

THERMOCOUPLES FOR TUBE SURFACE MEASUREMENT

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APPLICATION

The thermocouple models TTeO and TTeOT are equipped with a stainless steel support prism for mounting to pipelines for surface temperature measurement. There is no replaceable measuring insert available for this construction type.

For both models, we offer various connection heads and thermocouple materials according to DIN EN 60 584. In addition, model TTeOT is available with several fitted transmitters with analogue or digital output.



STANDARD VERSION

Measuring Element

Thermocouple types K, N, J and S according to DIN EN 60 584 as single or dual element

Operating Temperature Ranges

Type K (NiCr-Ni): -40 °C to +1175 °C (-40 °F to +2147 °F) 1)

Type N (NiCrSi-NiSi): -40 °C to +1175 °C (-40 °F to +2147 °F) 1)

Type J (Fe-CuNi): -40 °C to +750 °C (-40 °F to +1382 °F)

Type S (Pt10Rh-Pt): 0 °C to +1175 °C (+32 °F to +2147 °F) 1)

Ambient Temperature Ranges 2)

Model TTeO: -40 °C to +100 °C (-40 °F to +212 °F)

Model TTeOT: -40 °C to +85 °C (-40 °F to +185 °F)

Accuracy

Class 1 according to DIN EN 60 584

Tolerance value 3) J, K, N: $\pm 1.5 \text{ °C}$ or $0.004 \cdot |t|$

for type J in the range: -40 °C to +750 °C (-40 °F to +1382 °F)

for type K, N in the range: -40 °C to +1000 °C (-40 °F to +1832 °F)

Tolerance value 3) S: $\pm 1.0 \text{ °C}$ or $(1+(t-1100) \cdot 0.003) \text{ °C}$

in the entire operating temperature range



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TEMPERATURE SENSOR

Made of sheathed, mineral insulated cable
For fixation on tube surfaces via stainless steel tightening strap
For a precise measurement, the temperature sensor should be enclosed by the insulating material
Sheath material: Inconel 600 (2.4816) for type K, N, S
1.4401 for type J
Insulation: MgO

Connection Heads

Types B, BUZ, BUZ-H, BUZ-H-W, BEG, NS or GG

Degree of Protection (DIN EN 60 529)

IP65 (connection head) 4)

Output Signal

Model TTeO: thermoelectric voltage according to DIN EN 60 584

Model TTeOT: 4...20 mA, HART ® or PROFIBUS ® PA / FOUNDATION™ Fieldbus

SPECIAL VERSION (UPON REQUEST)

- Other thermocouples
- Special sheath materials
- Other head-mount transmitters, also with voltage output
- Version for the subsequent mounting of transmitters
- Other connection heads
- Higher degree of protection up to IP68

ACCESSORIES

- Transmitters for rail mounting
- Digital displays for switch panel mounting or wall mounting
- Compensating cables and extension cables

Le caratteristiche dichiarate possono cambiare senza alcun preavviso

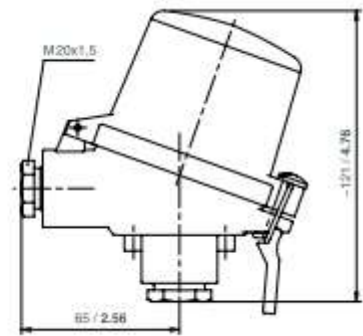
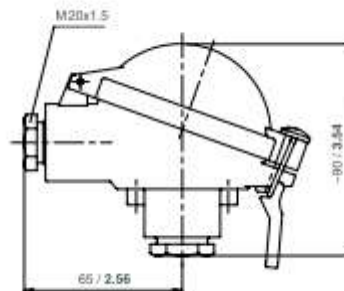
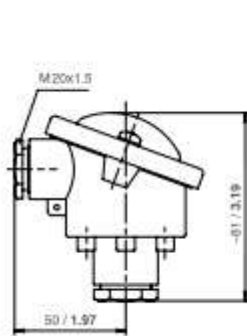


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Connection Heads			
	Head B	Head BUZ	Head BUZ-H 1) , BUZ-H-W
Material:	die-cast aluminum	die-cast aluminum	die-cast aluminum
Lid:	flanged lid with screws	hinged lid	BUZ-H: high lid, hinged BUZ-H-W: high lid with LED display
Degree of protection:	IP65	IP65	IP65
No. of transmitters:	1	1	2
Max. installation dimensions:	Ø 44 x 21 mm (1.73 x 0.82")	Ø 45 x 40 mm (1.77 x 1.57")	lid Ø 60 x 40 mm (2.36 x 1.57") base Ø 45 x 16 mm (1.77 x 0.63")



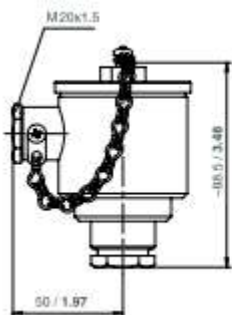
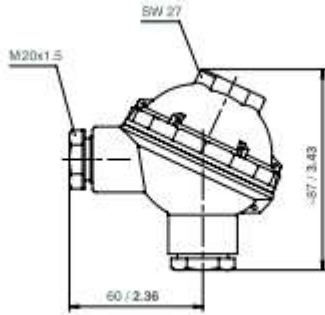
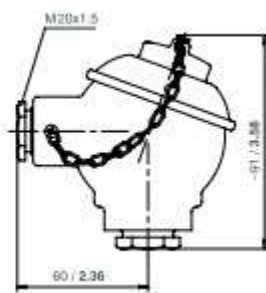
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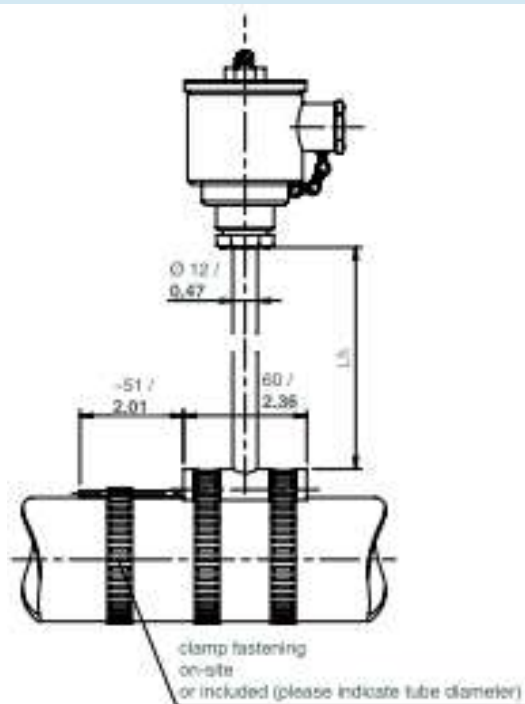
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	Head BEG	Head NS	Head GG
Material:	stainless steel 1.4401	plastic polyphenylene oxide	grey cast iron
Lid:	screw-on lid	screw-on lid	screw-on lid
Degree of protection:	IP65	IP65	IP65
No. of transmitters:	1	1	1
Max. installation dimensions:	Ø 45 x 20 mm (1.77 x 0.79")	Ø 42 x 14 mm (1.65 x 0.55")	Ø 42 x 20 mm (1.65 x 0.79")
			

DIMENSION DATA



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ORDERING INFORMATION

Basic Model: Thermocouple for Tube Surface Measurement		TTeO
Transmitter:	without	without code letter
	with fitted transmitter	T
Thermocouple:	type K, NiCr-Ni	K
	type N, NiCrSi-NiSi	N
	type J, Fe-CuNi	J
	type S, Pt10Rh-Pt	S
No. of thermocouples:	1	1
	2	2
Connection head:	type B, aluminum, with screws	B
	type BUZ, aluminum, hinged lid	BUZ
	type BUZ-H, aluminum, high lid	BUZ-H
	type BUZ-H-W, aluminum, high lid with LED display	BUZ-H-W
	type BEG, stainless steel, screw-on lid	BEG
	type NS, polyphenylene oxide, screw-on lid	NS
	type GG, grey cast iron, screw-on lid	GG
Neck tube:	Lh = 120 mm, other lengths upon request	Lh = 120 mm
Version:	with tightening strap	MS
	tightening strap provided by the customer	SB
Tightening strap length:	in mm	e.g. 500 mm
With fitted transmitter:	TT5334: 4...20 mA	5334-A, 5334-B
	TT5337: 4...20 mA + HART 7	5337-A, 5337-D
	TT5350: PROFIBUS® PA/ FOUNDATION™ Fieldbus	5350-A, 5350-B
Measuring range:	scaling of the 4...20 mA signal to the temperature range	e.g. 0 °C to +250 °C
Options:	instrument tag	stainless steel plate 12 x 55 mm (0.47 x 2.17") sticker on the case
Example:		TTeOT, K, 1, B, Lh = 120 mm, MS, 500 mm, 5334-A, 0 °C to +250 °C

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