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JUMO Instrument Co. Ltd.
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JUMO Process Control, Inc.
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Screw-in thermocouples with terminal head form B

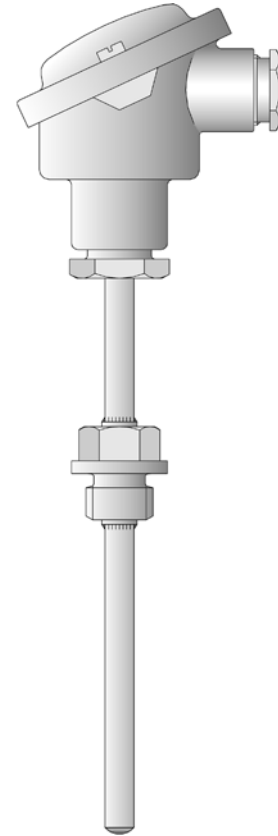
- For temperatures from -200 to +800 °C
- Available with different thermocouples
- As single or double thermocouple
- Connection head form B, BUZ, BUZH, BBK
- Available with transmitter

Screw-in thermocouples are preferentially used for measuring temperatures in fluids and gases. A decisive selection criterion is the reliable sealing feature of this installation type with vacuum and with overpressure. Application fields are found, amongst others, in heating, furnace/kiln and process technology.

The connection head is suitable for ambient temperatures up to +100 °C. The versions BUZ, BUZH and BBK are also available in addition to the standard connection head, form B.

Sheaths made of stainless steel protect the measuring insert against chemical influences and mechanical damage.

Thermocouples (elements) as per DIN EN 60584, class 2 and DIN 43710 are set into the measuring insert. Versions with two thermocouples are also possible.



Technical data

Terminal head

Form B DIN 43729, die-cast aluminum, M 20x1.5; IP65, ambient temperature -40 to +100 °C
Form BUZ, die-cast aluminum, M 20x1.5; IP65, ambient temperature -40 to +100 °C
Form BUZH, die-cast aluminum, M 20x1.5; IP65, ambient temperature -40 to +100 °C
Form BBK, plastic, M 20x1.5; IP54, ambient temperature -30 to +130 °C
Caution: reduced ambient temperature range when using transmitters,
Data sheets 70.7010 and 70.7060

Extension tube

Stainless steel 1.4571, length 130 mm

Process connection

thread, stainless steel 1.4571

Sheath

Stainless steel 1.4571, diameter 9 mm

Measuring insert

Exchangeable, insulated structure:

- 1x Fe-CuNi „J“, DIN EN 60584, cl. 2, operating temperature -200 to +600 °C
- 1x Fe-CuNi „L“, DIN 43710, cl. 2, operating temperature -200 to +600 °C
- 1x NiCr-Ni „K“, DIN EN 60584, cl. 2, operating temperature -200 to +800 °C
- 2x Fe-CuNi „J“, DIN EN 60584, cl. 2, operating temperature -200 to +600 °C
- 2x Fe-CuNi „L“, DIN 43710, cl. 2, operating temperature -200 to +600 °C
- 2x NiCr-Ni „K“, DIN EN 60584, cl. 2, operating temperature -200 to +800 °C

Transmitter

Programmable transmitter, 4 to 20 mA/20 to 4 mA output, data sheet 70.7010
Wtrans B programmable head transducer with radio transmission, data sheet 70.7060
(suitable Wtrans receivers, data sheet 90.2931)

Accessories

Sheath, data sheet 90.9710 (90.9721)

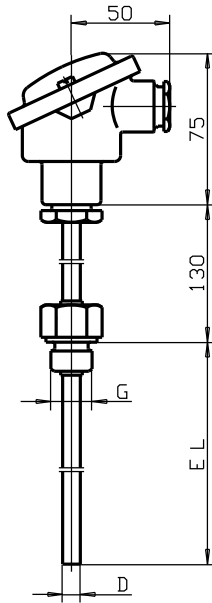
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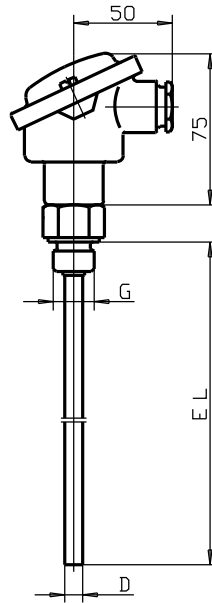
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Dimensions



Basic type 901020/10



Basic type 901020/20

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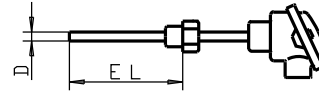
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Order specifications: Screw-in thermocouples with connection head form B

(1) Basic type

901020/10 Screw-in thermocouple
with extension tube and continuous sheath



901020/20 Screw-in thermocouple
without extension tube and continuous sheath



(2) Operating temperature in °C

x x 150 -200 to +600 °C
 x x 165 -200 to +800 °C

(3) Measuring insert

x x 1040 1x Fe-CuNi „J“
 x x 1042 1x Fe-CuNi „L“
 x x 1043 1x NiCr-Ni „K“
 x x 2040 2x Fe-CuNi „J“
 x x 2042 2x Fe-CuNi „L“
 x x 2043 2x NiCr-Ni „K“

(4) Sheath diameter D in mm

x x 9 Ø 9 mm

(5) Fitting length EL in mm (100 ≤ EL ≤ 1000)

x x 160 160 mm
 x x 200 200 mm
 x x 250 250 mm
 x x 300 300 mm
 x x 400 400 mm
 x x 600 600 mm
 x x ... Specification in plain text (50 mm steps)

(6) Process connection

x x 104 Screw-connection G 1/2
 x x 105 Screw-connection G 3/4
 x x 106 Screw connection G 1
 x x 126 Screw-connection M 18 x 1.5

(7) Extra codes

x x 000 no extra code
 x 306 Extension tube 70 mm
 x x 320 terminal head Form BUZ
 x x 321 terminal head Form BUZH
 x x 322 Connection head form BBK
 x x 331 1x transmitter programmable output 4 to 20 mA/20 to 4 mA³, data sheet 70.7010
 x x 335 2x transmitter programmable output 4 to 20 mA/20 to 4 mA³, data sheet 70.7010
 x x 859 1x Wtrans B programmable head transducer with radio transmission, data sheet 70.7060

Order code (1) - (2) - (3) - (4) - (5) - (6) / (7) ¹
Order example 901020/10 - 150 - 1042 - 9 - 250 - 104 / 000

Note: Sheaths, Data Sheet 90.9710 (90.9721)

¹ List extra codes in sequence, separated by commas.
³ Specify measuring range and output signal in plain text.

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Accessories for programmable 2-wire transmitter type 707010 in the accessories data sheet 70.9770

Part	Sales No.:
PC interface with TTL/RS232 converter and adapter (socket connector)	70/00350260
PC interface with USB/TTL converter, adapter (socket connector) and adapter (pins)	70/00456352
Special programming (standard measuring range 0 to 100 °C)	-
Setup program on CD-ROM, multilingual	70/00378733

Accessories for Wtrans B, programmable head transmitter with radio transmission Type 707060

Part	Sales No.:
Lithium battery 3.6 V, 2.2 Ah (size AA)	70/00547559
PC interface with USB/TTL converter, adapter (socket) and adapter (pins)	70/00456352
PC interface with TTL/RS232 converter and adapter (socket connector)	70/00350260
Setup program on CD-ROM, multilingual	70/00488887
Setup program including OnlineChart on CD-ROM, multilingual	70/00549067
OnlineChart activation	70/00549188

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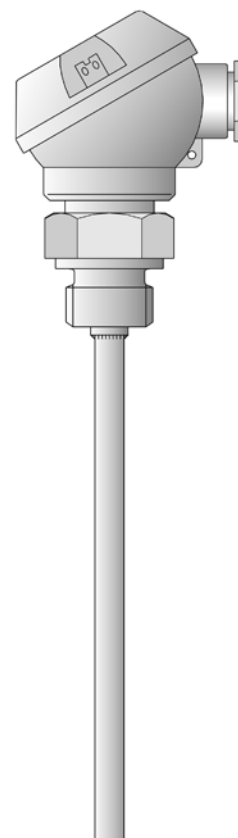


Screw-in thermocouples with terminal head form J

- for temperatures from -200 to +800°C
- As single or double thermocouples
- Structure isolated or connected with thermowell
- Protection class IP65

Screw-in thermocouples are preferentially used for measuring temperatures in liquids and gases. A decisive selection criterion is the reliable sealing feature of this installation type with vacuum and with overpressure. The application areas are, among others, in the HVAC, kiln and apparatus engineering sector.

The measuring insert is equipped with thermal pairs (thermocouples) according to DIN EN 60 584 and/or DIN 43 710 as a standard. Versions with two thermocouples are also possible.



Technical Data

Terminal head

Form J, die-cast aluminum, M 16x1.5; IP65, ambient temperature -40 to +100°C thread, stainless steel 1.4571

Process connection

Stainless steel 1.4571, Ø 6mm

Protection tube

Insulated structure:

1 x Fe-CuNi „J“, DIN EN 60 584, cl. 2, operating temperature -200 to +600°C

1 x Fe-CuNi „L“, DIN 43 710, cl. 2, operating temperature -200 to +600°C

1 x NiCr-Ni „K“, DIN EN 60 584, cl. 2, operating temperature -200 to +800°C

2 x Fe-CuNi „J“, DIN EN 60 584, cl. 2, operating temperature -200 to +600°C

2 x Fe-CuNi „L“, DIN 43 710, cl. 2, operating temperature -200 to +600°C

2 x NiCr-Ni „K“, DIN EN 60 584, cl. 2, operating temperature -200 to +800°C

Measuring insert**Accessories**

Thermowell, Data Sheet 90.9721

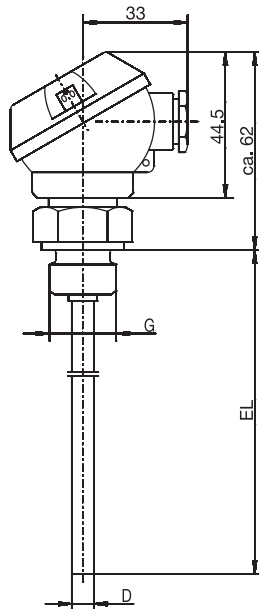
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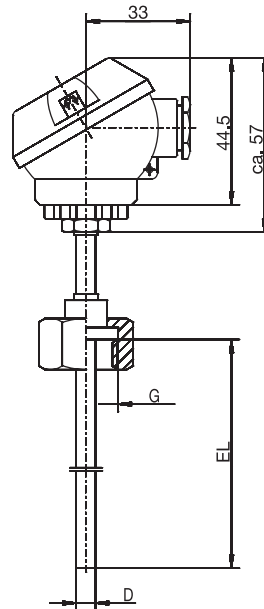
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Dimensions



Type 901030/10



Type 901030/20

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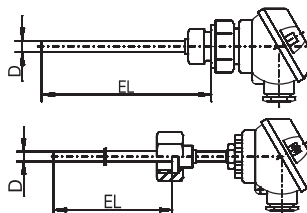


Order details: Screw-in thermocouples with terminal head form J

(1) Basic type

901030/10 Screw-in thermocouple
with continuous thermowell

901030/20 Screw-in thermocouple
with continuous thermowell
and union nut



(2) Operating temperature in °C

x x 130 -200 to +400°C
 x x 150 -200 to +600°C
 x x 165 -200 to +800°C

(3) Measuring insert

x x 1040 1 x Fe-CuNi „J“
 x x 1042 1 x Fe-CuNi „L“
 x x 1043 1 x NiCr-Ni „K“
 x x 2040 2 x Fe-CuNi „J“
 x x 2042 2 x Fe-CuNi „L“
 x x 2043 2 x NiCr-Ni „K“

(4) Protection tube diameter D in mm

x x 6 Ø 6mm

(5) Fitting length EL in mm (50 ≤ EL ≤ 600, EL ≥ 150 for basic type 901030/20)

x 50 50mm
 x 75 75mm
 x 100 100mm
 x x 150 150mm
 x x 200 200mm
 x x 250 250mm
 x x 300 300mm
 x x ... please specify in plain text (50mm steps)

(6) Process connection

x 102 Screw connection (thread) G 1/4
 x 103 Screw connection (thread) G 3/8
 x 104 Screw connection (thread) G 1/2
 x 164 Union nut G 1/2
 x 165 Union nut G 3/4

(7) Extra codes

x x 000 None

Order code (1) (2) (3) (4) (5) (6) (7)
Order example 901030/10 - 130 - 1042 - 6 - 100 - 104 / 000

Note: Thermowell, Data Sheet 90.9721

Stock versions

(1)	(2)	(3)	(4)	(5)	(6)	(7)	Part No.
901030/10	- 150	- 1042	- 6	- 100	- 104	/ 000	90/00407109
901030/10	- 150	- 1042	- 6	- 200	- 104	/ 000	90/00520186