

Screw in thermocouple temperature probe

GTF102TC

Introduction

GTF102TC is a screw-in thermocouple temperature sensor in a 3mm (other diameters available) stainless steel tube with fixed cable.

It is available as thermocouple type K (class 1).

Three temperature ranges (250/400/600°C) are available to allow best adaption to process requirements between maximum temperature and response times.

Cable can be configured silicon, pvc, ptfe or glass fibre insulated. The cable is protected by an extension tube and supported by a coil spring in the standard version (also available without extension tube and coil spring).



Thermocouples

allow compact sensors, fast response times and high temperatures



Robust design

3/4/5 or mm protective tube in custom length with process thread.



Faster response time

LT or MT version in 3mm for fast response times.

Technical Specifications

Process Condition

Media temperature	-200...+850 °C
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Measurement

Temperature sensor	Type K
Measuring principle	Thermocouples
Temperature range	-40...+1000 °C

Electrical Connection

Electrical connection type	loose ends For Loose ends with wire end ferrules: loose ends
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Probe

Material	Stainless steel 1.4404
Cable	PVC, PTFE, Silicon, Fiberglass insulation with steel wire braiding 2-wire For 2-wire: 2-wire For 2-wire: 2-wire For 1 m PVC cable, -20 ... +105 °C: 1 m PVC For each additional meter (PVC cable): PVC For 1 m silicone cable, -50 ... +200 °C: 1 m Silicon For each additional meter (silicone cable): Silicon For 1 m Teflon cable, -200 ... +250 °C: 1 m PTFE For each additional meter (silicone cable): Silicon For 1 m glass fibre, -50 ... +400 °C: 1 m Flexible fiberglass with steel wire braiding For each additional meter (glass fibre insulated cable): Flexible fiberglass with steel wire braiding For each additional meter (teflon cable): PTFE
Probe Diameter	For 3 mm: 3 mm For 4 mm: 4 mm For 5 mm: 5 mm For 6 mm: 6 mm
Probe length	For 50 mm: 50 mm For 100 mm: 100 mm For 150 mm: 150 mm For 250 mm: 250 mm For 500 mm: 500 mm

Order Code

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
GTF102TC -		K	1							LE	

i Enter the code for your selected option in the order code field above. The numbering corresponds to the sets from which you can choose. Note that some options can only be used in certain combinations.

Nr.	Code	Description
1. Operating temperature	LT	-200...+250°C at sensors tip
	MT	-200...+400°C at sensors tip
	HT	-200...+850°C at sensors tip
2. Measuring element	K	Thermocouple type K, NiCr-Ni
3. Measuring range	1	Class 1 -40...+1000°C
4. Thread	11	G ¼
	12	G ¼
	13	G ¾
	14	G ½
5. Probe diameter Ø	3	3 mm
	4	4 mm
	5	5 mm
	6	6 mm
6. Installation length	0050	50 mm
	0100	100 mm
	0150	150 mm
	0250	250 mm
	0500	500 mm
	-xxxx	each additional 100 mm
7. Extension	OKH	without
	550	with extension sleeve and coil spring
8. Connection sensor element	2L	2-wire
	2L	2-wire
9. Cable and length	1-P	1 m PVC cable, -20 ... +105 °C
	x-P	each additional meter (PVC cable)
	1-S	1 m silicone cable, -50 ... +200 °C
	x-S	each additional meter (silicone cable)
	1-T	1 m Teflon cable, -200 ... +250 °C
	x-T	each additional meter (silicone cable)
	1-G	1 m glass fibre, -50 ... +400 °C
	x-G	each additional meter (glass fibre insulated cable)
	x-T	each additional meter (teflon cable)

Nr.	Code	Description
10. Connection	LE	Loose ends with wire end ferrules
11. Options	00	without
	TU	Teflon covered probe
	WD	Cable transition water proof covered

Features

Constructive design

Available for following max. process temperatures at sensors tip:

LT: -200...250°C (fast response in lower temperature)

MT: -200...+400°C (fast response in medium temperatures)

HT: -200...+850°C (mineral insulated; good response in higher temperatures)

Note: The maximum operating temperature of the cable must not be exceeded at either the cable ferrule or the cable itself!

Sensor element

Thermocouple type K (NiCr-Ni), class 1 (-40...+1000°C)

Protective tube

Available in 3/4/5 or 6mm diameter in length up to 1000mm in 5mm minimum steppings.

Process threads

G1/2" (standard) or G1/4"

Available cable insulation

Type (allowed temperatures)

PVC (-20...+105°C)

Silicon (-50...+200°C)

Teflon (-200...+250°C)

Glass-fiber with stainless steel mesh (-50...+400°C)

Instructions

Dimensions

