

Thread Mounted Thermocouples

Description

Thermocouples in this series are designed for direct screw fitting into the process, mainly in tanks and pipelines. These thermometers are suitable for fluid and gaseous media under moderate mechanical load and normal chemical stress. The thermowell made of stainless steel is fully welded and screw-fitted into the connection head. The interchangeable measuring insert can be dismantled without removing the complete probe from the process. This makes inspection and, when servicing is necessary, replacement possible during operation and while the plant is running. Selection of normal or standard lengths enables short delivery time and the possibility of stocking spare components. Insertion length, process connection, design of thermowell, connection head as well as type and number of sensors, accuracy and method of connection can be selected individually for the respective application. Intrinsically safe designs are available for applications in hazardous areas.



Special Features

- Application ranges from -200 °C to +1200 °C
- Fabricated thermowell included
- Spring loaded measuring insert (exchangeable)

Applications

- Machinery, plant and tank construction
- Energy and power plant technology
- Chemical industry
- Food and beverage industry
- Sanitary, heating and air-conditioning technology



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Technical Data

Sensor type

The application range of these thermometers is limited by the permissible max. temperature of the thermocouple as well as the max. temperature of the thermowell material.

Type	Recommended max. operating temperature
K (NiCr-Ni)	1200 °C
J (Fe-CuNi)	800 °C
E (NiCr-CuNi)	800 °C
T (Cu-CuNi)	400 °C
N (NiCrSi-NiSi)	1200 °C

Sensor limiting error

A cold junction temperature of 0 °C is taken as basis with the definition of the sensor limiting error of thermocouples.

Type K

Class	Temperature range	Limiting error
DIN EN 60 584 part 2		
1	-40 °C ... +375 °C	± 1.5 °C
1	+375 °C ... +1000 °C	± 0.0040 · t ¹⁾
2	-40 °C ... +333 °C	± 2.5 °C
2	+333 °C ... +1200 °C	± 0.0075 · t ¹⁾
ISA (ANSI) MC96.1-1982		
Standard	0 °C ... +1250 °C	± 2.2 °C or ²⁾ ± 0.75 %
Special	0 °C ... +1250 °C	± 1.1 °C or ²⁾ ± 0.4 %

Type E

Class	Temperature range	Limiting error
DIN EN 60 584 part 2		
1	-40 °C ... +375 °C	± 1.5 °C
1	+375 °C ... +800 °C	± 0.0040 · t ¹⁾
2	-40 °C ... +333 °C	± 2.5 °C
2	+333 °C ... +900 °C	± 0.0075 · t ¹⁾

Physical Dimension

According to customer demand completeness.

