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Push-in thermocouples with terminal head Form A

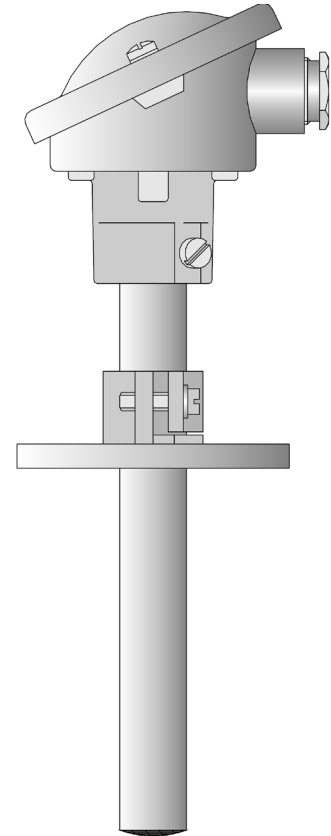
- for temperatures from -200 to +1600°C
- with protection tubes in different materials
- as single or twin thermocouple
- available with transmitter

Push-in thermocouples are the preferred choice for measuring temperatures in liquids and gases. Applications include heating installations, ovens, furnaces and plant engineering.

Terminal head Form A is suitable for ambient temperatures up to +100°C. The support tube is made from steel. When using a backing flange (see Data Sheet 90.9725), the mounting location can be sealed against 1bar max.

Protection tubes in different ceramic materials, and in heat-resistant steel, protect the measuring insert from chemical effects and mechanical damage. The choice of the appropriate protection tube material depends on the site conditions.

The measuring insert is fitted with thermocouples according to Class 2 of EN 60 584 and DIN 43 710 respectively. Versions with two thermocouples can also be supplied.



Technical data

Terminal head

Form A DIN 43 729, aluminium die-casting, M 20x1.5; IP54, ambient temperature -40 to +100°C
Caution: reduced ambient temperature when using head-mounted transmitters, Data Sheet 70.7010

Process connection

screwed pipe joint 1"
stop flange 22mm dia. to DIN 43 734
stop flange 32mm dia. to DIN 43 734

Protection tube

steel 1.4749, 22mm dia., operating temperature up to +1150°C (seamless drawn)
steel 1.4841, 22mm dia., operating temperature up to +1150°C (seamless drawn)
ceramic KER 610, 15mm and 24mm dia., operating temperature up to +1300°C
ceramic KER 710, 15mm and 24mm dia., operating temperature up to +1600°C

Measuring insert

insulated assembly:
1 x Fe-Con J, EN 60 584, Cl. 2, operating temperature -200 to +600°C
1 x Fe-Con L, DIN 43 710, Cl. 2, operating temperature -200 to +600°C
1 x NiCr-Ni K, EN 60 584, Cl. 2, operating temperature -200 to +1200°C
1 x Pt10Rh-Pt S, EN 60 584, Cl. 2, operating temperature 0 to 1300°C
1 x Pt30Rh-Pt6Rh B, EN 60 584, Cl. 2, operating temperature 600 to 1600°C
2 x Fe-Con J, EN 60 584, Cl. 2, operating temperature -200 to +600°C
2 x Fe-Con L, DIN 43 710, Cl. 2, operating temperature -200 to +600°C
2 x NiCr-Ni K, EN 60 584, Cl. 2, operating temperature -200 to +1200°C
2 x Pt10Rh-Pt S, EN 60 584, Cl. 2, operating temperature 0 to 1300°C
2 x Pt30Rh-Pt6Rh B, EN 60 584, Cl. 2, operating temperature 600 to 1600°C

Transmitter

programmable transmitter, output 4 - 20mA/20 - 4mA,
Data Sheet 70.7010

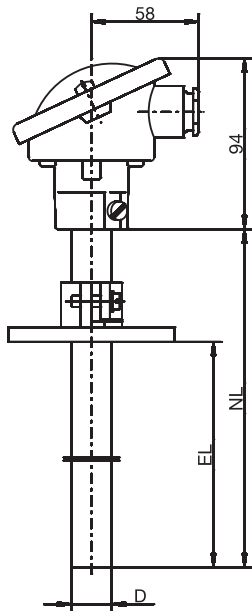
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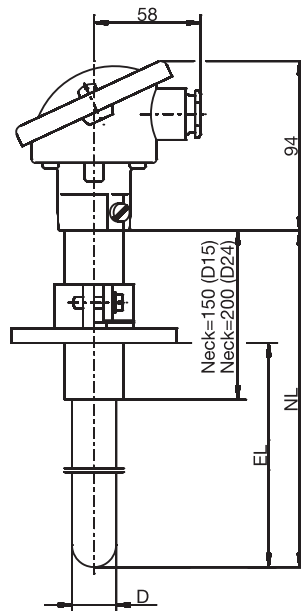
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Dimensions



Type 901101/10



Type 901101/20

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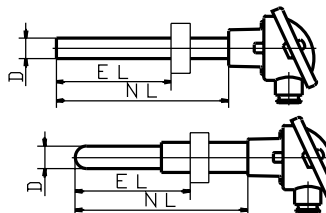


Order details: Push-in thermocouples with terminal head Form A

(1) Basic version

901101/10 Push-in thermocouple with continuous protection tube in heat-resistant steel

901101/20 Push-in thermocouple with stepped ceramic protection tube



(2) Measuring insert / operating temperature in °C

| | | |
|---|------|---|
| x | 1040 | 1 x Fe-Con J, operating temperature -200 to +600°C |
| x | 1042 | 1 x Fe-Con L, operating temperature -200 to +600°C |
| x | 1043 | 1 x NiCr-Ni K, operating temperature -200 to +1200°C |
| x | 1044 | 1 x Pt 10 Rh-Pt S, operating temperature 0 to 1300°C |
| x | 1046 | 1 x Pt 30 Rh-Pt 6 Rh B, operating temperature 600 to 1600°C |
| x | 2040 | 2 x Fe-Con J, operating temperature -200 to +600°C |
| x | 2042 | 2 x Fe-Con L, operating temperature -200 to +600°C |
| x | 2043 | 2 x NiCr-Ni K, operating temperature -200 to +1200°C |
| x | 2044 | 2 x Pt 10 Rh-Pt S, operating temperature 0 to 1300°C |
| x | 2046 | 2 x Pt 30 Rh-Pt 6 Rh B, operating temperature 600 to 1600°C |

(3) Protection tube diameter D in mm

| | | |
|---|----|-------------------------------|
| x | 15 | 15mm (support tube 22mm dia.) |
| x | 22 | 22mm |
| x | 24 | 24mm (support tube 32mm dia.) |

(4) Nominal length NL in mm (180 ≤ NL ≤ 1400)

| | | | |
|---|---|------|--|
| x | x | 500 | 500mm, fitting length (EL) 100 - 460mm |
| x | x | 710 | 710mm, fitting length (EL) 100 - 670mm |
| x | x | 1000 | 1000mm, fitting length (EL) 100 - 960mm |
| x | x | 1400 | 1400mm, fitting length (EL) 100 - 1360mm |
| x | x | ... | please specify in plain text (100mm steps) |

(5) Process connection

| | | | |
|---|---|-----|---|
| x | x | 000 | no process connection |
| x | | 256 | screwed pipe joint 1" (only for 22mm dia.), steel |
| x | x | 669 | stop flange D 22mm, DIN 43 734 |
| x | | 671 | stop flange D 32mm, DIN 43 734 |

(6) Protection tube material

| | | | |
|---|---|----|--|
| x | | 27 | steel X 18 CrN 28 Mat. Ref. 1.4749 (operating temp. up to +1150°C) |
| x | | 28 | steel X 15 CrNiSi 25 20 Mat. Ref. 1.4841 (operating temp. up to +1150°C) |
| x | x | 93 | ceramic KER 610 (operating temperature up to +1300°C) |
| x | | 94 | ceramic KER 710 (operating temperature up to +1600°C) |

(7) Extra codes

| | | | |
|---|---|-----|--|
| x | x | 000 | no extra code |
| x | x | 331 | 1 x programmable transmitter, output 4 - 20mA/20 - 4mA ¹ , Data Sheet 70.7010 |

Order code (1) (2) (3) (4) (5) (6) (7)
 - - - - - /
Order example 901101/10 - 1042 - 22 - 710 - 669 - 27 / 000

1. Please specify range and output signal in plain text.

Stock versions

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | Sales No. |
|-----------|------|-----|------|-----|-----|-----|-------------|
| 901101/10 | 1043 | 22 | 500 | 669 | 27 | 000 | 90/00054836 |
| 901101/10 | 1043 | 22 | 710 | 669 | 27 | 000 | 90/00054837 |
| 901101/10 | 1043 | 22 | 1000 | 669 | 27 | 000 | 90/00054838 |
| 901101/10 | 2043 | 22 | 710 | 669 | 27 | 000 | 90/00054842 |
| 901101/20 | 1043 | 15 | 500 | 669 | 93 | 000 | 90/00054846 |