



## Temperature measuring instrument (1-channel)

testo 110 - Universally applicable

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Wireless measurement with radio probes possible

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TopSafe, the indestructible protective case, protects from dirt and impact (with TopSafe and probe attached)

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Automatic final value recognition (Auto-hold)

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Audible alarm (settable limit values)

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Min./max. value store

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Large illuminated display

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Certified according to EN 13485

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The testo 110 is a highly accurate, universally applicable temperature measuring instrument. The optional protective cover (TopSafe) protects it reliably from dirt, water and impact; this makes it ideal for use in tough surroundings. With the TopSafe, the testo 110 conforms to HACCP as well as EN 13485.

The monitoring measuring instrument is especially designed for measurements in refrigerated rooms and buildings, and in outdoor areas. In addition to the wide selection of classical probes, a wireless radio probe can simultaneously be used (when the wireless module is used in the instrument). As the user, you can set your own upper and lower limit values in the instrument; as soon as these values are violated, an audible alarm sounds. In addition to this, the minimum and maximum values are clearly shown in the 2-line backlit display.

# Temperature measuring instrument (1-channel)



Optional protective case TopSafe



Probe connection

Sensor type	NTC
Measuring range	-50 to +150 °C
Accuracy ±1 digit	±0.2 °C (-20 to +80 °C) ±0.3 °C (remaining range)
Resolution	0.1 °C

#### General technical data

Storage temperature	-40 to +70 °C
Operating temperature	-20 to +50 °C
Battery type	9V block battery, 6F22
Battery life	200 h (connected probe, backlight off) 45 h (radio mode, backlight off) 68 h (connected probe, backlight always on) 33 h (radio mode, backlight always on)
Weight	171 g
Dimensions	182 x 64 x 40 mm
Housing material	ABS
Warranty	2 years
Standard	EN 13485

#### Accessories

#### Part no.

##### Accessories for measuring instrument

9V rech. battery for instrument instead of battery	0515 0025	
Recharger for 9V rechargeable battery for external recharging of 0515 0025 battery	0554 0025	
Lithium battery button cell , CR2032 AA batteries for radio handle	0515 5028	

##### Radio module for upgrading measuring instrument with radio option

Radio module for measuring instrument, 869.85 MHz, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO	0554 0188	
Radio module for measuring instrument, 915.00 MHz FSK, approval for USA, CA, CL	0554 0190	

##### Printer and Accessories

Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries	0554 0549	
Spare thermal paper for printer (6 rolls), permanent ink; measurement data documentation legible for up to 10 years	0554 0568	
External fast charger for 1-4 AA rech. batteries, incl. 4 Ni-MH rech. batteries with individual cell charging and charge control display, incl. impulse trickle charging, integrated discharge function, with built-in international mains plug, 100-240 V, 300 mA, 50/60 Hz	0554 0610	

##### Transport and Protection

TopSafe, protects from impact and dirt (incl. 2 attachment magnets)	0516 0221	
Case for measuring instrument and probes	0516 0210	
Service case for measuring instrument, probe and accessories, dimensions 454 x 316 x 111 mm	0516 1200	
Service case for measuring instrument and probe, dimensions 454 x 316 x 111 mm	0516 1201	

##### Calibration Certificates


ISO calibration certificate/temperature, for air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001	
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	
DAkkS calibration certificate/temperature, meas. instr. with air/immersion probe; calibration points -20 °C; 0 °C; +60 °C	0520 0211	

# Radio probes

## Radio handles with probe head for air-/ immersion-penetration-meas.

Part no.

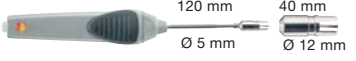
Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO; Radio freq. 869.85 MHz FSK	0554 0189	
T/C probe head for air/immersion/penetration measurement (T/C Type K)	0602 0293	
Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 915.00 MHz FSK	0554 0191	
T/C probe head for air/immersion/penetration measurement (T/C Type K)	0602 0293	

Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Resolution	t <sub>99</sub>
 100 mm 30 mm Ø 5 mm    Ø 3,4 mm	-50 to +350 °C Short-term to +500 °C	Radio handle: ±(0.5 °C +0.3% of m.v.) (-40 to +500 °C) ±(0.7 °C +0.5% of m.v.) (remaining range) T/C probe head: Class 2	0.1 °C (-50 to +199.9 °C) 1.0 °C (remaining range)	t <sub>99</sub> (in water) 10 s

## Radio handles with probe head for surface measurement

Part no.


Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO; Radio freq. 869.85 MHz FSK	0554 0189	
T/C probe head for surface measurement (T/C Type K)	0602 0394	
Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 915.00 MHz FSK	0554 0191	
T/C probe head for surface measurement (T/C Type K)	0602 0394	

Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Resolution	t <sub>99</sub>
 120 mm 40 mm Ø 5 mm    Ø 12 mm	-50 to +350 °C Short-term to +500 °C	Radio handle: ±(0.5 °C +0.3% of m.v.) (-40 to +500 °C) ±(0.7 °C +0.5% of m.v.) (remaining range) T/C probe head: Class 2	0.1 °C (-50 to +199.9 °C) 1.0 °C (remaining range)	5 s

## Radio handles for attachable T/C probes

Part no.

Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO ; Radio freq. 869.85 MHz FSK	0554 0189	
Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 915.00 MHz FSK	0554 0191	

Illustration	Measuring range	Accuracy	Resolution
	-50 to +1000 °C	±(0.7 °C +0.3% of m.v.) (-40 to +900 °C) ±(0.9 °C +0.5% of m.v.) (remaining range)	0.1 °C (-50 to +199.9 °C) 1.0 °C (remaining range)

## Technical data Radio probes

### Radio immersion/penetration probe, NTC

Battery type	2 x 3V button cell (CR 2032)
Battery life	150 h (meas. rate 0.5 s) 2 months (meas. rate 10 s)

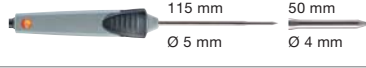
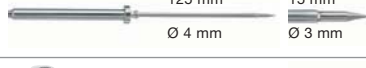
### Radio handle

Battery type	2 x 3V button cell (CR 2032)
Battery life	215 h (meas. rate 0.5 s) 6 months (meas. rate 10 s)

### Common Technical Data

Measuring rate	0.5 s or 10 s, adjustable on handle
Radio coverage	Up to 20 m (without obstructions)
Radio transmission	Unidirectional
Operating temperature	-20 to +50 °C
Storage temperature	-40 to +70 °C

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Air probes</b>					
◆ Efficient, robust NTC air probe, Fixed cable 1.2 m	 115 mm Ø 5 mm      50 mm Ø 4 mm	-50 to +125 °C <sup>2)</sup>	±0.2 °C (-25 to +80 °C) ±0.4 °C (remaining range)	60 s	0613 1712
<b>Surface probes</b>					
◆ Waterproof NTC surface probe for flat surfaces, Fixed cable 1.2 m	 115 mm Ø 5 mm      50 mm Ø 6 mm	-50 to +150 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	35 s	0613 1912
Pipe wrap probe with Velcro for pipe diameter to max. 75 mm, Tmax. +75 °C, NTC, Fixed cable 1.5 m	 300 mm	-50 to +70 °C <sup>2)</sup>	±0.2 °C (-25 to +70 °C) ±0.4 °C (-50 to -25.1 °C)	60 s	0613 4611
<b>Immers./penetr. probes</b>					
◆ Waterproof NTC immersion/penetration probe, Fixed cable 1.2 m	 115 mm Ø 5 mm      50 mm Ø 4 mm	-50 to +150 °C	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	10 s	0613 1212
<b>Food probes</b>					
◆ Stainless steel NTC food probe (IP65) with PUR cable, Fixed cable 1.6 m	 125 mm Ø 4 mm      15 mm Ø 3 mm	-50 to +150 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	8 s	0613 2211
◆ Stainless steel NTC food probe (IP67) with PTFE cable to +250 °C, Fixed cable	 125 mm Ø 4 mm      15 mm Ø 3 mm	-50 to +150 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	8 s	0613 3311
◆ Robust NTC food penetration probe with special handle, reinforced PUR cable, Fixed cable	 115 mm Ø 5 mm      30 mm Ø 3.5 mm	-25 to +150 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	7 s	0613 2411
◆ Frozen food probe NTC, corkscrew design (incl. plug-in wire)	 110 mm Ø 8 mm      30 mm Ø 4 mm	-50 to +140 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +140 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	20 s	0613 3211

◆ 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)

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