

Temperature probes – TP series



Highest possible flexibility

A temperature probe has to be flexible and robust. All Pt100 probes of the TP series are therefore mineral-insulated, equipped with a standard process connection and available ex-stock. Moreover, TURCK Pt100 probes are provided in 4-wire technology. The power resistance

is thus compensated and a possible influence on the measured value is avoided right from the start when using long cable connections between the probes and the processing units.



High operational safety

The mineral-insulated probes from TURCK are characterized by enormous flexibility and temperature resistance. Further advantages:

- High accuracy
- Weldability (like a tube)

- Longevity even under extreme conditions (sheathed cables oxidize only on one side and thus achieve double life cycles compared to tubes with the same wall thickness)

Type code

TP - 103 A - G1/8 - H1 1 4 0 - L013

TP	Functional principle	-	103	A	Mechanical version	-	G1/8	Process connection	-
	Functional principle TP temperature probe			Accuracy A accuracy class A			Process connection (only devices with built-on probe)		
				Housing 103 processor unit with probe Ø 3 mm, process connection via standard thread accuracy class A 104 process connection for food applications, probe Ø 4 mm, accuracy class A 203 for compression fitting/ thermowell mounting probe Ø 3 mm, accuracy class A 206 for compression fitting/ thermowell mounting probe Ø 6 mm, 306 cable probe Ø 6 mm			DN25 DN25 für milk pipe connection DIN 11851 CF connection via compression fitting or thermowell G1/8 G1/8" male thread TRI3/4 3/4" Tri-Clamp		

H1	1	4	0	Electrical connection	–	L013	Insertion depth
				Assignment 0 customized			
				Number of contacts 4 4 contacts			
				Connector type 1 straight			
				Connector type H1 connector M12 x 1			
					Probe length in mm		
					L013 13 mm (only 103A)		
					L024 25 mm (only 103A)		
					L035 35 mm (only 104A)		
					L100 100 mm (only 104A, 203A, 206A)		
					L150 150 mm (only 203A, 206A)		
					L200 200 mm (only 203A, 206A)		
					L250 250 mm (only 203A, 206A)		
					L300 300 mm (only 203A, 206A)		
					L1000 1000 mm (only 306A)		
					L2000 2000 mm (only 306A)		
					L5000 5000 mm (only 306A)		
					special lengths on request!		

Pt100 temperature probes in 4-wire technology



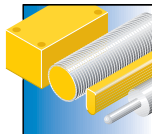
The core element of the TP series is a Pt 100 measuring resistor in 4-wire technology. All probes are connected to the processing unit via standard male M12 x 1.

Resistance thermometers are used in places where temperatures must be detected and monitored to control and optimize processes. Typical applications are process plants, manufacturing facilities and units as well as air-conditioning systems.

Features

- Pt100 probe acc. to DIN EN 60751
- Vibration and shock-resistant
- Class A for temp. < 350 °C
- Class B for temp. > 350 °C
- Connectable to TS, TT and TC series as well as IM34, BL20 and BL67

Properties



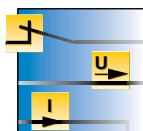
Designs

All types available: With standard process connection, lengths and diameters (3/6 mm), up to freely selectable types



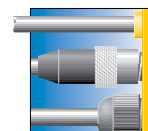
Measuring ranges

-50...+500 °C



Electrical versions

Pt100 4-wire, other types on request



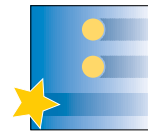
Electrical connections

Male M12 x 1, 4-pin



Connectivity

Probes available with standard thread, compression fitting or thermowell



Special features

Mineral-insulated probe, IP68



Internet link

Scan the QR code to access our products on the internet

Compact probe – Ø 3 mm – Process connection



General data			
Protection class	IP67	Connection	male, M12 x 1
Sensor quality	AISI 316L	Temperature operating range	-50...120 °C
Mechanical connection	G 1/8" male thread	Pressure resistance	100 bar
Housing material	V4A (1.4404)	Outer diameter	3 mm
Response time	t0.5 = 1.5 s/ t0.9 = 6.0 s in water at 0.2 m/s	Accuracy	Class A

Types and data – selection table

Type	Immersion depth (L)	w	d
TP-103A-G1/8-H1141-L013	13 mm	w172	d653
TP-103A-G1/8-H1141-L024	24 mm	w172	d654

Rod-type probe – Ø 3 mm



General data			
Protection class	IP67	Connection	male, M12 x 1
Sensor quality	AISI 316L	Temperature operating range	-50...500 °C
Mechanical connection	for compression ferule fittings, protective tubing or direct mounting	Pressure resistance	100 bar
Housing material	V4A (1.4404)	Outer diameter	3 mm
Response time	t0.5 = 1.5 s/ t0.9 = 6.0 s in water at 0.2 m/s	Accuracy	Class A

Types and data – selection table

Type	Immersion depth (L)	w	d
TP-203A-CF-H1141-L100	100 mm	w172	d655
TP-203A-CF-H1141-L150	150 mm	w172	d655
TP-203A-CF-H1141-L250	250 mm	w172	d655
TP-203A-CF-H1141-L200	200 mm	w172	d655
TP-203A-CF-H1141-L300	300 mm	w172	d655

Rod-type probe – Ø 6 mm


General data

Protection class	IP67	Connection	male, M12 x 1
Sensor quality	AISI 316L	Temperature operating range	-50...500 °C
Mechanical connection	for compression ferule fittings, protective tubing or direct mounting	Pressure resistance	100 bar
Housing material	V4A (1.4404)	Outer diameter	6 mm
Response time	t _{0.5} = 6 s / t _{0.9} = 15 s in water at 0.2 m/s	Accuracy	Class A

Types and data – selection table

Type	Immersion depth (L)	w	d
TP-206A-CF-H1141-L100	100 mm	w172	d656
TP-206A-CF-H1141-L150	150 mm	w172	d656
TP-206A-CF-H1141-L200	200 mm	w172	d656
TP-206A-CF-H1141-L300	300 mm	w172	d656

Cable probe – Ø 6 mm


General data

Protection class	IP67	Connection	male, M12 x 1
Sensor quality	AISI 316L	Temperature operating range	-50...105 °C
Mechanical connection	for compression ferule fittings, protective tubing or direct mounting	Housing material	V4A (1.4404)
Outer diameter	6 mm	Response time	t _{0.5} = 8 s / t _{0.9} = 20 s in water at 0.2 m/s
Accuracy	Class A		

Types and data – selection table

Type	Immersion depth (L)	w	d
TP-306A-CF-H1141-L1000	1000 mm	w172	d657
TP-306A-CF-H1141-L5000	5000 mm	w172	d657

