



GÜNTHER^{GmbH}

Temperaturmesstechnik



**Product category 20-TOM
Sheathed Thermocouple Assemblies
without Protection Tube**



Application Examples for Sheathed Thermocouple Assemblies without Protection Tube:



Waste Recycling / Incineration



Glass Industry



Plant and Machine Construction



Automobile Industry



Heat Treatment



Laboratories



Industrial Furnace Construction



Aluminium and Nonferrous Metal Industry



Cement and Building Material Industry



Energy Production



Plastic Industry

20-TOM

Sheathed Thermocouple Assemblies without Protection Tube

Sheathed thermocouple assemblies without protection tube (20-TOM) are used in almost every branch of industry up to a temperature of 1100°C, with a platinum-rhodium-mantle up to 1300°C. Sheathed thermocouple assemblies essentially consist of thermo wires (inner conductors) insulated with high-purity, condensed magnesium oxide powder and an external mantle (sheath) of heat-resistant high-grade steel or nickel alloy (e.g. Inconel 600®). Sheathed thermocouple assemblies are available in single, double or triple element version. The outer diameter lies somewhere between 0,25 mm and 8,0 mm depending on technical assembly and customer preference. As a result of their structure, sheathed thermocouple assemblies offer numerous advantages when compared to their conventional counterparts.

- Small dimensions for temperature measurements at measuring sites with difficult accessibility (any desired length available)
- Short response time for exact measurements of temperature fluctuations
- Vibration and pressure resistant
- Optimal protection of inner conductors against corrosion, oxidation, mechanical damage and chemical contamination
- Increased stability of electric insulation compared to ceramic insulated thermocouples
- Simple and sealed assembly

Availability

We are able to deliver every current design and diameter of sheathed thermocouple assemblies with mounted sockets, connection heads, compensation cables, as well as accessories and mounting structures of every type.

For specialised requirements and standards (such as AMS, CQI-9, etc.), we offer sheathed thermocouple assemblies available with exceptionally narrow tolerances, often referred to as “better class 1”. Thermoelectric voltages and tolerances of our mineral-insulated gauge slides are pursuant to DIN EN 60584, class 1.





① Connectors (Plug/Socket)

LEMO Size 0 - 3
Standard
Miniature
High-Temp.-Standard
High-Temp.-Miniature
Ceramic-Standard
Ceramic-Miniature

② Connection Head

With connecting thread	
B	(M24 x 1,5)
BUS	(M24 x 1,5)
BUZ	(M24 x 1,5)
BUZH	(M24 x 1,5)
BBK	(M24 x 1,5)
DL (MA)	(M10 x 1)

or with thread diameter of 15,3 mm

③ Process Connector (Detachable)

Clamp Connectors	Steel/High-Grade Steel
Pressure Ring	Teflon
Cutting Ring	High-Grade Steel

M 8x1 for Mantle Diameter 1,0-3,0 mm
G 1/8 A for Mantle Diameter 1,0-3,0 mm
G 1/4 A for Mantle Diameter 4,5-8,0 mm
G 1/2 A for Mantle Diameter 4,5-8,0 mm

④ Sheathed Thermocouple

(Thermocouple/Mantle Materials)

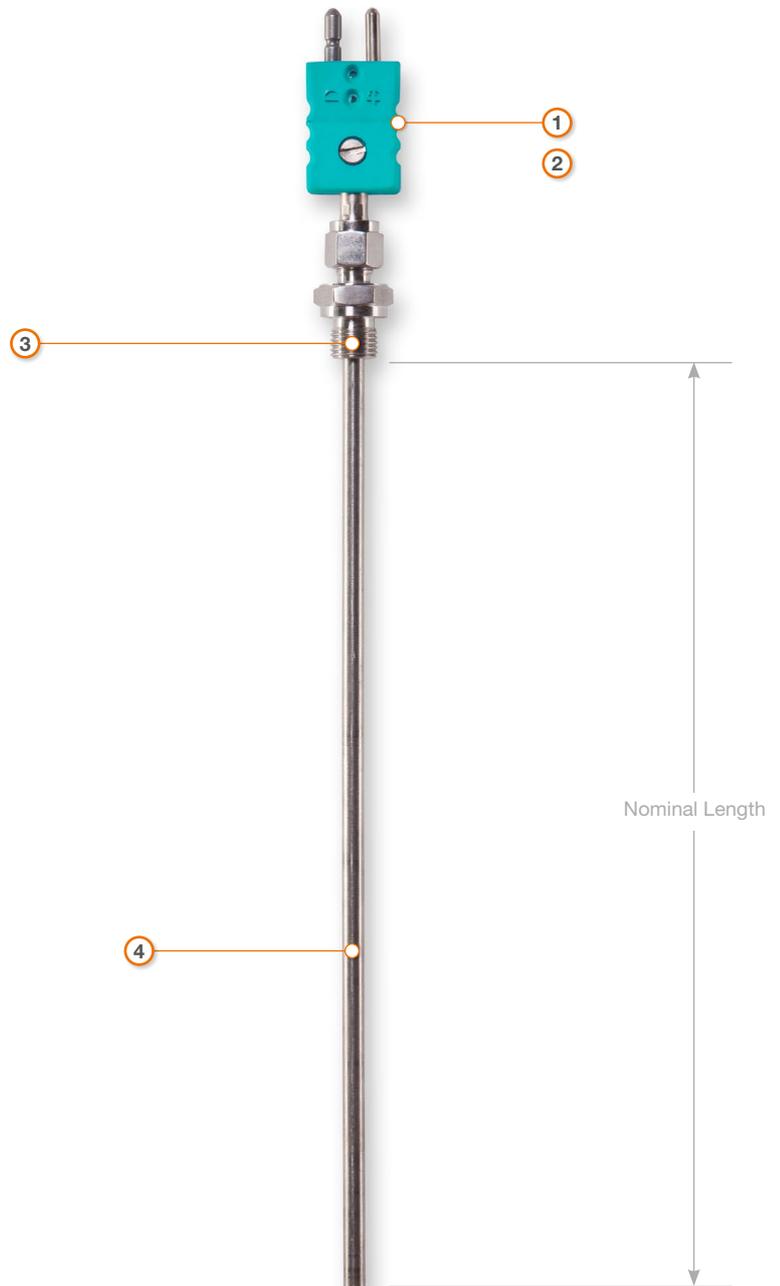
NiCr-Ni/K	Inconel 2.4816
Fe-CuNi/L	1.4541/2.4816
Fe-CuNi/J	1.4541/2.4816
PtRh-Pt/S	Inconel 2.4816
Nicrosil-Nisil/N	Inconel 2.4816
Mantle Diameter:	0,5 - 8 mm
Single, Double or Triple	

Further technical information for this product line is available on our website:

<http://www.guenther.eu/en/products/>

[thermocouples/20-tom/sheath-thermocouples-without-protection-tube](http://www.guenther.eu/en/products/thermocouples/20-tom/sheath-thermocouples-without-protection-tube)

Example of a common implementation in this product line



Individual Solutions such as, for example materials, process connectors, accessories, etc. not listed here, are often viable.

Please contact us for further information!

