

**JUMO GmbH & Co. KG**

Delivery address: Mackenrodtstraße 14  
36039 Fulda, Germany  
Postal address: 36035 Fulda, Germany  
Phone: +49 661 6003-0  
Fax: +49 661 6003-607  
E-mail: mail@jumo.net  
Internet: www.jumo.net

**JUMO Instrument Co. Ltd.**

JUMO House  
Temple Bank, Riverway  
Harlow, Essex CM20 2DY, UK  
Phone: +44 1279 635533  
Fax: +44 1279 635262  
E-mail: sales@jumo.co.uk  
Internet: www.jumo.co.uk

**JUMO Process Control, Inc.**

8 Technology Boulevard  
Canastota, NY 13032, USA  
Phone: 315-697-5866  
1-800-554-JUMO  
Fax: 315-697-5867  
E-mail: info@jumo.us  
Internet: www.jumo.us



## Push-in thermocouples with compensating cable

- for temperatures from -50 to +600 °C
- available with different thermocouples
- with stainless steel thermowell
- silicone compensating cable or with metal braiding
- also with 90° cable entry

Push-in thermocouples are preferred for measuring temperatures on solids, such as hot-plates and welding jaws. Applications include ovens, plant engineering and machinery.

Depending on the version, compensating cables are suitable for use in dry areas within the temperature range -50 to +600 °C. The connection of the cable to the thermowell incorporates strain relief. A cable protector is available as an option.

Thermowells in stainless steel protect the measuring insert from chemical influences and mechanical damage.

Thermocouples (elements) according to DIN EN 60584 and DIN 43710 are used as standard for the measuring insert.



### Technical data

**Connection**

available with cable ends as: bare wires, with ferrules, receptacle or multipole connector (e.g. connectors that are free from thermal emf)

**Compensating cable**

silicone, ambient temperature -50 to +180 °C  
metal braiding, ambient temperature -50 to +600 °C

**Thermowell**

stainless steel 1.4571, 4 mm dia., 6 mm dia.

**Measuring insert**

insulated assembly:

- 1× Fe-Con J, DIN 60584, Cl. 2, operating temperature -200 to +600 °C
- 1× Fe-Con L, DIN 43710, Cl. 2, operating temperature -200 to +600 °C
- 1× NiCr-Ni K, EN 60584, Cl. 2, operating temperature -200 to +600 °C

**Accessories**

Pipe screw connection and flanges, data sheet 909750.

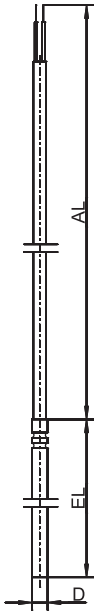
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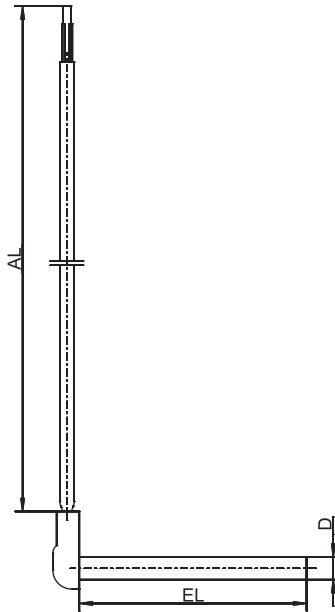
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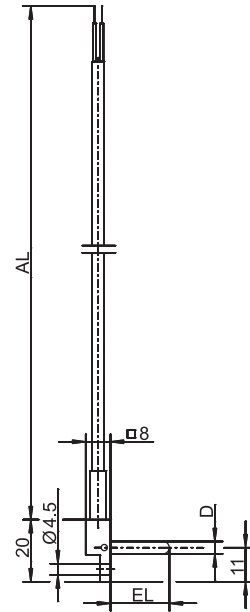
## Dimensions



Basic type 901150/10



Basic type 901150/20



Basic type 901150/44

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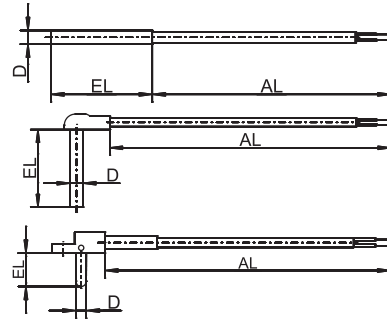
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**Order details: Push-in thermocouples with compensating cable**

**(1) Basic type**

|  |           |  |
|--|-----------|--|
|  | 901150/10 | Push-in thermocouple with stainless steel thermowell               |
|  | 901150/20 | Push-in thermocouple with stainless steel thermowell angled at 90° |
|  | 901150/44 | Push-in thermocouple with stainless steel thermowell angled at 90° |



**(2) Operating temperature in °C/compensating cable**

|   |   |     |                               |
|---|---|-----|-------------------------------|
| x | x | 380 | -50 to +200 °C/silicone       |
| x | x | 390 | -50 to +300 °C/metal braiding |
|   | x | 840 | 0 to 300 °C/metal braiding    |
|   | x | 843 | 0 to 350 °C/metal braiding    |
| x | x | 848 | 0 to 400 °C/metal braiding    |
| x |   | 858 | 0 to 600 °C/metal braiding    |

**(3) Measuring insert**

|   |   |   |      |              |
|---|---|---|------|--------------|
| x | x | x | 1040 | 1× Fe-Con J  |
| x | x | x | 1042 | 1× Fe-Con L  |
| x | x |   | 1043 | 1× NiCr-Ni K |

**(4) Thermowell diameter D in mm**

|   |   |   |      |
|---|---|---|------|
|   | x | 4 | 4 mm |
| x | x | 6 | 6 mm |

**(5) Fitting length EL in mm (EL 40 ... 500 mm for basic type 901150/10)**

|   |   |   |     |  |
|---|---|---|-----|--|
|   |   | x | 9   | 9 mm                                       |
|   | x | x | 12  | 12 mm                                      |
| x |   |   | 50  | 50 mm                                      |
|   | x |   | 60  | 60 mm                                      |
| x |   |   | 100 | 100 mm                                     |
| x |   |   | 200 | 200 mm                                     |
| x |   |   | 300 | 300 mm                                     |
| x |   |   | ... | please specify in plain text (50 mm steps) |

**(6) Compensating cable end**

|   |   |   |    |   |
|---|---|---|----|---|
| x | x | x | 03 | bare cable ends   |
| x | x | x | 11 | ferrules (standard)                                     |
| x | x | x | 13 | receptacle 6.3  |
| x | x | x | 80 | multipole connector (please specify type in plain text) |

**(7) Compensating cable length AL in mm (AL 500 ... 500000 mm)**

|   |   |   |      |   |
|---|---|---|------|---|
| x | x | x | 2500 | 2500 mm                                     |
| x | x | x | ...  | please specify in plain text (500 mm steps) |

**(8) Extra codes**

|   |   |   |     |   |
|---|---|---|-----|---|
| x | x |   | 000 | no extra code                                     |
| x | x | x | 309 | uninsulated assembly (thermocouple welded to tip) |
| x |   | x | 315 | cable protector: coil                             |
| x |   |   | 316 | cable protector: tube                             |

Order code  (1) -  (2) -  (3) -  (4) -  (5) -  (6) -  (7) /  (8) , ...<sup>1</sup>  
 Order example 901150/10 - 848 - 1042 - 6 - 100 - 11 - 2500 / 000

**Stock versions**

| (1)       | (2)   | (3)    | (4) | (5)  | (6)  | (7)    | (8)   | Part no. |
|-----------|-------|--------|-----|------|------|--------|-------|----------|
| 901150/10 | - 848 | - 1042 | - 6 | - 50 | - 11 | - 2500 | / 315 | 00055455 |
| 901150/20 | - 840 | - 1042 | - 6 | - 60 | - 11 | - 2500 | / 000 | 00055448 |

<sup>1</sup> List extra codes in sequence, separated by commas.