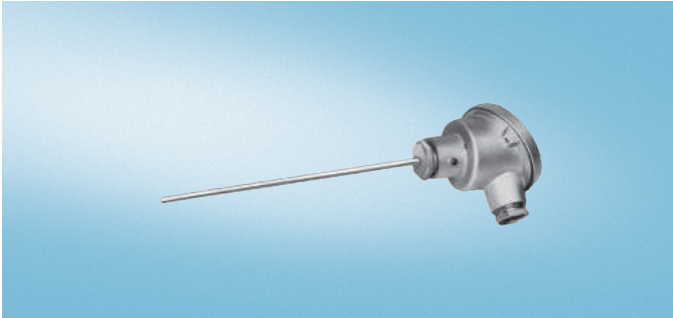


SITRANS T measuring instruments for temperature

Thermocouples

Jacket thermocouples with connection head, form B

Overview



The jacket thermocouple with connection head, form B is suitable for the temperature range from 0 to 800 or 1,100 °C (32 to 1472 or 2012 °F) and can also be supplied with a built-in temperature transmitter.

Technical specifications

Jacket thermocouple with connection head, form B

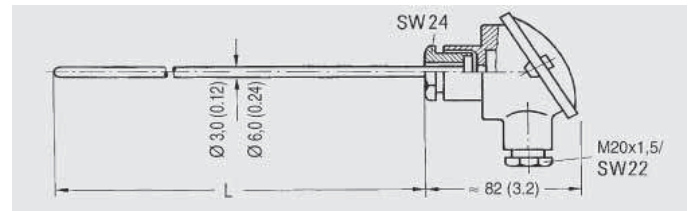
Thermocouple	Fe/Cu Ni, Fe-CuNi or Ni Cr/Ni
Jacket	Measuring junction insulated from base of jacket
• Material	X 6 CrNiTi 18 10, mat. Inconel No. 1.4541
• Temperature	Up to 800 °C (1472 °F) Up to 1100 °C (2012 °F)
Connection head	Form B to DIN 43729
• Material	Cast light alloy
• Temperature	-30 ... +100 °C (-22 ... +212 °F) is permissible
• Cable inlet	For cables up to 15 mm (0.59 inch) diameter
• Terminal block	Without clamping springs

Thermocouple

- Insulation resistance between conductors and jacket: $\geq 1000 \text{ M}\Omega/\text{m}$ at 20 °C ($\geq 305 \text{ M}\Omega/\text{ft}$ at 68 °F)
- Minimum bending radius: 5 x outer diameter of jacket
- Leak resistance of measuring junction: Tested at 40 bar (580 psi)

Thermo- couple	Jacket		No. of thermo- couples	Thermo- couple wire diameter	Resis- tance (for double con- ductor)
	Outer diameter	Wall thickness			
Fe/Cu Ni (type J) and Fe-CuNi (type L)	3.0 (0.12)	0.42 (0.017)	1	0.54 (0.02)	2.7 (8.9)
		0.42 (0.017)	2	0.48 (0.02)	3.5 (11.5)
	6.0 (0.24)	0.55 (0.022)	1	1.07 (0.04)	0.66 (2.2)
		0.89 (0.035)	2	0.81 (0.03)	1.14 (3.7)
Ni Cr/Ni (type K)	3.0 (0.12)	0.42 (0.017)	1	0.54 (0.02)	4.3 (14.1)
		0.42 (0.017)	2	0.48 (0.02)	5.5 (18.0)
	6.0 (0.24)	0.55 (0.022)	1	1.07 (0.04)	1.12 (3.7)
		0.89 (0.035)	2	0.81 (0.03)	1.94 (6.4)

Dimensional drawings



Jacket thermocouple with connection head, form B, made of cast light alloy, dimensions in mm (inches)

Selection and Ordering data

Order No.

Jacket thermocouple element with connection head, form B

Fe/Cu Ni type J thermocouple
Jacket made of X 6 CrNiTi 18 10, material No. 1.4541, temperature up to 800 °C (1472 °F)
1 thermocouple

Jacket outer diameter/mm (inch):

- 3.0 (0.12)
- 6.0 (0.24)

7MC2021-2CE-Z
7MC2021-4CE-Z

2 thermocouples

Jacket outer diameter/mm (inch):

- 3.0 (0.12)
- 6.0 (0.24)

7MC2021-2CF-Z
7MC2021-4CF-Z

Fe/Cu Ni type L thermocouple

Jacket made of X 6 CrNiTi 18 10, material No. 1.4541, temperature up to 800 °C (1472 °F)
1 thermocouple

Jacket outer diameter/mm (inch):

- 3.0 (0.12)
- 6.0 (0.24)

7MC2021-2CA-Z
7MC2021-4CA-Z

2 thermocouples

Jacket outer diameter/mm (inch):

- 3.0 (0.12)
- 6.0 (0.24)

7MC2021-2CB-Z
7MC2021-4CB-Z

Ni Cr/Ni type K thermocouple

Jacket made of Inconel, temperature up to 1,100 °C (2012 °F)
1 thermocouple

Jacket outer diameter/mm (inch):

- 3.0 (0.12)
- 6.0 (0.24)

7MC2021-2LC-Z
7MC2021-4LC-Z

2 thermocouples

Jacket outer diameter/mm (inch):

- 3.0 (0.12)
- 6.0 (0.24)

7MC2021-2LD-Z
7MC2021-4LD-Z

Further designs

Please specify Order code(s) and plain text.

Order code

- Length L in m (ft)
 - 0.25 (0.82)
 - 1 (3.28)
 - 5 (16.4)
 - 10 (32.8)
- Different design (mounting length, protective tube material etc.), specify in plain text.
- TAG plate made of stainless steel specify TAG No. in plain text
- Calibration carried out at one point, specify desired temperature in plain text (order equivalent number of times for several calibration points).

A01
A02
A03
A04
Y01

Y15

Y33

To order a temp. transmitter installed in the connection head, see "Temp. transm. for installation in the connection head" (page 3/83).

Note: SITRANS T3K PA can only be used in a connection head with high hinged cover. Can be ordered als special version (...-Z Y01).

Example of ordering:

The following is required:

- Jacket thermocouple element
 - jacket made of X 6 CrNiTi 18 10; outer diameter 3.0 mm (0.12 inch);
 - with 1 Fe/Cu Ni thermocouple, type J; nominal length 5 m (16.4 ft)

Order as follows:

1 jacket thermocouple

7MC2021-2CE-Z A03