

# Temperature measuring instrument (2-channel)

testo 922 - For fast (differential) temperature measurement

Ideally suited for applications in the HVAC field

2-channel temperature measuring instrument with optional wireless probes

Display of differential temperature

TopSafe, the indestructible protective cover, protects from dirt and impact

Continuous display of min./max. values

Hold-button for freezing measurement values

Cyclic printing of measurement values, e.g. once per minute



testo 922 is a temperature measuring instrument which is especially suited to applications in the HVAC field. The measuring instrument records the temperature values of two connected thermocouple probes, and shows these simultaneously together with the differential temperature in the display. Measurement data transfer by radio additionally allows the measurement value from a further temperature probe to be displayed wirelessly.

With the TopSafe, and the probe plugged in, the measuring instrument has protection class IP65.

The instrument continuously displays the minimum and maximum values. The measurement values shown in the display (current measurement value, fixed measurement value or the minimum/maximum value) can be printed out on site using the Testo report printer (optional). In addiition to this, the measurement values can be cyclically printed – the intervals can be individually set.

°C

# Technical data

#### testo 922

testo 922, 2 channel temperature measuring instrument T/C Type K, connection of an optional radio probe, with battery and calibration protocol

Part no. 0560 9221



Sensor type	Type K (NiCr-Ni)
Meas. range	-50 to +1000 °C
Accuracy ±1 digit	±(0.5 °C +0.3% of mv) (-40 to +900 °C) ±(0.7 °C +0.5% of mv) (remaining range)
Resolution	0.1 °C (-50 to +199.9 °C) 1 °C (remaining range)

#### **General technical data**

Oper. temp.	-20 to +50 °C
Storage temp.	-40 to +70 °C
Material/Housing	ABS
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)
Dimensions	182 x 64 x 40 mm
Weight	171 g
Warranty	2 years

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Optional protective case TopSafe



Wireless measurement with radio probes



Simultaneous recording of temperature by two connected probes and display of differential temperature



2 probe conneections

### Accessories

Accessories for measuring instrument	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	

#### 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; for printing out measurements on site	0554 0549	
Spare thermal paper for printer (6 rolls), permanent ink measurement data documentation legible for up to 10 years	0554 0568	

#### **Transport and Protection**

TopSafe, protects from impact and dirt (incl. 2 attachment magnets)	0516 0222
Transport case for measuring instrument, 3 probes and accessories (430 x 310 x 85 mm)	0516 0200
Transport case for meas. instr. and probes (405 x 170 x 85 mm)	0516 0201
Case for measuring instrument and probes	0516 0210

#### Other features

Handle for attachable measurement tips, applicable for all Testo probes with miniature thermocouple plugs	0409 1092	
Extension cable, 5m, for thermocouple probe Type K	0554 0592	
Silicone heat paste (14g), Tmax = +260°C, improves heat transfer in surface probes	0554 0004	

#### **Calibration Certificates**

ISO calibration certificate/temperature for air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001
ISO calibration certificate/temperature (Applies only to immersion/penetration probe 0602 2693) Meas. instr. with air/immersion probe; cal. points 0°C; +150°C; +300°C	0520 0021
ISO calibration certificate/temperature meas. instr. with air/immersion probe; calibration points 0°C; +300°C; +600°C	0520 0031
ISO calibration certificate/temperature meas. instr. with surface probe; calibration points +60°C; +120°C; +180°C	0520 0071
DAkkS calibration certificate/temperature meas. instr. with air/immersion probe; calibration points -20 °C; 0 °C; +60 °C	0520 0211
DAkkS calibration certificate/temperature contact surface temperature probes; calibration points +100°C; +200°C; +300°C	0520 0271

Part no.

Part no.

# Radio probes

#### Radio probes for immersion/penetration measurements

Radio immersion/penetration probe, NTC, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, E			Γ, SE, AT, DK, F	I, HU,	0613 1001	
Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Resolution	t <sub>99</sub>		
105 mm 30 mm 0 5 mm 0 3.4 mm	-50 to +275 °C	±0.5 °C (-20 to +80 °C) ±0.8 °C (-50 to -20.1 °C) ±0.8 °C (+80.1 to +200 °C) ±1.5 °C (remaining range)	0.1 °C	t <sub>99</sub> (in water) 12 s	-	

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

 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)
 0554 0191

 Dimensions
 Measuring
 Accuracy

 Perohe shaft tip
 Measuring

 Prohe shaft tip
 Accuracy

Probe shaft/probe shaft tip	range			
100 mm 30 mm Ø 5 mm Ø 3,4 mm	-50 to +350 °C Short-term to +500 °C	Radio handle: $\pm$ (0.5 °C +0.3% of m.v.) (-40 to +500 °C) $\pm$ (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

Radio handle for plug-in probe heads, i DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT				, SE, AT,	0554 0189	
T/C probe head for surface measureme	nt (T/C Type K)				0602 0394	
Radio handle for plug-in probe heads, i	ncl. T/C adapter,	approval for USA, CA, CL; Radio freq.	915.00 MHz FS	K	0554 0191	
T/C probe head for surface measureme	nt (T/C Type K)				0602 0394	
Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Resolution	t <sub>99</sub>		
120 mm 0 5 mm 0 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

# Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DS54 0189 0554 0189 Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 869.85 MHz FSK 0554 0191 Illustration Measuring range Accuracy -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 AAA micro batteries

#### **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

#### Part no.

#### Part no.

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
Air probes					
Robust air probe, T/C Type K, Fixed cable 1.2 m	115 mm Ø 4 mm	-60 to +400 °C	Class 2 <sup>1)</sup>	25 s	0602 1793
Immers./penetr. probes					
Efficient and fast-action immersion probe, waterproof, TC Type K, Fixed cable 1.2 m	Ø 1.5 mm 300 mm	-60 to +1000 °C	Class 1 1)	2 s	0602 0593
Fast-action, waterproof immersion/penetration probe, TC Type K, Fixed cable 1.2 m	60 mm 14 mm 0 5 mm 0 1.5 mm	-60 to +800 °C	Class 1 1)	3 s	0602 2693
Immersion tip, flexible, TC Type K	Ø 1.5 mm 500 mm	-200 to +1000 °C	Class 1 <sup>1)</sup>	5 s	0602 5792
Immersion measurement tip, flexible, for measurements in air/exhaust gases (not suitable for measurements in smelters), TC Type K	Ø 3 mm 1000 mm	-200 to +1300 °C	Class 1 <sup>1)</sup>	4 s	0602 5693
Immersion tip, flexible, TC Type K	Ø 1.5 mm 500 mm	-200 to +40 °C	Class 3 <sup>1)</sup>	5 s	0602 5793
Waterproof immersion/penetration probe, TC Type K, Fixed cable 1.2 m	114 mm 50 mm Ø 5 mm Ø 3.7 mm	-60 to +400 °C	Class 2 <sup>1)</sup>	7 s	0602 1293
Surface probes					
Fast-reaction paddle surface probe, for measurements in inaccessible places, e.g. narrow apertures and slots, TC Type K, Fixed cable		0 to +300 °C	Class 2 <sup>1)</sup>	5 s	0602 0193
P Fast-action surface probe with sprung thermocouple strip, also for uneven surfaces, measurement range short-term to +500°C, TC Type K, Fixed cable 1.2 m	115 mm Ø 5 mm Ø 12 mm	-60 to +300 °C	Class 2 <sup>1)</sup>	3 s	0602 0393
Waterproof surface probe with widened measurement tip for flat surfaces, T/C Type K, Fixed cable 1.2 m	115 mm 0 5 mm 0 6 mm	-60 to +400 °C	Class 2 <sup>1)</sup>	30 s	0602 1993
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The measuring instrument inside TopSafe is waterproof with this probe. 1) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K). A probe always corresponds to only **one** accuracy class.

# Probes

Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.			
Surface probes							
80 mm 50 mm Ø 5 mm Ø 12 mm	-60 to +300 °C	Class 2 1)	3 s	0602 0993			
150 mm Ø 2.5 mm Ø 4 mm	-60 to +1000 °C	Class 1 <sup>1)</sup>	20 s	0602 0693			
680 mm 12 mm	-50 to +250 °C	Class 2 <sup>1)</sup>	3 s	0602 2394			
35 mm	-50 to +170 °C	Class 2 1)	150 s	0602 4792			
75 mm Ø 21 mm	-50 to +400 °C	Class 2 1)		0602 4892			
395 mm	-50 to +120 °C	Class 1 1)	90 s	0628 0020			
	-60 to +130 °C	Class 2 1)	5 s	0602 4592			
35 mm	-60 to +130 °C	Class 2 <sup>1)</sup>	5 s	0602 0092			
	-50 to +100 °C	Class 2 1)	5 s	0602 4692			
	80 mm       50 mm         0 5 mm       50 mm         0 12 mm       0 12 mm         150 mm       0 4 mm         0 2.5 mm       0 4 mm         0 2.5 mm       0 4 mm         0 25 mm       0 20 mm         150 mm       0 20 mm	Probe shaft/probe shaft tip       range         80 mm       50 mm       -60 to +300 °C         0 5 mm       0 12 mm       -60 to +1000 °C         150 mm       0 4 mm       -60 to +1000 °C         680 mm       0 4 mm       -50 to +250 °C         680 mm       0 25 mm       -50 to +1000 °C         35 mm       0 20 mm       -50 to +100 °C         35 mm       0 20 mm       -50 to +100 °C         75 mm       0 21 mm       -50 to +100 °C         395 mm       20 mm       -50 to +120 °C         395 mm       20 mm       -60 to +130 °C         35 mm       15 mm       -60 to +130 °C	Probe shaft/probe shaft tip       range       construction         80 mm       50 mm       -80 to +300 °C       Class 2 °         100 mm       0.12 mm       -80 to +1000 °C       Class 1 °         150 mm       0.2.5 mm       0.4 mm       -80 to +1000 °C       Class 2 °         100 mm       0.2.5 mm       0.4 mm       -50 to +250 °C       Class 2 °         100 mm       0.2.5 mm       0.2.5 mm       -50 to +100 °C       Class 2 °         100 mm       0.2.5 mm       0.2.5 mm       -50 to +100 °C       Class 2 °         100 mm       0.2.5 mm       -50 to +100 °C       Class 2 °       -50 to +100 °C       Class 2 °         100 mm       0.2.5 mm       0.2.5 mm       -50 to +100 °C       Class 2 °       -50 to +100 °C       Class 2 °         100 mm       0.2.5 mm       0.2.5 mm       -50 to +120 °C       Class 2 °       -50 to +120 °C       Class 2 °         100 mm       0.2.5 mm       -60 to +130 °C       Class 2 °       -50 to +130 °C       Class 2 °         110 mm       15 mm       -60 to +130 °C       Class 2 °       -50 to +130 °C       Class 2 °	Probe shaft/probe shaft tip       range       No. X = 1       as <ul> <li>80 mm</li> <li>0.5 mm</li> <li>0.12 mm</li> </ul> -60 to +300 °C 0.12 mm          Class 2 °)            3 s                 150 mm 0.2 mm              -0 to +1000 °C 0.2 mm              Class 1 °)               20 s			

The measuring instrument inside TopSafe is waterproof with this probe. 1) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K). A probe always corresponds to only **one** accuracy class.

# **Probes**

Probe type	Dimensions Probe shaft/probe shaft tip		Measuring range	Accuracy	t <sub>99</sub>	Part no.
Food probes						
<ul> <li>Waterproof food probe made of stainless steel (IP65), TC Type K, Fixed cable</li> </ul>	125 mm	30 mm	-60 to +400 °C	Class 2 <sup>1)</sup>	7 s	0602 2292
	Ø 4 mm	Ø 3.2 mm				
Waterproof robust immersion/penetration probe with metal protection hose Tmax +230°C, e.g. for monitoring temp. in cooking oil, T/C Type K, Fixed	240 mm		-50 to +230 °C	Class 1 1)	15 s	0628 1292
	Ø 4 mm					

#### Thermocouples

cable

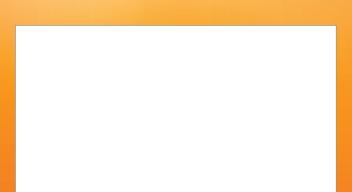
Thermocouple with TC adapter, flexible, 800 mm long, fibre glass, TC Type K	800 mm Ø 1.5 mm	-50 to +400 °C	Class 2 <sup>1)</sup>	5 s	0602 0644
Thermocouple with TC adapter, flexible, length 1500 mm , fibreglass, TC Type K	1500 mm Ø 1.5 mm	-50 to +400 °C	Class 2 <sup>1)</sup>	5 s	0602 0645
Thermocouple with TC adapter, flexible, 1500 mm long, PTFE, TC Type K	1500 mm Ø 1.5 mm	-50 to +250 °C	Class 2 1)	5 s	0602 0646

The measuring instrument inside TopSafe is waterproof with this probe.
 1) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K). A probe always corresponds to only **one** accuracy class.

#### Information on surface measurement:

- $\bullet$  The response times  $t_{_{99}}\,$  stated are measured on ground steel or aluminium plates at +60 °C.
- The stated accuracies are sensor accuracies.
- The accuracy in your application is dependent on the surface structure (roughness), material of the measurement object (heat capacity and heat transfer), as wel as sensor accuracy. Testo creates a corresponding calibration certificate for the deviations of your measurement system in your application. For this purpose, Testo uses a surface test bench developed in cooperation with the PTB (Physikalisch Technische Bundesanstalt).





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