

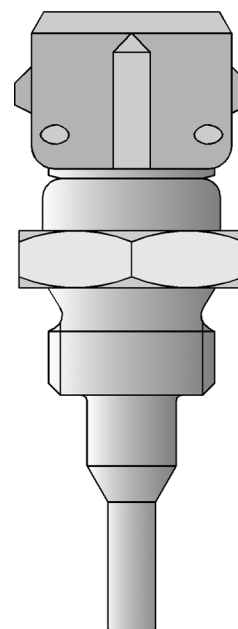


Screw-in resistance thermometers with plug connector

- for temperatures from -50 to +300°C
- highly resistant to shock and vibration
- connector locked in for reliable contact, Protection IP65

Shock-proof screw-in resistance thermometers enable temperature measurement under pressure in motors and compressors, in plant engineering, as well as in ship building. The connection between the protection fitting and the connecting cable incorporates a locking system and is protected to IP65 when assembled.

The measuring insert is normally fitted with a Pt100 temperature sensor to EN 60 751, Class B in 2-wire circuit. Versions with Pt500 or Pt1000, as well as with semiconductor or NTC temperature sensors can be provided. With Type 902004/20 .../21, 2-wire or 4-wire circuit connections can be selected.



Technical data

Connection

Type 902004/10 plug connector with gold-plated contacts, IP5 when assembled
Type 902004/20 connector DIN 43 650, Pg9 (Type 902004/21, Pg11), max. conductor cross-section 1.5mm², IP65, ambient temperature -40 to +125°C.

Process connection

thread, stainless steel 1.4301 / 1.4571, brass 2.0401

Protection tube

stainless steel 1.4301, 6mm and 7.5mm dia. stepped down to 4mm

brass 2.0401, 7.5mm dia. stepped down to 4mm

stainless steel 1.4571, 8mm dia., pressure loading 50bar max. at 200°C
(Type 902004/20 .../21)

Measuring insert

Pt100 temperature sensor, EN 60 751, Cl. B, 2-wire circuit (replaceable on Type 902004/20.../21)*

KTY11-6 temperature sensor, 2-wire circuit

Protection

IP65

Response times

Type 902004/10: $t_{0.5} = 1.2\text{sec}$, $t_{0.9} = 6\text{sec}$, in water with 0.2m/sec, 4mm dia.

Type 902004/20 .../21: $t_{0.5} = 15\text{sec}$, $t_{0.9} = 45\text{sec}$, in water with 0.2m/sec, 8mm dia.

$t_{0.5} = 23\text{sec}$, $t_{0.9} = 59\text{sec}$, in oil with 0.2m/sec, 8mm dia.

Vibration strength

Germanischer Lloyd Application Category D, Characteristic 2

Approvals

Type 902004/20 .../21 GL Germanischer Lloyd

Accessories

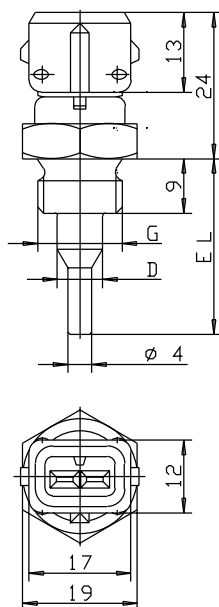
pocket, see Data Sheet 90.9721

mating plug for Type 902004/10 with siliconized connecting cable 0.34mm², length 2.5m
Sales No. 90/00308880

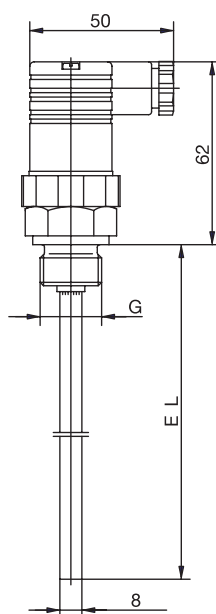
* Note:

With Type 902004/20 .../21: short fitting lengths in conjunction with unfavorable mounting conditions (heat conduction error) may result in the tolerance class being exceeded.

Dimensions



Type 902004/10



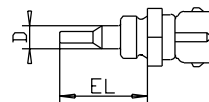
Type 902004/20
Type 902004/21

Order details: Screw-in resistance thermometers with plug connector

(1) Basic version

902004/10

Screw-in resistance thermometer with plug connector



(2) Operating temperature in °C

x	370	-50 to +150°C
x	390	-50 to +300°C

(3) Measuring insert

x	1003	1 x Pt100 in 2-wire circuit
x	1004	1 x Pt500 in 2-wire circuit
x	1005	1 x Pt1000 in 2-wire circuit
x	1601	1 x KTY11-6 in 2-wire circuit

(4) Tolerance class to EN 60 751

x	0	KTY temperature sensor
x	1	Class B (standard)
x	2	Class A

(5) Protection tube diameter D in mm

x	6	6mm with EL = 60mm
x	7.5	7.5mm stepped down to 4mm with EL = 29mm

(6) Fitting length EL in mm

x	29	29mm
x	60	60mm

(7) Process connection

x	103	thread 3/8" pipe
x	121	thread M14 x 1.5
x	141	thread 1/8"-27NPT
x	542	thread R 3/8 DIN 29 99
x	543	thread R 1/2 DIN 29 99, only with EL = 60mm

(8) Protection tube material

x	21	stainless steel X 5 CrNi 18 10, 1.4301
x	50	brass CuZn 39 Pb 3, 2.0401

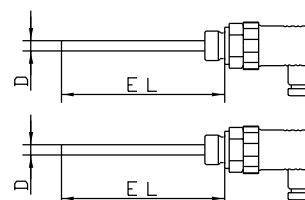
Order code

Order example

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)							
<div></div>	-	<div></div>	-	<div></div>	-	<div></div>	-	<div></div>						
902004/10	-	390	-	1003	-	1	-	7.5	-	29	-	121	-	50

Order details: Screw-in resistance thermometers with plug connector

(1) Basic version		
902004/20	Screw-in resistance thermometer with terminal box, Pg9, to DIN 43 650	
902004/21	Screw-in resistance thermometer with terminal box, Pg11, to DIN 43 650	
x x	380	(2) Operating temperature in °C -50 to +200°C
x x	1003	(3) Measuring insert 1 x Pt100 in 2-wire circuit
x x	1011	1 x Pt100 in 4-wire circuit
x x	2003	2 x Pt100 in 2-wire circuit
x x	1	(4) Tolerance class to EN 60 751 Class B (standard)
x x	2	Class A
x x	8	(5) Protection tube diameter D in mm 8mm
x x	50	(6) Fitting length EL in mm (50 ≤ EL ≤ 250) 50mm
x x	100	100mm
x x	150	150mm
x x	200	200mm
x x	250	250mm (without GL approval)
x x	...	please specify in plain text (50mm steps)
x x	102	(7) Process connection thread 1/4" pipe
x x	103	thread 3/8" pipe
x x	104	thread 1/2" pipe
x x	126	thread M 18 x 1.5
x x	128	thread M 20 x 1.5
x x	144	thread 1/2"-14NPT
x x	26	(8) Protection tube material stainless steel 1.4571
x x	000	(9) Extra codes no extra code
x x	062	GL approval (max. fitting length EL = 200mm)



Order code (1) (2) (3) (4) (5) (6) (7) (8) (9)

Order example 902004/20 - 380 - 1003 - 1 - 8 - 100 - 104 - 26 / 000

1. List extra codes in sequence, separated by commas.

Stock versions:

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	Sales No.
	-		-		-		-	
902004/10	-	390	-	1003	-	1	-	7.5
902004/10	-	390	-	1003	-	1	-	7.5
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	
	-		-		-		-	

Stock versions:

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	Sales No.								
	-		-		-		-		/								
902004/20	-	380	-	1003	-	1	-	8	-	50	-	104	-	26	/	000	90/00365259
902004/20	-	380	-	1003	-	1	-	8	-	100	-	104	-	26	/	000	90/00368414
902004/20	-	380	-	1003	-	1	-	8	-	150	-	104	-	26	/	000	90/00368416