 4 mm 30 mm Ø 3.2 mm Conn.: Fixed cable	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	7 s	0603 2292
◆ Accurate, waterproof food probe (IP67), made of stainless steel, with Teflon cable	125 mm Ø 4 mm 30 mm Ø 3.2 mm Conn.: Fixed cable	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	7 s	0603 3392
◆ Waterproof, super-quick needle probe for measurements without visible penetration hole. Ideal for hamburgers, steaks etc.	150 mm Ø 1.4 mm 30 mm Ø 3.2 mm Conn.: Fixed cable	-50 to +250 °C	±0.2 °C (-20 to +70 °C)	2 s	0628 0027
◆ Waterproof precision immersion/penetration probe for quick measurements w/o visible penetration hole, Tmax handle +70°C	60 mm Ø 3 mm 20 mm Ø 1.5 mm Conn.: Fixed cable	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	3 s	0603 2692
◆ Robust penetration probe for food, to measure small, thin frozen pieces such as pizza etc., Tmax handle and cable +70°C	40 mm Ø 4 mm 25 mm Ø 2.5 mm Conn.: Fixed cable	-50 to +250 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	5 s	0628 0028
◆ Quick needle probe to monitor cooking processes in oven. Measurements on vacuum products also possible if special sealing strip is used	60 mm Ø 1.4 mm 30 mm Ø 3.2 mm Conn.: Fixed cable	-50 to +250 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining measurement range)	2 s	0628 0030
◆ Flexible incoming goods probe, ideal for quick temperature measurements on incoming goods	500 mm Ø 1.5 mm 30 mm Ø 3.2 mm Conn.: Fixed cable	-50 to +350 °C	Class 1	5 s	0628 0023

◆ The measuring instrument inside TopSafe is waterproof with this probe.

For more NTC/Pt100/Type K probes see testo 945

testo 946
Practical accessories and recommended sets / Technical data
Recommended set
The affordable monitoring set

- testo 946, food thermometer, with TopSafe, battery and calibration protocol (Part no. 0563 9460)
- Accurate, waterproof food probe (IP67), made of stainless steel, with 4 mm reinforced PVC cable (Part no. 0603 2192)

Complete set for frozen and semi-solid food

- testo 946, food thermometer, with TopSafe, battery and calibration protocol (Part no. 0563 9460)
- Robust food penetration probe with special handle, IP 65, reinforced cable (PUR) and reinforced protection from buckling (Part no. 0603 2492)
- Frozen food probe, corkscrew design, Tmax handle and cable +70°C (Part no. 0603 3292)
- Testo printer with cordless IRDA and infrared interface, 1 roll of thermal paper and 4 round batteries (Part no. 0554 0547)
- Transport case (plastic) for measuring instrument, probes and accessories (Part no. 0516 0445)

Incoming goods set with readings documentation

- testo 946, food thermometer, with TopSafe, battery and calibration protocol (Part no. 0563 9460)
- Flexible incoming goods probe, ideal for quick temperature measurements on incoming goods (Part no. 0628 0023)
- Testo printer with cordless IRDA and infrared interface, 1 roll of thermal paper and 4 round batteries (Part no. 0554 0547)
- Transport case (plastic) for measuring instrument, probes and accessories (Part no. 0516 0445)

Complete set for incoming goods

- testo 946, food thermometer, with TopSafe, battery and calibration protocol (Part no. 0563 9460)
- Waterproof precision immersion/penetration probe for quick measurements w/o visible penetration hole, Tmax handle +70°C (Part no. 0603 2692)
- Frozen food probe, corkscrew design, Tmax handle and cable +70°C (Part no. 0603 3292)
- Testo printer with cordless IRDA and infrared interface, 1 roll of thermal paper and 4 round batteries (Part no. 0554 0547)
- Transport case (plastic) for measuring instrument, probes and accessories (Part no. 0516 0445)

Accessories
Part no.
Printer and accessories

Testo printer with cordless IRDA and infrared interface, 1 roll of thermal paper and 4 round batteries 0554 0547

Fast testo 575 printer, incl. 1 roll of thermal paper and batteries 0554 1775

Recharger for printer (with 4 standard rech. batteries) 0554 0110

Spare thermal paper for printer (6 rolls) 0554 0569

Spare thermal paper for printer (6 rolls), Measurement data documentation legible for up to 10 years 0554 0568

Label thermal paper (Testo patent) for testo 575 printer (6 rolls), can be applied directly 0554 0561

Additional accessories and spare parts

Plug-in mains unit, For mains operation and recharging battery in instrument 0554 0088

9V rech. battery for instrument, Instead of battery 0515 0025

Special sealing strip (4m) for needle probe, For meas. in vacuum products without loss of air-tightness 0554 1030

Transport and Protection

TopSafe (indestructible protection case) incl. bench stand and belt clip 0516 0442

Accessories set (for instrument without TopSafe) includes multi-function clip and probe holder 0554 0552

Transport case (plastic) for measuring instrument, probes and accessories 0516 0445

Software and accessories

ComSoft 3 - Professional with data management, Incl. database, analysis and graphics function, data analysis, trend curve 0554 0830

RS232 cable, Connects instrument to PC (1.8 m) for data transfer 0409 0178

Calibration certificates

ISO calibration certificate/Temperature, Thermometers with surface probe; calibration points +60°C; +120°C; +180°C 0520 0071

ISO calibration certificate/Temperature, Single point calibration for surface thermometer; calibration point +60°C 0520 0072

ISO calibration certificate/Temperature, Single point calibration for surface thermometer; calibration point +120°C 0520 0073

ISO calibration certificate/Temperature, For air/immersion probes, calibration points -18°C; 0°C; +60°C 0520 0001

ISO calibration certificate/Temperature, Infrared thermometer; calibration points +60°C; +120°C; +180°C 0520 0002

ISO calibration certificate/Temperature, For air/immersion probes, calibration points -8°C; 0°C; +40°C 0520 0181

Technical data

Probe type	NTC	Type T	Pt100	Type K (NiCr-Ni)	Type S (Pt10Rh-Pt)
Meas. range	-50 to +150 °C	-50 to +400 °C	-200 to +800 °C	-200 to +1370 °C	-50 to +1700 °C
Accuracy ±1 digit	±0.5% of mv (remaining range) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (+75 to +99.9 °C)	±0.5% of mv (+60.1 to +400 °C) ±0.3 °C (-50 to +60 °C)	±0.1% of mv (+200.1 to +800 °C) ±0.2 °C (-200 to +200 °C)	±0.5% of mv (-200 to -60.1 °C) ±0.5% of mv (+60.1 to +1370 °C) ±0.3 °C (-60 to +60 °C)	
Resolution	0.1 °C	0.1 °C	0.1 °C	0.1 °C (-200 to +1370 °C)	0.1 °C (-50 to +1700 °C)

Oper. temp.	0 to +50 °C
Storage temp.	-20 to +70 °C
Battery type	9V block battery
Battery life	45 h/8 h
Dimensions	215 x 68 x 47 mm

Weight	255 g
Display	LCD, 4 lines
Material/Housing	ABS
Warranty	2 years

testo 950

Highly accurate reference measuring instrument

Precision reference class measuring instruments have everything the professional user needs to complete complicated measurement tasks efficiently, accurately and conveniently.

testo 950 includes the basic parameters temperature, CO₂, rpm, current and voltage. testo 950 can be upgraded to the multi-function measuring instrument, testo 400.

The measuring instrument can keep up with the measurement tasks at hand thanks to upgrades. Intelligent electronics ensure the latest technology is used thanks to software updates.

Upgradable and teachable, highly reliable and of the highest quality - they are the properties which guarantee that the customer is equipped for the future.

testo 950, reference temperature meas. instr., with battery, Li cell and calibration protocol

Part no.
0563 9501



Attachable printer
Measured values are printed on site in seconds

Clear graphics display

Data communication with PC
Barcode pen

3 user defined function buttons

Saves or prints at the touch of a button

User-friendly operation with cursor

Mains connection/quick battery recharging

2 user defined probe sockets, automatic recognition of all connected probes

Recommended set

Precision measuring instrument with up to 0.05 °C system accuracy

- testo 950, reference temperature meas. instr., with battery, Li cell and calibration protocol, 2 channel instrument (thermocouple, Pt100, NTC) with option of connecting CO, CO₂, rpm and mV/mA transmitter (Part no. 0563 9501)
- Highly accurate immersion/penetration probe incl. certificate, Plug-in head, connection cable 0430 0143 or 0430 0145 required (Part no. 0614 0240)
- Cable, 1.5 m long, connects probe with plug-in head to meas. instrument, PUR coating material (Part no. 0430 0143)
- Attachable printer (securely attached) including 1 roll of thermal paper and batteries, Quickly prints readings on location (Part no. 0554 0570)
- System case (plastic) for measuring instrument, probes and accessories, Probes in lid make it easy to find parts in case (Part no. 0516 0400)

We recommend:

4 point adjustment for 0614 0240 probe, incl. ISO certificate at -40, 0, +100, +200, +300 °C 0520 0142

4 point adjustment for 0614 0240 probe, incl. DKD certificate at -40, 0, +100, +200, +300 °C 0520 0241

ComSoft 3 - Professional with data management, Incl. database, analysis and graphics function, data analysis, trend curve 0554 0830

RS232 cable, Connects instrument to PC (1.8 m) for data transfer 0409 0178

Recommended set

Data management

- Memory upgrade to 500,000 readings, Upgrades memory capacity (by Service) (Part no. 0554 9481)
- ComSoft 3 - Professional with data management, Incl. database, analysis and graphics function, data analysis, trend curve (Part no. 0554 0830)
- RS232 cable, Connects instrument to PC (1.8 m) for data transfer (Part no. 0409 0178)
- Barcode reader to read in measurement locations, Quick and accurate allocation of reading to site (Part no. 0554 0460)
- Barcode labels, self-adhesive (1200 off), for labelling site with barcode, printing via software (Part no. 0554 0411)

testo 950
Accessories / Technical data

Accessories	Part no.
Transport and Protection	
SoftCase (protects instrument from impact) with carrier strap, magnetic holder and probe holder, Protects against impact and falls	0516 0401
SoftCase for attachable printer (protects printer from dirt/impact), Protects from impact and falls	0516 0411
Transport case (plastic) for measuring instrument, probes, For secure and orderly storage	0516 0300
System case (plastic) for measuring instrument, probes and accessories, Probes in lid make it easy to find parts in case	0516 0400
System case (aluminium) for measuring instrument, probes and accessories, Probes in lid make it easy to find parts in case	0516 0410
Printer and accessories	
Attachable printer (securely attached) including 1 roll of thermal paper and batteries, Quickly prints readings on location	0554 0570
Testo printer with cordless IRDA and infrared interface, 1 roll of thermal paper and 4 round batteries	0554 0547
Fast testo 575 printer, incl. 1 roll of thermal paper and batteries, Infrared thermal line printer with graphics function	0554 1775
Recharger for printer (with 4 standard rech. batteries), Rechargeable batteries are recharged externally	0554 0110
Spare thermal paper for printer (6 rolls)	0554 0569
Spare thermal paper for printer (6 rolls), Measurement data documentation legible for up to 10 years	0554 0568
Label thermal paper (Testo patent) for testo 575 printer (6 rolls), can be applied directly	0554 0561
Additional accessories and spare parts	
Memory upgrade to 500,000 readings, Upgrades memory capacity (by Service)	0554 9481
Rechargeable battery set for instrument (4 rechargeables 2.4V/700mAh)	0554 0196
Power unit 230 V/ 8 V/ 1 A, for instrument (European plug)	0554 1084
Car charging adapter, ready to measure following recharging in car, Battery is recharged while travelling in car	0554 0424
Spare Li cell to save RAM data, When changing battery or rechargeable battery	0515 0028
Update	
Humidity/pressure module, Upgrade via service (updates testo 950 to testo 650)	0450 4002
Velocity module, incl. volume flow, degree of turbulence..., Upgrade via service (updates testo 650 to testo 400)	0450 4003
Barcode and Accessories	
Barcode reader to read in measurement locations, Quick and accurate allocation of reading to site	0554 0460
Barcode labels, self-adhesive (1200 off), for labelling site with barcode, printing via software	0554 0411
Adhesive pockets (50 off) for printout, paper barcode labels...	0554 0116
Software and accessories	
ComSoft 3 - Professional with data management, Incl. database, analysis and graphics function, data analysis, trend curve	0554 0830
RS232 cable, Connects instrument to PC (1.8 m) for data transfer	0409 0178
Ethernet adapter, RS 232 - Ethernet incl. software driver, mains unit, Facilitates data communication in network	0554 1711
Electrical isolation for RS232 (connects measuring instrument to PC)	0554 0006
Calibration certificates	
ISO calibration certificate/Temperature, For air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001
ISO calibration certificate/Temperature, Measuring instruments with air/immersion probe; calibration points 0°C; +150°C; +300°C	0520 0021
ISO calibration certificate/Temperature, Thermometers with surface probe; calibration points +60°C; +120°C; +180°C	0520 0071
DKD calibration certificate/Temperature, Meas. instr. with air/immersion probe; calibration points -20°C; 0°C; +60°C	0520 0211
DKD calibration certificate/Temperature, Contact surface temperature probes; calibration points +100°C; +200°C; +300°C	0520 0271

ISO/DKD calibration certificates for testo 950 are possible at user defined points within the measuring range.

Technical data		NTC	Type K (NiCr-Ni)
Probe type	Pt100	-40 to +150 °C	-200 to +1370 °C
Meas. range	-200 to +800 °C		
Accuracy ±1 digit	±0.1 °C (-49.9 to +99.9 °C) ±0.4 °C (-99.9 to -50 °C) ±0.4 °C (+100 to +199.9 °C) ±1 °C (-200 to -100 °C) ±1 °C (+200 to +800 °C)	±0.2 °C (-10 to +50 °C) ±0.4 °C (-40 to -10.1 °C) ±0.4 °C (+50.1 to +150 °C)	±0.4 °C (-100 to +200 °C) ±1 °C (-200 to -100.1 °C) ±1 °C (+200.1 to +1370 °C)
Resolution	0.01 °C (-99.9 to +300 °C) 0.1 °C (-200 to -100 °C) 0.1 °C (+300.1 to +800 °C)	0.1 °C (-40 to +150 °C)	0.1 °C (-200 to +1370 °C)

Probe type	Type S (Pt10Rh-Pt)	Type J (Fe-CuNi)
Meas. range	0 to +1760 °C	-200 to +1000 °C
Accuracy ±1 digit	±1 °C (0 to +1760 °C)	±0.4 °C (-150 to +150 °C) ±1 °C (-200 to -150.1 °C) ±1 °C (+150.1 to +1000 °C)
Resolution	1 °C (0 to +1760 °C)	0.1 °C (-200 to +1000 °C)

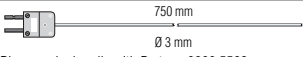

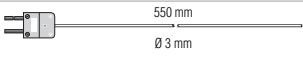
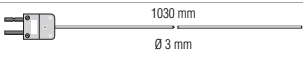
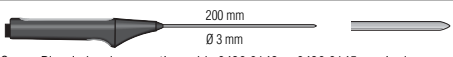
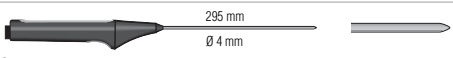
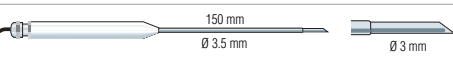
Probe type	CO2 probe	CO probe	Mechanical
Meas. range	0 to +1 Vol. % CO ₂ 0 to +10000 ppm CO ₂	0 to +500 ppm CO	20 to 20000 rpm
Accuracy ±1 digit	See probe data	±5% of mv (0 to +500 ppm CO)	20 to 20000 rpm
Resolution			1 rpm (20 to 20000 rpm)

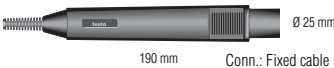




Probe type	Current measurement	Voltage measurement
Meas. range	0 to +20 mA	0 to +10 V
Accuracy ±1 digit	±0.04 mA (0 to +20 mA)	±0.01 V (0 to +10 V)
Resolution	0.01 mA (0 to +20 mA)	0.01 V (0 to +10 V)

Oper. temp.	0 to +50 °C	Memory space in basic version: 128 kB corresponds to approx. 45,000 readings Memory space, extended: 1 MB, corresponds to approx. 500,000 readings Other features: automatic recognition of all connected probes Power supply: Battery/rech. batt., alternatively 8 V mains unit Battery life in continuous operation with 2 thermocouple probes
Storage temp.	-25 to +60 °C	
Display	LCD, 4 lines	
Battery type	1.5 V AA	
Battery life	18 h	
Weight	500 g	
PC	RS232 interface	
Material/Housing	ABS	
Warranty	3 years	

Probes Type K (NiCr-Ni)	Illustration	Meas. range	Accuracy	t ₉₉	Part no.
Super quick-action immersion/penetration probe for measurements in gases and liquids with a low-mass tip	150 mm Ø 1.4 mm 20 mm Ø 0.5 mm	-200 to +600 °C	Class 1	1 s	0604 9794 0614 9794
Thermocouple, made of fibre-glass insulated thermal pipes, pack of 5	2000 mm Ø 0.8 mm	-200 to +400 °C	Class 1	5 s	0644 1109
Quick-action surface probe with sprung thermocouple strip, measuring range short-term to +500°C	150 mm Ø 10 mm	-200 to +300 °C	Class 2	3 s	0604 0194 0614 0194
Super quick-action surface probe, probe tip at 90° angle, with sprung thermocouple strip	100 mm 50 mm Ø 10 mm	-200 to +300 °C	Class 2	3 s	0604 0994
Robust surface probe	150 mm Ø 4 mm	-200 to +600 °C	Class 1	25 s	0604 9993 0614 9993
Robust surface probe, at 90° angle, suitable for inaccessible places	130 mm Ø 4 mm	-200 to +600 °C	Class 1	25 s	0604 9893 0614 9893
Robust surface probe with sprung thermocouple strip for high temperature range up to +700°C	200 mm Ø 15 mm	-200 to +700 °C	Class 2	3 s	0600 0394
Roller surface probe for measurements on rollers and rotating drums, max. circumferential velocity 18 to 400m/min	274 mm Ø 33 mm	-50 to +240 °C	Class 2		0600 5093
Magnetic probe, adhesive power approx. 20 N, with magnets, for measurements on metal surfaces	35 mm Ø 20 mm	-50 to +170 °C	Class 2		0600 4793
Magnetic probe, adhesive power approx. 10 N, with magnets, for higher temperatures, measures on metal surfaces	75 mm Ø 21 mm	-50 to +400 °C	Class 2		0600 4893
Miniature surface probe for measurements on electronic components, small motors...	270 mm Ø 5 mm	-200 to +400 °C	Class 2	3 s	0600 1494
Adhesive thermocouple, pack of 2, carrier material: aluminium foil		-200 to +200 °C	Class 1		0644 1607
Fast response immersion/penetration probe	150 mm Ø 3 mm	-200 to +400 °C	Class 1	3 s	0604 0293 0614 0293
Super quick-action immersion/penetration probe for measurements in liquids	150 mm Ø 1.5 mm	-200 to +600 °C	Class 1	1 s	0604 0493 0614 0493
Super quick-action immersion/penetration probe for high temperatures	470 mm Ø 1.5 mm	-200 to +1100 °C	Class 1	1 s	0604 0593 0614 0593
Robust immersion/penetration probe made of V4A stainless steel, waterproof and oven-proof, e.g. for the food sector	150 mm Ø 3.5 mm Ø 3 mm	-200 to +400 °C	Class 1	3 s	0600 2593
Smelting probe for measurements in non-ferrous melting baths, with exchangeable measuring tips	1100 mm Ø 6.5 mm	-200 to +1250 °C	Class 1	60 s	0600 5993
Pipe wrap probe for pipes with diameter of up to 2", for flow/return temp. meas. in hydronic systems		-60 to +130 °C	Class 2	5 s	0600 4593
Spare meas. head for pipe wrap probe	15 mm 35 mm	-60 to +130 °C	Class 2	5 s	0602 0092

testo 950
Suitable probes at a glance

Probes Type K (NiCr-Ni)	Illustration	Meas. range	Accuracy	t ₉₀	Part no.
Plug-in measuring tip, 750mm long, flexible, for high temperatures, outer casing: stainless steel 1.4541	 750 mm Ø 3 mm Please order handle with Part no. 0600 5593	-200 to +900 °C	Class 1	4 s	0600 5393
Plug-in measuring tip, 1200 mm long, flexible, for high temperatures, outer casing: stainless steel 1.4541	 1200 mm Ø 3 mm Please order handle with Part no. 0600 5593	-200 to +900 °C	Class 1	4 s	0600 5493
Plug-in measuring tip, 550mm long, flexible, for high temperatures, outer casing: Inconel 2.4816	 550 mm Ø 3 mm Please order handle with Part no. 0600 5593	-200 to +1100 °C	Class 1	4 s	0600 5793
Plug-in measuring tip, 1030mm long, flexible, for high temperatures, outer casing: Inconel 2.4816	 1030 mm Ø 3 mm Please order handle with Part no. 0600 5593	-200 to +1100 °C	Class 1	4 s	0600 5893
Probes Pt100	Illustration	Meas. range	Accuracy	t ₉₀	Part no.
Standard air probe	 150 mm Ø 3 mm Ø 9 mm Conn.: Plug-in head, connection cable 0430 0143 or 0430 0145 required	-200... +600 °C	Class A	75 s	0604 9773
Precision air probe	 150 mm Ø 3 mm Ø 9 mm Conn.: Plug-in head, connection cable 0430 0143 or 0430 0145 required	-100 to +400 °C	1/10 Class B (0 to 100°C) 1/5 Class B (rem. range) to EN 60751	75 s	0628 0017
Robust surface probe	 150 mm Ø 4 mm Ø 9 mm Conn.: Plug-in head, connection cable 0430 0143 or 0430 0145 required	-50 to +400 °C	Class B	40 s	0604 9973 0628 0018
Velcro probe for pipes with diameter of max. 100 mm	 280 mm Conn.: Fixed cable	-50 to +150 °C	Class B	40 s	0628 0019
Standard immersion/penetration probe	 200 mm Ø 3 mm Conn.: Plug-in head, connection cable 0430 0143 or 0430 0145 required	-200 to +400 °C	Class A	20 s	0604 0273
Standard immersion/penetration probe	 200 mm Ø 3 mm Conn.: Plug-in head, connection cable 0430 0143 or 0430 0145 required	-200 to +600 °C	Class A	20 s	0604 0274
Highly accurate immersion/penetration probe incl. certificate	 295 mm Ø 4 mm Conn.: Plug-in head, connection cable 0430 0143 or 0430 0145 required	-40 to +300 °C	±0.05 °C (+0.01 to +100 °C) ±(0.05 °C ±0.05% of mv) (-40 to 0 °C) ±(0.05 °C ±0.05% of mv) (+100.01 to +300 °C)	60 s	0614 0240
Highly accurate immersion/penetration probe	 200 mm Ø 3 mm Conn.: Plug-in head, connection cable 0430 0143 or 0430 0145 required	-100 to +400 °C	1/10 Class B (0 to 100°C) 1/5 Class B (rem. range) to EN 60751	30 s	0628 0015
Flexible precision immersion probe, cable heat-proof up to +300°C	 1000 mm Ø 3.5 mm 50 mm Ø 6 mm Conn.: Plug-in head, connection cable 0430 0143 or 0430 0145 required	-100 to +265 °C	1/10 Class B (0 to 100°C) 1/5 Class B (rem. range) to EN 60751	80 s	0628 0016
Robust immersion/penetration probe with sharpened measuring tip, waterproof and oven-proof	 150 mm Ø 3.5 mm Ø 3 mm Conn.: Fixed cable	-200 to +400 °C	Class A	30 s	0604 2573
Probes NTC	Illustration	Meas. range	Accuracy	t ₉₀	Part no.
Highly accurate air probe for air and gas temperature measurements with bare, mechanically protected sensor	 150 mm Ø 9 mm Conn.: Fixed cable	-40 to +130 °C	To UNI curve	60 s	0610 9714
Globe thermometer to measure radiant heat	 Ø 150 mm Conn.: Fixed cable	0 to +120 °C	±0.5 °C (0 to +49.9 °C) ±1 °C (+50 to +120 °C) Accuracy corresponds to ISO 7243, ISO 7726, DIN EN 27726, DIN 33403 requirements		0554 0670

More probes	Illustration	Meas. range	Accuracy	Part no.
Ambient CO probe to measure CO level in ambient air	 190 mm Conn.: Fixed cable	0 to +500 ppm CO	±5% of mv (+100.1 to +500 ppm CO) ±5 ppm CO (0 to +100 ppm CO)	0632 1247
CO2 probe measures indoor air quality and monitors the workplace. With plug-in head, connection cable 0430 0143 or 0430 0145 required	 Conn.: Plug-in head, connection cable 0430 0143 or 0430 0145 required	0 to +1 Vol. % CO ₂ 0 to +10000 ppm CO ₂	±(50 ppm CO ₂ ±2% of mv)(0 to +5000 ppm CO ₂) ±(100 ppm CO ₂ ±3% of mv)(+5001 to +10000 ppm CO ₂)	0632 1240
Mechanical rpm probe with plug-in head Included 2 probe tips Ø 8 and Ø 12 mm 1 hollow cone Ø 8 mm 1 surface speed disc Ø 19 mm to measure rotational speed: rpm = rotational speed in mm/s	 Conn.: Plug-in head, connection cable 0430 0143 or 0430 0145 required	20 to 20000 rpm	±1 digit	0640 0340
Current/voltage cable (±1 V, ±10 V, 20 mA)		0 to +1000 mV 0 to +10 V 0 to +20 mA	±1 mV (0 to +1000 mV) ±0.01 V (0 to +10 V) ±0.04 mA (0 to +20 mA)	0554 0007
4 to 20 mA interface for connection and intermittent power supply to transmitters (scaling via hand-held instrument), in robust metal housing with impact protection, incl. magnet for fast attachment	 Conn.: Plug-in head, connection cable 0430 0143 or 0430 0145 required	0/4 to 20 mA	±0.04 mA	0554 0528

Accessories	Part no.
Cable, 1.5 m long, connects probe with plug-in head to meas. instrument, PUR coating material	0430 0143
Cable, 5 m long, connects probe with plug-in head to measuring instrument, PUR coating material	0430 0145
Extension cable, 5 m long, between plug-in head cable and instrument, PUR coating material	0409 0063
Telescopic handle, max. 1 m, for probe with plug-in head, Cable: 2.5 m long, PUR coating material	0430 0144
Glass shaft for immersion/penetration probe to protect from corrosive agents For probes with Part nos. 0604 0273 and 0628 0015	0554 7072
Adapter to connect NiCr-Ni thermocouples and probes with open wire ends	0600 1693
Handle for plug-in measuring tip	0600 5593
Silicone heat paste (14g), Tmax = +260°C, Improves heat transfer in surface probes	0554 0004

testo 860-T2

testo 860-T2, the non-contact thermometer with new laser technology. The 60:1 focus is also suitable for measurements over long distances.

testo 860-T2, infrared thermometer with standard focus, incl. case and batteries

Part no.
0560 8602

- Internal data memory (100 pos.) with location management
- Alarm function, audible and visual
- Freely adjustable emissivity from 0.10 to 1.00
- Contact probe can be connected
- Data output RS 232 or analog output (1 mV/°C)
- Materials table (preset emissivities)
- Mean calculation/differential value

testo 860-T3

testo 860-T3 with its close focus (50:1) creates a 6mm wide spot at a distance of 0.3m.

testo 860-T3, infrared thermometer with close focus, incl. case and batteries

Part no.
0560 8603

Infrared measurement system with laser sighting


Set	Part no.
testo 860-T2 set includes thermometer, quick-action surface probe for contact measurements up to 500°C, Windows-compatible software, RS 232 computer cable, plug-in mains unit, transport case.	0563 8602

The testo 860-T3 Set includes measuring instrument, fast-action surface probe for contact measurement up to 500°C, Windows-compatible software, computer cable RS 232, plug-in mains unit, transport case.

Accessories	Part no.
230 V mains unit (Euro plug), For mains operation of testo 860-T2/T3	0554 0861

Software, Windows compatible, for convenient data analysis

PC connection cable, RS 232, for testo 860 T2-/T3	0409 0861
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Analog cable for testo 860, connection cable for flatbed recorder or data logger

Adhesive tape e.g. for polished surfaces (roll, 10 m long, 25 mm wide), E = 0.93, temperature resistant up to +300°C

ISO calibration certificate/Temperature, Infrared thermometer; calibration points +60°C; +120°C; +180°C

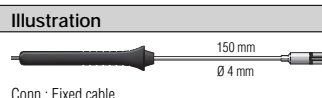
ISO calibration certificate/Temperature, Thermometers with surface probe; calibration points +60°C; +120°C; +180°C

Technical data

Probe type	Infrared	Reaction type	t_{95}
Meas. range	-30 to +900 °C	Reaction time	0.25 s
Accuracy ±1 digit	±0.75% of mv (+75 to +900 °C) ±0.75 °C (-4.9 to +74.9 °C) ±2 °C (-30 to -5 °C)	Oper. humidity	+10 to +95 %RH
Resolution	0.1 °C	Display	LCD graphics display
Oper. temp.	0 to +45 °C	Material/Housing	ABS
Storage temp.	-20 to +50 °C	Dimensions	200 x 170 x 50 mm
Battery type	2 AAAA micro batteries	Weight	480 g
Battery life	10 h	Warranty	2 years
		Reproducibility: ±0.5 % of reading or ±1 °C, the larger value is valid	
		Spectral sensitivity: 8 to 14 µm	

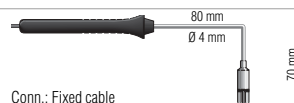
NiCr-Ni probes

Quick-action surface probe with spring-loaded thermocouple, also for rough surfaces, measuring range short-term up to 500°C



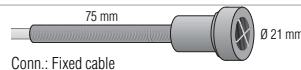
Meas. range	Accuracy	t_{99}	Part no.
-60 to +300 °C	Class 2	3 s	0602 0392

Quick-action surface probe, bent, with sprung thermocouple strip, also for rough surfaces, measuring range short-term up to +500°C

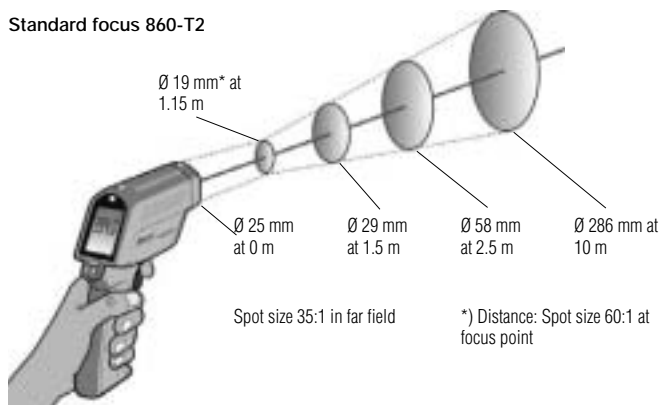
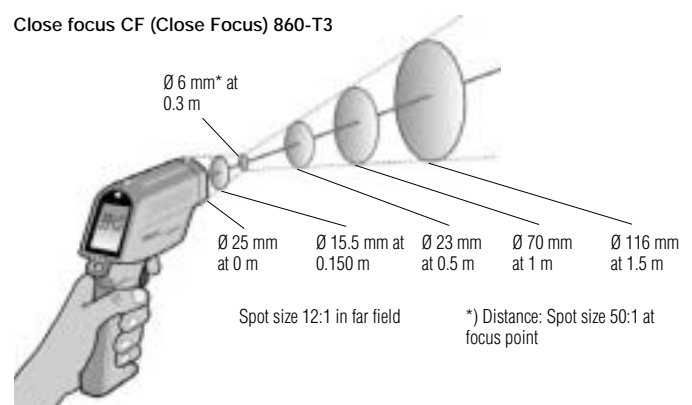


-60 to +300 °C	Class 2	3 s	0602 0992
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Magnetic probe, adhesive force approx. 10 N, with magnets, for higher temp., for measurements on metal surfaces



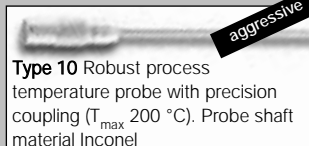
-50 to +400 °C	Class 2		0602 4892
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For additional probes see testo 925
Standard focus 860-T2

Close focus CF (Close Focus) 860-T3


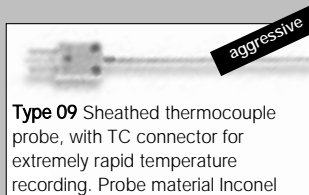
Selecting the right type of standard probe

Testo offers a wide range of stationary probes. Use the characteristics listed below to choose the one that is suitable for your process media:

in gases

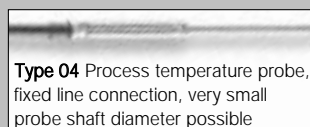


Type 10 Robust process temperature probe with precision coupling (T_{\max} 200 °C). Probe shaft material Inconel



Type 09 Sheathed thermocouple probe, with TC connector for extremely rapid temperature recording. Probe material Inconel

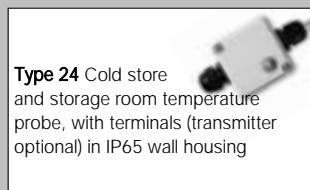
in air and gases



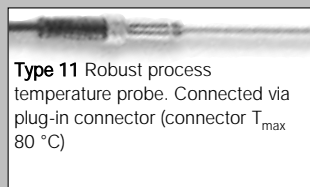
Type 04 Process temperature probe, fixed line connection, very small probe shaft diameter possible



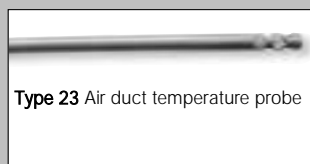
Type 20 Ambient temperature probe, plastic or sheet steel housing



Type 24 Cold store and storage room temperature probe, with terminals (transmitter optional) in IP65 wall housing

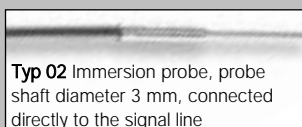


Type 11 Robust process temperature probe. Connected via plug-in connector (connector T_{\max} 80 °C)

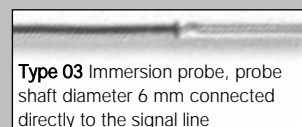


Type 23 Air duct temperature probe

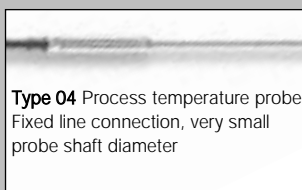
in liquids



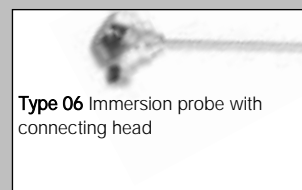
Type 02 Immersion probe, probe shaft diameter 3 mm, connected directly to the signal line



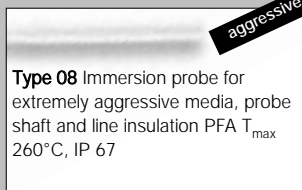
Type 03 Immersion probe, probe shaft diameter 6 mm connected directly to the signal line



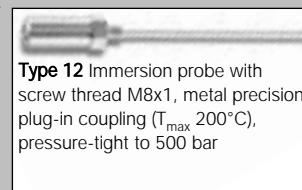
Type 04 Process temperature probe. Fixed line connection, very small probe shaft diameter



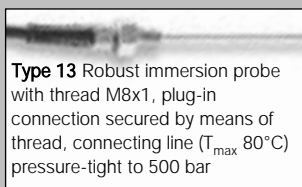
Type 06 Immersion probe with connecting head



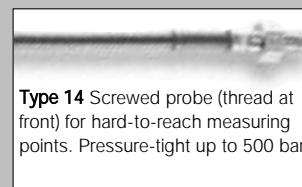
Type 08 Immersion probe for extremely aggressive media, probe shaft and line insulation PFA T_{\max} 260°C, IP 67



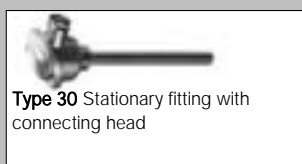
Type 12 Immersion probe with screw thread M8x1, metal precision plug-in coupling (T_{\max} 200°C), pressure-tight to 500 bar



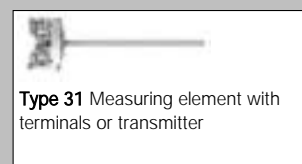
Type 13 Robust immersion probe with thread M8x1, plug-in connection secured by means of thread, connecting line (T_{\max} 80°C) pressure-tight to 500 bar



Type 14 Screwed probe (thread at front) for hard-to-reach measuring points. Pressure-tight up to 500 bar

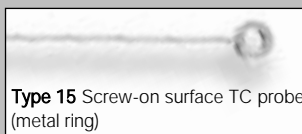


Type 30 Stationary fitting with connecting head

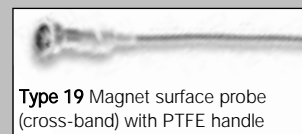


Type 31 Measuring element with terminals or transmitter

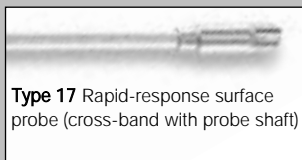
on surfaces



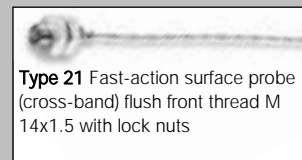
Type 15 Screw-on surface TC probe (metal ring)



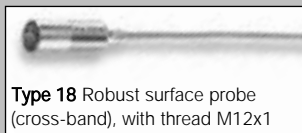
Type 19 Magnet surface probe (cross-band) with PTFE handle



Type 17 Rapid-response surface probe (cross-band with probe shaft)



Type 21 Fast-action surface probe (cross-band) flush front thread M 14x1.5 with lock nuts



Type 18 Robust surface probe (cross-band), with thread M12x1

Please send for the brochure "Stationary Temperature Probes"

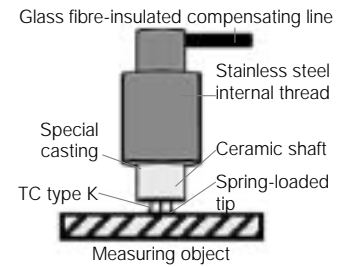
Custom stationary probes

Does none of the standard stationary probes shown meet your requirements? Or do you already have a clear idea of what your solution should look like? Testo offers custom-designed stationary probes corresponding exactly to your concepts. We will design the stationary probe especially for your measurement task. Some examples are shown on this page.

Example from mechanical engineering

Shafts and gear wheels are heated in a furnace until they have reached a certain temperature. The gear wheels are then fitted onto the shafts, to which they remain securely joined after cooling down. The spring-loaded tip of the probe ensures optimum contact; ceramic and coating mass are a perfect match for the temperature stresses.

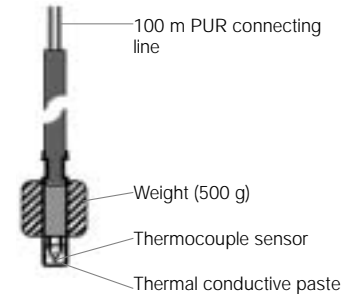
Stationary surface probe with spring-loaded tip:



Example from chemistry and research

The stationary probe can be immersed in liquid to a depth of 100 metres. This means that temperature layers in seas, lakes and even tanks can be recorded. The special probe shaft, the weight and the connected compensating line are very robust in design. The choice of sensor and thermal conduction paste allows precise measurement even with rapid changes in position.

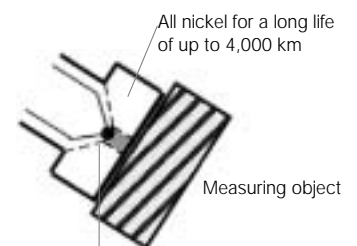
Measuring probe for immersion in water



Example from automotive engineering

Recording the temperature of brake disks during travel demands very robust materials. It is also extremely important to have excellent contact with the measuring object so that the actual temperature is recorded. This requirement is met optimally by soldering the thermocouple wire into a nickel turned part by means of a flush front solder.

Temperature probe for measuring the brake disk temperature



The thermoelectric wires are soldered in. The solder is directly on measuring object to guarantee optimum temperature recording

- Probe data
- Type K (Class 1) thermocouple
 - All-nickel turned part
 - Tmax 400 °C
 - Glass fibre-insulated steel wire-braided signal line

Please send for the brochure "Stationary Temperature Probes"



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