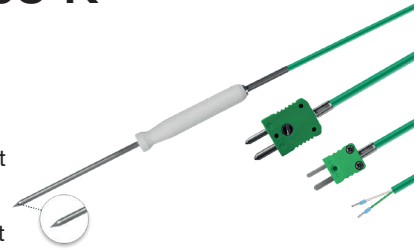


# Penetration probe thermocouple Type K

Article no.: 802410 1211

Penetration Thermocouples are perfect for measuring the core temperature in viscoplastic media or for measuring the air temperature. The stainless steel sleeve with the centric measuring tip and the connecting cable are firmly connected and cast in a water vapor-tight manner. The ergonomic PTFE handle serves as heat protection. To order your penetration probe, select the required configuration features and submit the order code.



General Information	
Measuring range	-40 °C to +260 °C depending on chosen connection cable
Perm. °C range cable	see cable
Accuracy	-40 °C to +375 °C: ±1,5 °C according to DIN IEC 60584 Class 1
Response time	t63 / t99: information is available on request
Pull-out force	≥ 30 N
Supply and output	
Measuring element	Thermocouple Type K
Measuring point	Measuring point isolated
Measurement signal	Thermovoltage
Ambient conditions	
Protection class	IP65 according DIN 60529, water-vapour-proof casted   Probe not autoclavable / sterilizable
Humidity and moisture condensation resistance	according to application-specific qualification
Certificates and Standards	
Standards	DIN EN 61326-1:2013   DIN EN IEC 63000:2019-05
Directive	RoHS 2011/65/EU   2014/30/EU
Certificates	Certificate of suitability (on request)

**Customizable options**

- E - Material connection cable
- F - Length connection cable
- G - Connector
- I - Ø measuring tip



Handle und Measuring tip							
Bild	Handle		Measuring tip		I - Ø measuring tip		Zeichnung
	Material	PTFE	Design	Central auxiliary tip	Code	Ø in mm	
	Length (mm)	120	Material	Stainless steel 1.4571   316TI	I4	4	
	Ø (mm)	20	Length	150 mm	I6	6	

E - Cable material and configuration connection cable											
Code	Type	Color	IP	From (°C) <sup>1)</sup>	To (°C) <sup>1)</sup>	Outside material	Material strand	Ø (mm) <sup>2)</sup>	Q (mm <sup>2</sup> )	Color strand	Ω / m <sup>4)</sup>
E8220	Thermocouple cable	Type K <sup>3)</sup>	IP67	-50	+180	Silicone	FEP	3,6	0,22	gn, wt	4,5
E8520	Thermocouple cable	Type K <sup>3)</sup>	IP67	-50	+260	PFA	PFA	2,5	0,22	gn, wt	4,5

Insulation resistance: ≥ 100 MOhm at min. 100 VDC | <sup>1)</sup>Perm. range °C | <sup>2)</sup>Tolerance ± 0,2 mm | <sup>3)</sup>Color according to IEC 584 | <sup>4)</sup>per thermocouple

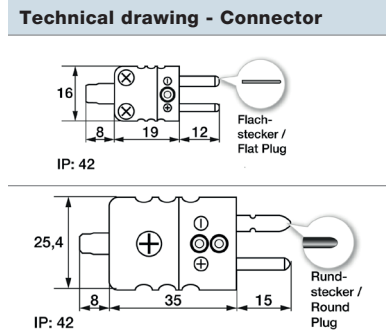
F - Length						
Code	F010	F020	F030	F040	F050	F100
m	1	2	3	4	5	10

Other lengths on request

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G - Connector					
Picture	Code	Feature	Picture	Code	Feature
	G01	Insulated end ferrules (50 mm)			
	G12	Mini-TC connector Type K gn		G32	TC connector Type K gn
	G19	Mini-TC connector Type K ye		G39	TC connector Type K ye

Other connectors available on request



H - Bend protection		
	Length (mm)	50
	Material	Stainless steel spring 1.4310   SUS 302

Delivery and Assembly	
Delivery and Packaging	Probe, separately packaged in PE bag

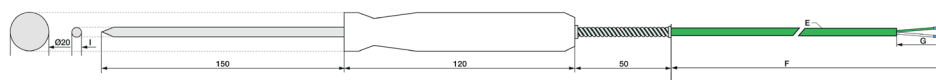
**Important advices**

Eintauchtiefe = mind. 10 x Ø Sondenrohr  
Immersion depth = min 10 x Ø probe tube

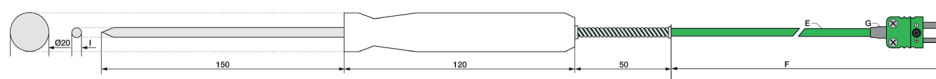
For an exact measurement of the temperature, insert the probe sufficiently deep into the medium to be measured (at least 10 times the diameter of the probe shaft.) Please leave the probe in the medium until the final temperature is reached.  
Please make sure that you only immerse the probe shaft and not the cable or the connector into the medium.  
This probe cannot be autoclaved or sterilized.

Your order code				
Article no.	Material connection cable	Length connection cable	Connector	Ø measuring tip
802410 1211	E _____	F _____	G _____	I _____

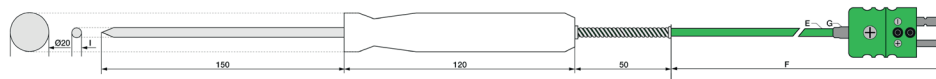
**Version with insulated end ferrules**



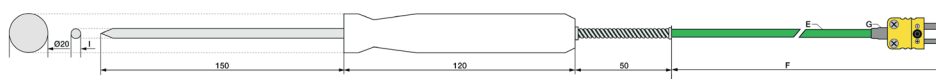
**Version with Mini TE connector**



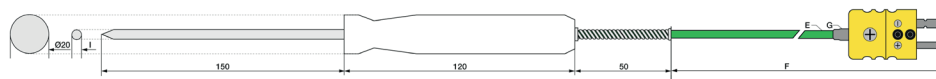
**Version with TE connector**



**Version with Mini TE connector**



**Version with TE connector**



RL / KS / 11.03.2022

# Matching accessories: Thermocouple cables & Connector

Details of accessories can be found on our website.

Thermocouple cables - Please select your desired cable first.												
Order code	Type	Color	IP	From (°C) <sup>1)</sup>	To (°C) <sup>1)</sup>	Outside material	Material strand	Ø (mm) <sup>2)</sup>	Q (mm <sup>2</sup> )	Color strand	Ω / m <sup>4)</sup>	
809310 2	Thermocouple cable	Type K <sup>3)</sup>	IP67	-50	+180	Silicone	FEP	3,6	0,22	gn, wt	4,5	

Insulation resistance: ≥ 100 MOhm at min. 100 VDC | <sup>1)</sup>per. °C range | <sup>2)</sup>Tolerance ± 0.2 mm | <sup>3)</sup> Color according to IEC 584 | <sup>4)</sup>per thermocouple

Now please select the length and add the code to the article no. of the cable.					
Length (m)	1	2	5	10	20
Code	010	020	050	100	200

Please append these digits to the part number of your desired cable.

## Matching accessories: Connector

Connector					
Picture	Code	Feature	Picture	Code	Feature
	809140 2000	Mini-TC connector Type K gn		809100 2000	Mini-TC coupling Type K gn
	809150 2000	TC connector Type K gn		809110 2000	TC coupling Type K gn
	809140 2001	Mini-TC connector Type K ye		809100 2001	Mini-TC coupling Type K ye
	809150 2001	TC connector Type K ye		809110 2001	TC coupling Type K ye

Other connectors available on request

