

Cross-band probe with counter nut

Article no.: 802913 1211

All our cross band probes are ideal for contact temperature measurement on surfaces. Their type is developed for the fastest surface temperature measurements and ensures the shortest response times due to the filigree head design. With this type, you can quickly and easily integrate the probe into your process permanently and vibration-resistant via the continuous M14 thread. The probe is supplied with two matching nuts, making it particularly easy to install. The nuts allow you, for example, to simply lock the probe to a retaining plate. Order this probe with anti-kink spring if required. We offer different cable lengths and materials so that you can optimally adapt the probe to your installation situation. You will find suitable connectors and connection cables in our accessories.

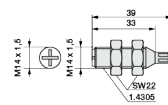


General Information	
Measuring range	-40 °C to +180 °C permanent, short-term up to 400 °C - The measuring range depends on the cable.
Perm. °C range cable	see cable
Perm. °C range probe head	+ 180 °C
Pull-out force probe head	≥ 30 N
Accuracy	-40 °C to +333 °C: ±2,5 °C according to DIN IEC 60584 Class 2
Response time	t63: < 0,8 s t99: < 3 s
Supply and output	
Measuring element	Thermocouple Type K Class 2
Measuring point	Measuring point not isolated
Measurement signal	Thermovoltage
Ambient conditions	
Protection class	none (open measuring head)
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
- H - Bend protection

Probe head	
Contact geometry	Cross band (fitting)
Material probe head	Stainless Steel 1.4305
Length probe head (mm)	33
Thread probe head (mm)	M 14 x 1,5 (continuous thread)



E - Cable material and configuration connection cable											
Code	Type	Color	IP	From (°C) ¹⁾	To (°C) ¹⁾	Outside material	Material strand	Ø (mm) ²⁾	Q (mm ²)	Color strand	Ω / m ⁴⁾
E8020	Thermocouple cable	Type K ³⁾	IP67	-30	+105	PVC	PVC	3,8	0,22	gn, wt	4,5
E8220	Thermocouple cable	Type K ³⁾	IP67	-50	+180	Silicone	FEP	3,6	0,22	gn, wt	4,5
E8120	Thermocouple compensating cable	Type K ³⁾	IP67	-50	+205	FEP	FEP	4	0,22	gn, wt	4,5

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

RL / KS / 11.03.2022

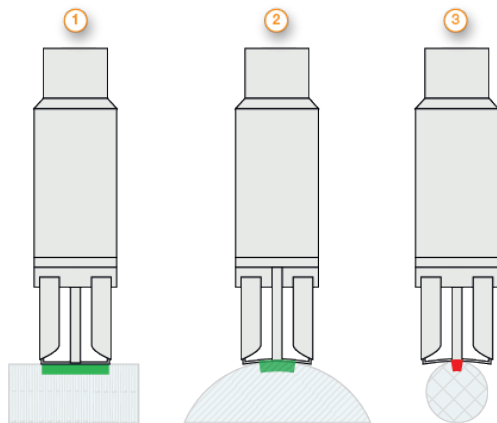
G - Connector								
Picture	Code	Feature	Picture	Code	Feature	Picture	Code	Feature
	G01	Insulated end ferrules (50 mm)		G12	Mini-TC connector Type K gn		G32	TC connector Type K gn
Technical drawing - Connector								

F - Length	
Code	m
F010	1
F020	2
F030	3
F040	4
F050	5
F100	10
F150	15
F200	20

Other connectors available on request

H - Bend protection	
	Length (mm) 50
	Material Stainless steel spring 1.4310 SUS 302
Code	Feature
H0	Without (Standard)
H1	Metal bend protection

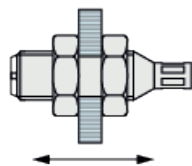
Important assembly advices



Our cross band probes measure the surface temperature. At the measuring point, the surface should be clean, flat and free of residues. If necessary, you can use thermal paste for better thermal coupling. Our probes are best suited for measurement on flat surfaces (1). For uneven or round surfaces, please make sure that the contact area is sufficiently large (2). If the measuring surface is too small (3), measurement errors may occur.

Please lay the cable with reserve loop. In this way, you can extend the probe without disconnecting the electrical connection. If necessary, you should order the probe with bend protection to reduce the mechanical stress at the transition between cable and sleeve.

The filigree cross tapes are sensitive to mechanical damage. Therefore, please do not press the measuring tapes in with your fingers or with a pointed object. Carefully place the cross band probes on the measuring point and press them lightly.



This type has a through thread and is fastened with two counter nuts. To fix the probe at the measuring point, please loosen one of the two nuts and then position the probe at the required measuring point. Then tighten the two counter nuts to ensure secure fastening. When selecting the bore diameter at the installation point, please take into account the size of the thread and the counter nuts on the probe.

Delivery and Assembly

Delivery and Packaging	Probe, 2 x SW22 nuts, separately packaged in PE bag
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Your order code

Article no.	Material connection cable	Length connection cable	Connector	Bend protection
802913 1211	E_____	F_____	G_____	H_____

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Technical drawing

Customizable options

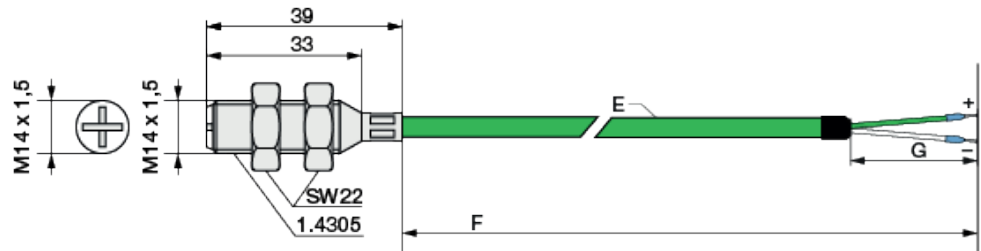
All dimensions in mm

E - Material connection cable

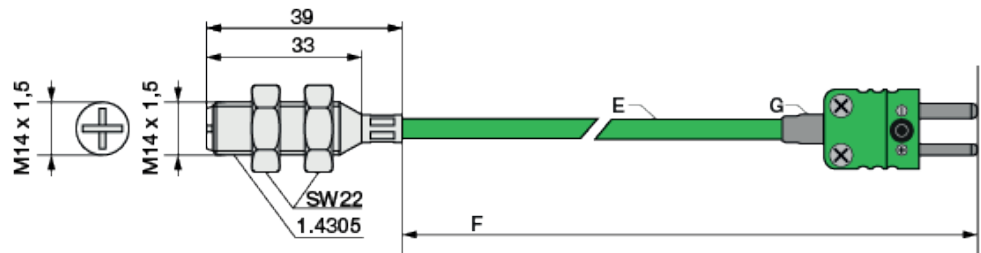
F - Length connection cable
G - Connector

H - Bend protection

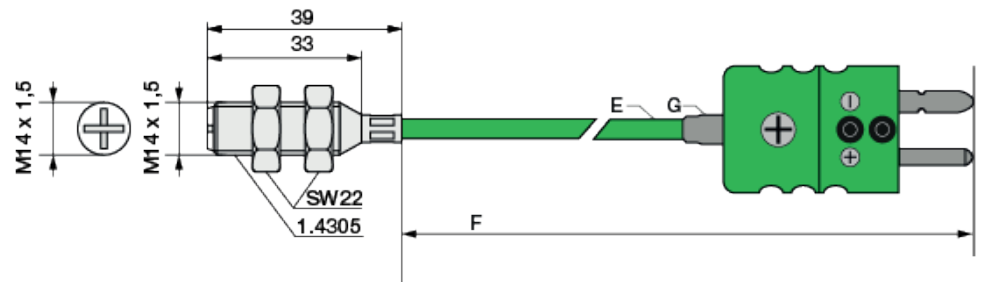
Version with insulated end ferrules



Version with Mini TE connector



Version with TE connector



Matching accessories: Thermocouple cables

Details of accessories can be found on our website.

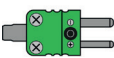
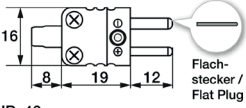
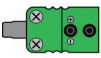
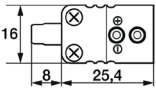
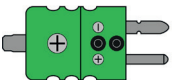
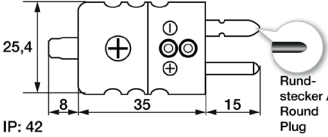
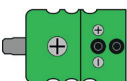
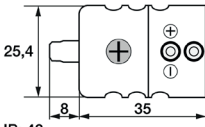
Thermocouple cables											
Please select your desired cable first.											
Order code	Type	Color	IP	From (°C) ¹⁾	To (°C) ¹⁾	Outside material	Material strand	Ø (mm) ²⁾	Q (mm ²)	Color strand	Ω / m ⁴⁾
809300 2	Thermocouple cable	Type K ³⁾	IP67	-30	+105	PVC	PVC	3,8	0,22	gn, wt	4,5
809310 2	Thermocouple cable	Type K ³⁾	IP67	-50	+180	Silicone	FEP	3,6	0,22	gn, wt	4,5

Insulation resistance: ≥ 100 MOhm at min. 100 VDC | ¹⁾per. °C range | ²⁾Tolerance ± 0.2 mm | ³⁾ Color according to IEC 584 | ⁴⁾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	Technical drawing
	809140 2000	Mini-TC connector Type K gn	 IP: 42
	809100 2000	Mini-TC coupling Type K gn	 IP:42
	809150 2000	TC connector Type K gn	 IP: 42
	809110 2000	TC coupling Type K gn	 IP: 42

Other connectors available on request