

We measure it.



Temperature probes for Testo instruments

Configurator for 6000 1111

Find the right temperature probe quickly and easily
for:

- Testo data loggers
 - testo Saveris™
 - Testo temperature measuring instruments
-



The standard temperature probes from the Testo range can be individually tailored to your application.

Just select the respective options.

The configurator on the following pages will support you in your selection.

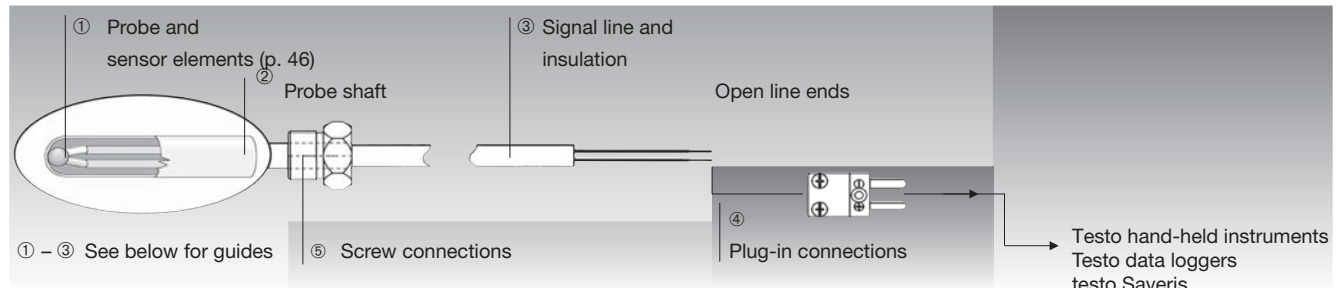
For assistance with your questions, please contact your Testo partner.

www.testolimited.com

Selection assistance temperature probes

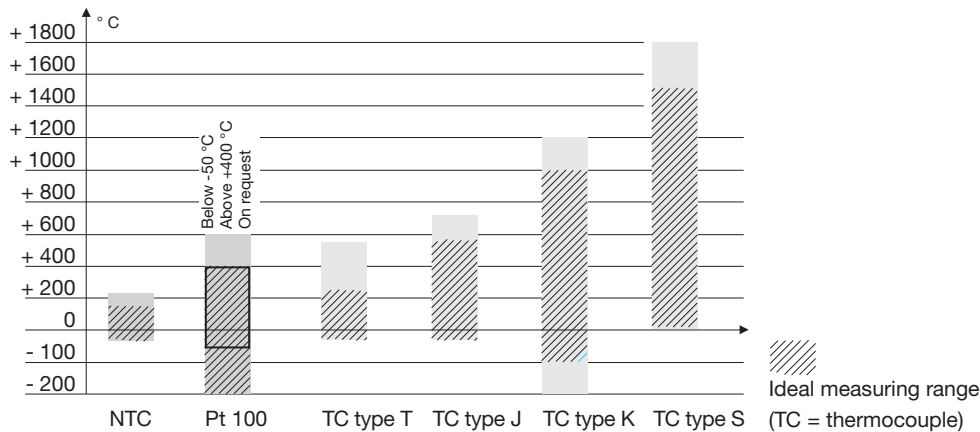
Overview of probe components 1-5

The following pages give some advice for when you come to choose each of the temperature probe components. For an overview of components (1-5), see also the graphic below. This allows you to optimally select your custom temperature probes. The codes D01, G08 etc. will help you define the different versions quickly and correctly.



1 Selection of sensor element

1 a Measuring range of sensor element



Example:
Your process requires a measuring range from 0 to 350 °C (32 to 662 °F). Pt 100 and thermocouple type J or K are suitable.

1 b Accuracy and response times

Order code	Measuring sensor	Range °C	Class	Tolerances		Response times t99**
A 01	Pt 100	-50...+400	B	± 0.3 °C	± 0.005 x ltl	10 s in water (probe shaft Ø 1.6 mm)
A 02		-50...+400	A	± 0.15 °C	± 0.002 x ltl	15 s in water (probe shaft Ø 3 mm)
A 03		-50...+200	1/3 B	± 0.1 °C	± 0.0017 x ltl	130 s in air (probe shaft Ø 1.6 mm)
A 04		0...+100	1/10 B	± 0.03 °C	± 0.0005 x ltl	150 s in air (probe shaft Ø 3 mm)
A 05	Type K	-40...+1000	1	± 1.5 °C or ¹⁾	± 0.004 x ltl	1.5 sec. in water (probe shaft Ø 0.5 mm)
A 06	Type K	-40...+1200	2	± 2.5 °C or ¹⁾	± 0.0075 x ltl	3 s in water (probe shaft Ø 3 mm) 40 s in air (probe shaft Ø 0.5 mm) 70 s in air (probe shaft Ø 3 mm)
A 09/A 10	NTC (Standard)*	-50...-25.1	-	± 0.4 °C		7 s in water (probe shaft Ø 3 mm)
		-25...+74.9	-	± 0.2 °C		66 s in air (probe shaft Ø 3 mm)
		+75...+150	-	± 0.5 %	Of value	

* NTC are not standardized
A09: 5K Ohm, e.g. for Testo hand-held instruments, Testo data loggers, testo Savaris

¹⁾ the higher value applies

** Temperature probe	in water	in air	on a surface
Type 14	68 s	90 s	
Type 15			approx. 45 s
Type 17			approx. 3 s
Type 18			approx. 3 s
Type 21			approx. 3 s
Type 23		approx. 15 s	

Selection assistance temperature probes

② Selecting probe shaft material

Material	Material no.	Temp. range in cont. operation	Application
Stainless steel	1.4305	-200...+550 °C	Limited resistance to chemicals. Used in the paint, soap, paper and textile industries.
Stainless steel	1.4571	-200...+700 °C	Resistant to non-oxidising acids and media containing chloride.
Inconel 600	2.4816	-200...+1150 °C	Areas of application include furnace construction, chemical industry, food industry, plastics industry. Very resistant to halogens and chlorine.
PTFE		-190...+260 °C (briefly 300 °C) 150 °C	(PTFE)/PFA is resistant to almost all chemicals. The surface is non-adhesive.



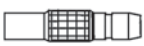


③ Selection of cable insulation

A shielded cable is recommended as standard

Material	Temperature range		Mechanical properties	Other properties	Order code, Pt100/NTC lines		Order code, thermocouple lines	
	Insulation static	Insulation moving			without shielding	with shielding	without shielding	with shielding
PVC/PUR	-20 to +80 °C (-4 to +176 °F) -20 to +105 °C (for D11)	+5 to +70 °C (+41 to +158 °F) +5 to +90 °C (at D11)	Moderate protection	Standard applications, low cost	D 01	D 02	D 11	D 12
Silicone	-50 to +180 °C (-58 to +356 °F)	-25 to +180 °C (-13 to +356 °F)	Flexible, easy to seal, susceptible to damage	Resistant to moisture and temperature	D 03	–	D 13	–
FEP	-100 to +205 °C (-148 to +401 °F)	-30 to +205 °C (-22 to +401 °F)	Very robust, less flexible	Resistant to moisture, temperature and chemicals	–	D 04	–	D 14
PFA/PTFE	-100 to +260 °C (-148 to +500 °F)	-30 to +250 °C (-22 to +482 °F)	Very robust, less flexible	Resistant to moisture, temperature and chemicals	D 06	–	–	–
Glass fibre	-25 to +400 °C (-13 to +752 °F)	+20 to +400 °C (+68 to +752 °F)	Best high temperature properties	Susceptible to moisture	–	D 05	–	D 15

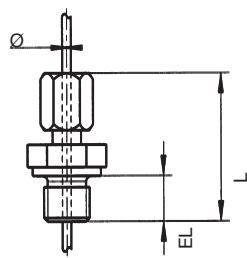
④ Selecting plug-in connections and couplings

The plug-in connections shown can be selected according to the type of probe (cf. ordering overviews in the probe options).

	G 02	8-pin mini DIN plug
	G 03	Miniature TC connector, glass fibre-reinforced (up to +200 °C/+392 °F)
	G 07	Precision plug-in connector, 5-pin, for testo 171 (NTC 10KΩ)
	G 08	DIN round connector (8-pin) Pt100/NTC
	G 09	DIN round connector (8-pin), TC type K with reference junction

⑤ Selection of clamp screw connections

To install thermocouple and Pt100 probes; pressure-tight with PTFE clamp ring to 6 bar (87 psi); pressure-tight with stainless steel tapered ring up to 50bar (725 psi)

Illustration	Material	Thread	Diameter (L/EL)	Clamping	Part no.
	Stainless Steel	M 8x1	1.5 mm (26/8)	PTFE clamp ring	0400 6181
	Stainless Steel	M 8x1	3 mm (26/8)	PTFE clamp ring	0400 6183
	Zinc-coated steel	M 8x1	1.5 mm (26/8)	PTFE clamp ring	0400 6161
	Zinc-coated steel	M 8x1	3 mm (26/8)	PTFE clamp ring	0400 6163
	Zinc-coated steel	M 8x1	1.5 mm (26/8)	St. steel clamp ring	0400 6171

Overview of probe types 02 / 03 / 04 / 08 / 11 / 13

Standard temperature probes can be tailored to your own specific measuring requirements. Just choose the relevant options. You can use the selection assistance to help you choose the options.

<p>Type 02 Cable probe, probe shaft (Ø 3 mm), connected directly to the line</p>	<p>Temperature range: Pt100/Type K/Type J: -50 to +180 °C (-58 to +356 °F) NTC: -50 to +150 °C (-58 to +302 °F)</p> <p>Fixed e.g. by clamp screw connection Process: liquids</p>
<p>Type 03 Cable probe, probe shaft (Ø 6 mm), connected directly to the line</p>	<p>Temperature range: Pt100/Type K/Type J: -50 to +180 °C (-58 to +356 °F) NTC: -50 to +150 °C (-58 to +302 °F)</p> <p>Fixed e.g. by screwed bush Process: liquids</p>
<p>Type 04 Process temperature probe, probe shaft (Ø very small), connected directly to the line</p>	<p>Temperature range: Pt100: -50 to +400 °C (-58 to +752 °F) TC Type K: -200 to +1200 °C (-328 to +2192 °F) TC Type J: -200 to +700 °C (-328 to +1292 °F) NTC: -50 to +150 °C (-58 to +302 °F)</p> <p>Fixed e.g. by clamp screw connection Liquids and gases</p>
<p>Type 08 Immersion probe for extremely aggressive media, max. temperature +260 °C (+500 °F), IP67</p>	<p>Temperature range: Pt100: -50 to +260 °C (short-term to +300 °C) (-58 to +500 °F, +572 °F)</p> <p>Aggressive liquids</p>
<p>Type 11 Process temperature probe, connected via plug-in connection (connector Tmax 80 °C)</p>	<p>Temperature range: Pt100: -50 to +400 °C (-58 to +752 °F)</p> <p>Plug-in connection secured by means of threaded sleeve Fixed e.g. by clamp screw connection</p>
<p>Type 13 Immersion probe with thread M 8x1, plug-in connection secured via thread, connecting line, pressure tight to 500 bar</p>	<p>Temperature range: Pt100: -50 to +400 °C (-58 to +752 °F) NTC: -50 to +150 °C (-58 to +302 °F)</p> <p>Plug-in connection secured by means of thread</p>

Ordering information for types 02 / 03 / 04 / 08 / 11 / 13

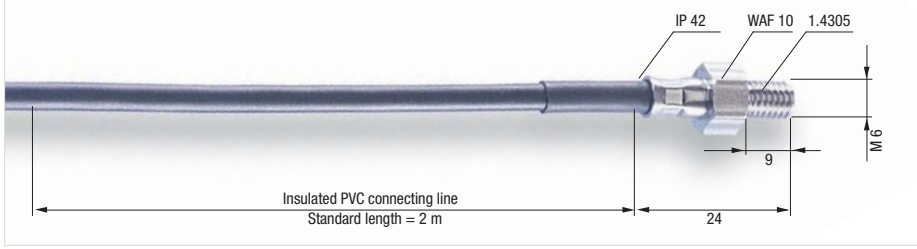
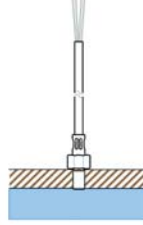
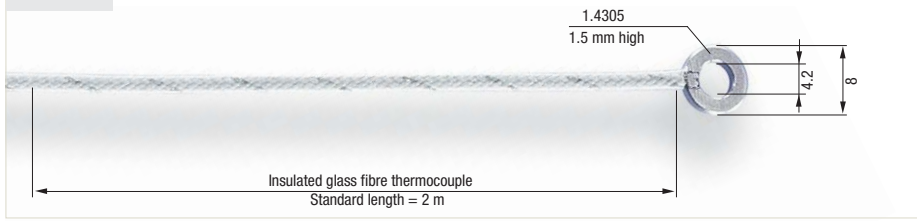
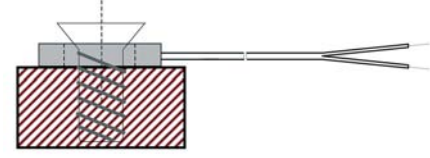
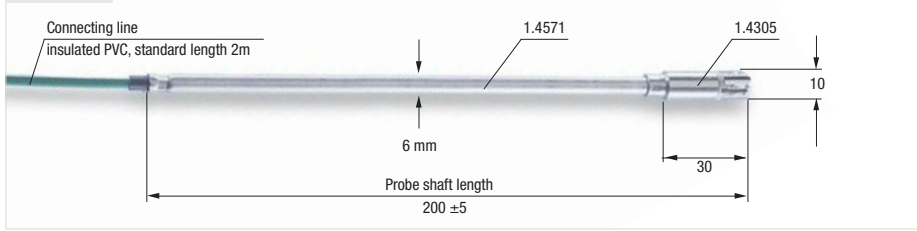
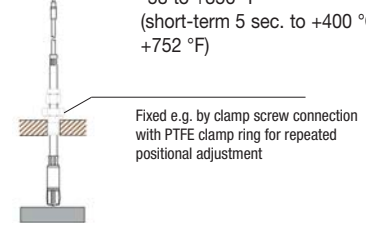
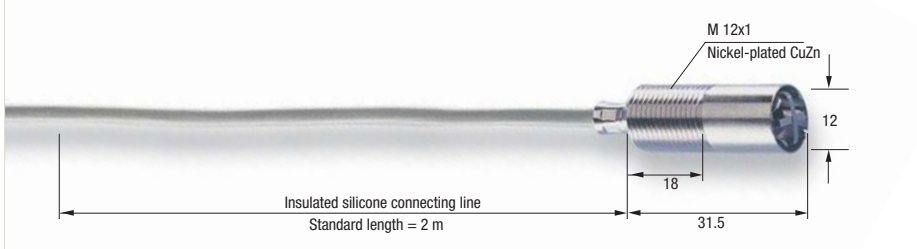
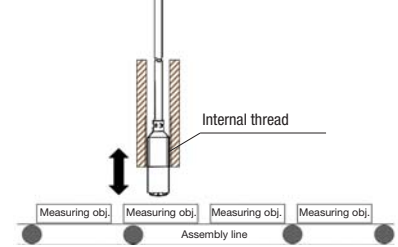
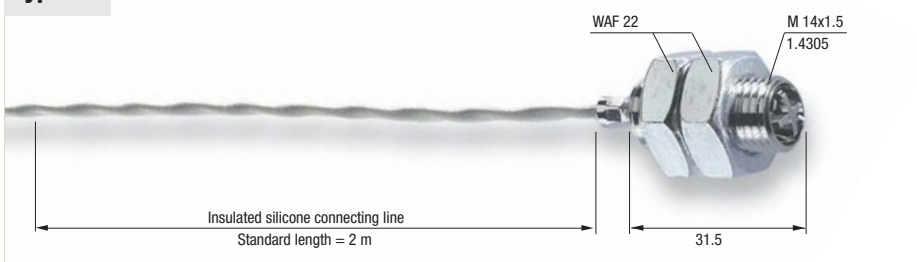
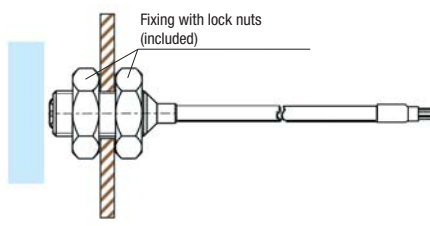

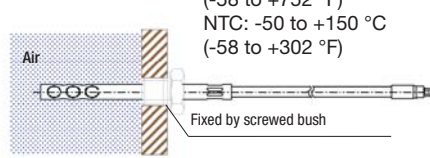
Selection advice: Light-blue fields cannot be combined with dark-blue fields	Order no.					
	6000 1111	6000 1111	6000 1111	6000 1111	6000 1111	6000 1111
	Type 02	Type 03	Type 04	Type 08	Type 11	Type 13
Measuring sensors:						
Pt100 class B	A 01	A 01	A 01		A 01	A 01
Pt100 class A	A 02	A 02	A 02	A 02	A 02	A 02
Pt100 1/3 class B	A 03	A 03	A 03		A 03	A 03
Pt100 1/10 class B	A 04	A 04	A 04		A 04	A 04
Type K (NiCr-Ni) class 1			A 05			
Type K (NiCr-Ni) class 2	A 06	A 06	A 06			
Type J (Fe-CuNi) class 1						
Type J (Fe-CuNi) class 2						
NTC 5 kOhm (e.g. for Testo handheld units)	A 09	A 09	A 09		A 09	A 09
NTC 10 kOhm (e.g. for testo 171 logger)	A 10	A 10	A 10		A 10	A 10
Probe shaft Ø:						
Ø 0.25 mm			B 01			
Ø 0.5 mm			B 02			
Ø 1.0 mm			B 03			
Ø 1.5 mm			B 04			
Ø 1.6 mm (Pt100 class B only)						
Ø 3.0 mm	B 06		B 06		B 06	B 06
Ø 4.0 mm						B 07
Ø 5.0 mm				B 08		
Ø 6.0 mm (for Type 06 Pt100 and NTC only)		B 09				
Probe shaft length						
40 mm					C 02	C 02
48 mm		C 03	C 03			
60 mm		C 04	C 04	C 04		
70 mm	C 05	C 05	C 05			
100 mm		C 06	C 06		C 06	C 06
200 mm		C 08	C 08		C 08	C 08
300 mm		C 09	C 09		C 09	C 09
400 mm		C 10	C 10		C 10	C 10
500 mm		C 11	C 11		C 11	C 11
Please indicate other probe shaft lengths in mm		C 99	C 99		C 99	C 99
Connecting line for Pt100 and NTC						
Insulated PVC, Ø 4.5 mm, 4 x 0.14 mm ²	D 01	D 01	D 01			
Insulated PVC, shielded, Ø 5 mm, 4 x 0.14 mm ²	D 02	D 02	D 02			
Insulated silicone, Ø 4.5 mm, 4 x 0.25 mm ²	D 03	D 03	D 03			
Insulated FEP, Ø 4 mm, 4 x 0.22 mm ² , shielded	D 04	D 04	D 04			
Insulated glass fibre, external wire braiding, Ø 4.5 mm, 4 x 0.25 mm ²	D 05	D 05	D 05			
Insulated PFA, Ø 4 mm, 4 x 0.25 mm ²	D 06	D 06	D 06	D 06		
Insulated PUR, length 2.0 m					D 07	D 07
Insulated PUR, length 5.0 m					D 08	D 08
Insulated PUR, length 7.5 m					D 09	D 09
Insulated PUR, length 10.0 m					D 10	D 10
Connecting line for thermocouple						
Insulated PVC, Ø 4 mm, 2 x 0.22 mm ²	D 11	D 11	D 11			
Insulated PVC, shielded, Ø 5 mm, 2 x 0.25 mm ²	D 12	D 12	D 12			
Insulated silicone, Ø 4 mm, 2 x 0.25 mm ²	D 13	D 13	D 13			
Insulated FEP, Ø 4.5 mm, 2 x 0.22 mm ²	D 14	D 14	D 14			
Insulated glass fibre, external wire braiding, Ø 3.6 mm, 2 x 0.22 mm ²	D 15	D 15	D 15			
Please indicate length of line (standard = 2 m)	E__m	E__m	E__m	E__m		
Miscellaneous (omit code, if not selected):						
Pt100, NTC "vibration-proof" in thermal conductive paste, Tmax = 200 °C (+392 °F)	F 01	F 01	F 01	F 01	F 01	F 01
Metal antikink spring	F 02	F 02	F 02			
Connection plug						
8-pin DIN plug on Testo instrument (not for TC)	G 02	G 02	G 02	G 02	G 02	G 02
Miniature TC plug	G 03	G 03	G 03			
Precision plug for testo 171, (only with Code A10)	G 07	G 07	G 07		G 07**	G 07**
DIN round plug Pt100/NTC (for testo 400, 454, 650, 950)	G 08	G 08	G 08	G 08	G 08	G 08
DIN round plug TC, 8-pin, with reference junction Type K	G 09	G 09	G 09			

Sample order: Order code 6000 1111/Type 04/A 05/B 02/C 99/600/D 12/E 2.5 m/G 03
 Process temperature probe type 04, TC type K, class 1, Ø 0.5 mm, probe shaft 600 mm, 2.5 m long cable (PVC shielded), mini TC connector

** no coupling, with connector only

Overview of probe types 14 / 15 / 17 / 18 / 21 / 23

The standard temperature probes can be tailored to your own specific measuring requirements. Just choose the relevant options. You can use the selection assistance to help you choose the options.

<p>Type 14 Screwed probe for hard-to-reach measuring points, pressure tight to 500 bar</p> 	<p>Temperature range: Pt100/NTC: -50 to +80 °C (-58 to +176 °F)</p> 
<p>Type 15 Screw-on surface T/C probe (metal ring)</p> 	<p>Temperature range: TC Type K/Type J: -200 to +400 °C (-328 to +752 °F)</p> 
<p>Type 17 Surface probe (cross-band) with probe shaft</p> 	<p>Temperature range: TC Typ eK: -50 to +180 °C / -58 to +356 °F (short-term 5 sec. to +400 °C / +752 °F)</p> 
<p>Type 18 Surface probe (cross-band) with thread M 12x1 (e.g. robot arm)</p> 	<p>Temperature range: cf. Type 17</p> 
<p>Type 21 Surface probe (cross-band), flush front thread M 14x1.5 with lock nuts</p> 	<p>Temperature range: TC Type K: -50 to +180 °C (-58 to +356 °F)</p> 
<p>Type 23 Air duct temperature probe</p> 	<p>Temperature range: Pt100/Type K/Type J: -50 to +400 °C (-58 to +752 °F) NTC: -50 to +150 °C (-58 to +302 °F)</p> 

Ordering information for types 14 / 15 / 17 / 18 / 21 / 23

	Order no. 6000 1111	6000 1111	6000 1111	6000 1111	6000 1111	6000 1111
	Type 14	Type 15	Type 17	Type 18	Type 21	Type 23
Selection advice: Light-blue fields cannot be combined with dark-blue fields						
Measuring sensors:						
Pt100 class B	A 01					A 01
Pt100 class A	A 02					A 02
Pt100 1/3 class B	A 03					A 03
Pt100 1/10 class B	A 04					A 04
Type K (class 1)		A 05				A 05
Type K (class 2)			A 06	A 06	A 06	A 06
Type J (class 1)						
NTC 5 kOhm (e.g. for Testo hand-held instruments)	A 09					A 09
NTC 10 kOhm (e.g. for testostor 171 logger)	A 10					A 10
Probe shaft Ø:						
Ø 4.0 mm						
Ø 5.0 mm						
Ø 6.0 mm (Pt100 only)						B 09
Probe shaft length						
100 mm			C 06			
200 mm			C 08			C 08
300 mm			C 09			
400 mm			C 10			
500 mm			C 11			
Please always indicate other probe shaft lengths in mm			C 99			C 99
Connecting line for Pt100 and NTC						
Insulated PVC, Ø 4.5 mm, 4 x 0.14 mm ²	D 01					D 01
Insulated PVC, shielded, Ø 5 mm, 4 x 0.14 mm ²	D 02					D 02
Insulated silicone, Ø 4.5 mm, 4 x 0.25 mm ²	D 03					D 03
Insulated FEP, Ø 4 mm, 4 x 0.22 mm ² , shielded	D 04					D 04
Insulated glass fibre, external wire braiding, Ø 4.5 mm, 4 x 0.25 mm ²	D 05					D 05
Insulated PFA, Ø 4 mm, 4 x 0.25 mm ²	D 06					D 06
Connecting line for thermocouple						
Insulated PVC, Ø 4 mm, 2 x 0.22 mm ²			D 11	D 11	D 11	D 11
Insulated PVC, shielded, Ø 5 mm, 2 x 0.25 mm ²			D 12	D 12	D 12	D 12
Insulated silicone, Ø 4 mm, 2 x 0.25 mm ² , shielded			D 13	D 13	D 13	D 13
Insulated FEP, Ø 4 mm, 2 x 0.22 mm ²			D 14	D 14	D 14	D 14
Insulated glass fibre, external wire braiding, Ø 3.6 mm, 2 x 0.22 mm ²		D 25*	D 15	D 15	D 15	D 15
Please indicate length of line (standard = 2 m)	E__m	E__m	E__m	E__m	E__m	E__m
Miscellaneous (omit code, if not selected):						
Pt100, NTC "vibration-proof" in thermal conductive paste, Tmax = 200 °C (+392 °F)	F 01					
Metal antikink spring	F 02		F 02	F 02		
Connection plug						
8-pin mini DIN plug on Testo instrument (not for TC)	G 02					G 02
Miniature TC plug		G 03	G 03	G 03	G 03	G 03
Precision plug (for testo 171, Code A10)	G 07					G 07
DIN round plug Pt100/NTC (for testo 400, 454, 650, 950)	G 08					G 08
DIN round plug TC, 8-pin, with reference junction for type K only		G 09	G 09	G 09	G 09	G 09













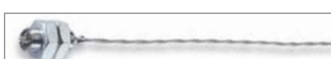
Sample order: Order code 6000 1111/Type 18/A 06/D 11/E 2.0/G 03
 Surface probe type 18 with sensor TC type K, class 2 and internal thread, PVC
 connecting line (length 2.0 m) and mini TC connector

*without external wire braiding
 Ø oval 1.8 x 1.2 mm,
 2 x 0.2 mm

Temperature probes

Selecting the right type of probe

Testo AG offers a broad selection of temperature probes with plugs for Testo instruments. Use the characteristics listed below to choose the one that is suitable for your process media:

in air	in gases	in liquids	on surfaces
<p>non-aggressive gases</p>			
 <p>Type 04 Process temperature probe, fixed line connection, very small probe shaft diameter possible.</p>	 <p>Type 08 Immersion probe for extremely aggressive media, probe shaft and line insulation PFA Tmax. 260°C/500 °F, IP 67</p>	 <p>Type 02 Cable probe, probe shaft diameter 3 mm, connected directly to the signal line.</p>	 <p>Type 15 Screw-on surface TC probe (metal ring) thermocouple Type K</p>
 <p>Type 11 Robust process temperature probe. Connected via plug-in connection (connector Tmax 80 °C/176 °F)</p>	 <p>Type 14 Screwed probe (thread at front) for hard-to-reach measuring points. Pressure-tight up to 500 bar (7252 psi)</p>	 <p>Type 03 Cable probe, probe shaft diameter 6 mm, connected directly to the signal line.</p>	 <p>Type 17 Rapid-response surface probe (cross-band with probe shaft), thermocouple type K, also for rough surfaces</p>
 <p>Type 23 Air duct temperature probe</p>		 <p>Type 04 Cable probe. Fixed line connection, very small probe shaft diameter</p>	 <p>Type 18 Robust surface probe (cross-band), with thread M12x1, thermocouple Type K, also for rough surfaces</p>
		 <p>Type 13 Robust immersion probe with thread M8x1, plug-in connection secured by means of thread, connecting line (Tmax. 80 °C/176 °F), pressure-tight to 500 bar.</p>	 <p>Type 21 Rapid-response surface probe (cross-band) flush front thread M 14x1.5 with lock nuts, thermocouple Type K, also for rough surfaces</p>