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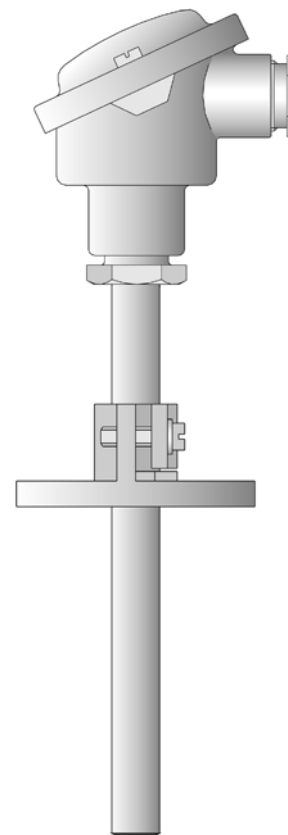
## Push-in resistance thermometers with terminal head Form B

- for temperatures from -50 to +600°C
- with replaceable measuring insert
- as single or twin resistance thermometer
- terminal head Form B, BUZ, BUZH, BBK
- available with transmitter

Push-in resistance thermometers are preferred for measuring temperatures in liquids and gases. Applications include HVAC and refrigeration, heating installations, ovens, furnaces and plant engineering, as well as process technology.

The terminal head is suitable for ambient temperatures up to +100°C. Terminal heads Form BUZ, BUZH and BBK are available in addition to the standard Form B.

The measuring insert is normally fitted with a Pt100 temperature sensor to EN 60 751, Class B in 2-wire circuit. Versions with Pt500 or Pt1000 are also available. There is a choice of 3-wire and 4-wire circuit connections. A transmitter can optionally be integrated into the terminal head.



## Technical data

### Terminal head

Form B DIN 43 729, aluminium die-casting M 20x1.5; IP54, ambient temperature -40 to +100°C

Form BUZ, aluminium die-casting M 20x1.5; IP65, ambient temperature -40 to +100°C

Form BUZH, aluminium die-casting 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 when using transmitters (see Data Sheets 95.6530/95.6550)

### Process connection

plate flange 9mm and 11mm dia., galvanized steel

stop flange 15mm dia., DIN 43 734, cast iron

screwed pipe joint 12mm dia., 15mm dia., stainless steel

### Protection tube

stainless steel, 1.4571, 9mm, 11mm and 15mm dia.

### Measuring insert

replaceable, Pt100 temperature sensor EN 60 751, Cl. B, 2-wire circuit

### Transmitter

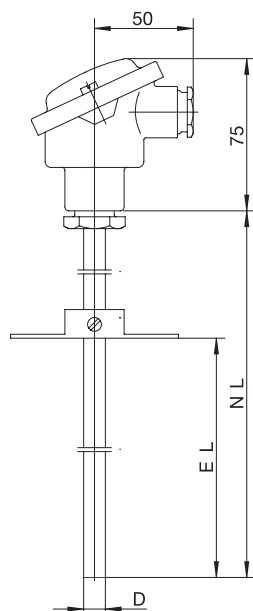
analog transmitter, output 4 - 20mA, see Data Sheet 95.6530

analog transmitter, output 0 - 10V, see Data Sheet 95.6530

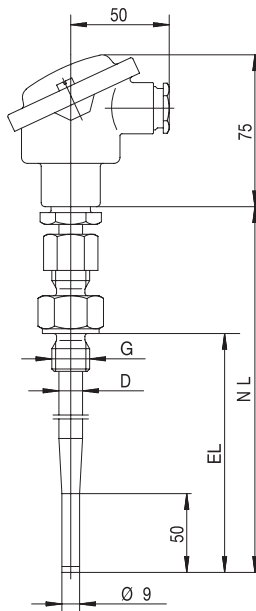
programmable transmitter, output 4- 20mA/20 - 4mA, see Data Sheet 95.6550



## Dimensions



**Type 902102/10**



**Type 902102/11**

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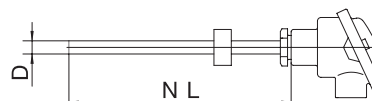


## Order details: Push-in resistance thermometers with terminal head Form B

### (1) Basic version

902102/10

Push-in resistance thermometer with  
continuous protection tube



### (2) Operating temperature in °C

|   |     |                          |
|---|-----|--------------------------|
| x | 150 | -200 to +600°C           |
| x | 402 | -50 to +400°C (standard) |
| x | 415 | -50 to +600°C            |

### (3) Measuring insert

|   |      |                             |
|---|------|-----------------------------|
| x | 1001 | 1 x Pt100 in 3-wire circuit |
| x | 1003 | 1 x Pt100 in 2-wire circuit |
| x | 1011 | 1 x Pt100 in 4-wire circuit |
| x | 2001 | 2 x Pt100 in 3-wire circuit |
| x | 2003 | 2 x Pt100 in 2-wire circuit |

### (4) Tolerance class to EN 60 751

|   |   |                    |
|---|---|--------------------|
| x | 1 | Class B (standard) |
| x | 2 | Class A            |

### (5) Protection tube diameter D in mm

|   |    |      |
|---|----|------|
| x | 9  | 9mm  |
| x | 11 | 11mm |
| x | 15 | 15mm |

### (6) Nominal length NL in mm ( $100 \leq NL \leq 1000$ , $NL \leq 700$ for type 902102/11)

|   |      |                                           |
|---|------|-------------------------------------------|
| x | 180  | 180mm, fitting length (EL) 100 - 140mm    |
| x | 270  | 270mm, fitting length (EL) 100 - 230mm    |
| x | 290  | 290mm, fitting length (EL) 100 - 250mm    |
| x | 350  | 350mm, fitting length (EL) 100 - 310mm    |
| x | 410  | 410mm, fitting length (EL) 100 - 370mm    |
| x | 420  | 420mm, fitting length (EL) 100 - 400mm    |
| x | 500  | 500mm, fitting length (EL) 100 - 460mm    |
| x | 710  | 710mm, fitting length (EL) 100 - 670mm    |
| x | 1000 | 1000mm, fitting length (EL) 100 - 960mm   |
| x | ...  | please specify in plain text (50mm steps) |

### (7) Process connection

|   |     |                                              |
|---|-----|----------------------------------------------|
| x | 000 | no process connection                        |
| x | 254 | screwed pipe joint 1/2" (only for 15mm dia.) |
| x | 663 | plate flange for 9mm dia.                    |
| x | 665 | plate flange for 11mm dia.                   |
| x | 668 | stop flange 15mm dia., DIN 43 734            |

### (8) Extra codes

|   |     |                                                                                              |
|---|-----|----------------------------------------------------------------------------------------------|
| x | 000 | no extra code                                                                                |
| x | 320 | terminal head Form BUZ                                                                       |
| x | 321 | terminal head Form BUZH                                                                      |
| x | 322 | terminal head Form BBK                                                                       |
| x | 330 | 1 x analog transmitter, output 4 - 20mA <sup>2</sup> , see Data Sheet 95.6530                |
| x | 331 | 1 x programmable transmitter, output 4 - 20mA/20 - 4mA <sup>3</sup> , see Data Sheet 95.6550 |
| x | 333 | 1 x analog transmitter, output 0 - 10V <sup>2</sup> , see Data Sheet 95.6530                 |
| x | 334 | 2 x analog transmitter, output 4 - 20mA <sup>2</sup> , see Data Sheet 95.6530                |
| x | 335 | 2 x programmable transmitter, output 4 - 20mA/20 - 4mA <sup>3</sup> , see Data Sheet 95.6550 |
| x | 337 | 2 x analog transmitter, output 0 - 10V <sup>2</sup> , see Data Sheet 95.6530                 |

Order code      (1)      (2)      (3)      (4)      (5)      (6)      (7)      (8)      ,...

Order example      902102/10      -      402      -      1001      -      1      -      9      -      410      -      663      /      000<sup>1</sup>

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

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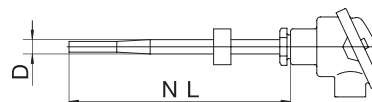
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## Order details: Push-in resistance thermometers with terminal head Form B

### (1) Basic version

902102/11 Push-in resistance thermometer with stepped protection tube



### (2) Operating temperature in °C

|   |     |                          |
|---|-----|--------------------------|
| x | 150 | -200 to +600°C           |
| x | 402 | -50 to +400°C (standard) |
| x | 415 | -50 to +600°C            |

### (3) Measuring insert

|   |      |                             |
|---|------|-----------------------------|
| x | 1001 | 1 x Pt100 in 3-wire circuit |
| x | 1003 | 1 x Pt100 in 2-wire circuit |
| x | 1011 | 1 x Pt100 in 4-wire circuit |
| x | 2001 | 2 x Pt100 in 3-wire circuit |
| x | 2003 | 2 x Pt100 in 2-wire circuit |

### (4) Tolerance class to EN 60 751

|   |   |                    |
|---|---|--------------------|
| x | 1 | Class B (standard) |
| x | 2 | Class A            |

### (5) Protection tube diameter D in mm

|   |    |                          |
|---|----|--------------------------|
| x | 12 | 12mm stepped down to 9mm |
|---|----|--------------------------|

### (6) Nominal length NL in mm (100 ≤ NL ≤ 700)

|   |     |                                           |
|---|-----|-------------------------------------------|
| x | 180 | 180mm, fitting length (EL) 100 - 140mm    |
| x | 270 | 270mm, fitting length (EL) 100 - 230mm    |
| x | 290 | 290mm, fitting length (EL) 100 - 250mm    |
| x | 350 | 350mm, fitting length (EL) 100 - 310mm    |
| x | 410 | 410mm, fitting length (EL) 100 - 370mm    |
| x | 500 | 500mm, fitting length (EL) 100 - 460mm    |
| x | ... | please specify in plain text (50mm steps) |

### (7) Process connection

|   |     |                         |
|---|-----|-------------------------|
| x | 000 | no process connection   |
| x | 254 | screwed pipe joint 1/2" |

### (8) Extra codes

|   |     |                                                                                              |
|---|-----|----------------------------------------------------------------------------------------------|
| x | 000 | no extra code                                                                                |
| x | 320 | terminal head Form BUZ                                                                       |
| x | 321 | terminal head Form BUZH                                                                      |
| x | 322 | terminal head Form BBK                                                                       |
| x | 330 | 1 x analog transmitter, output 4 - 20mA <sup>2</sup> , see Data Sheet 95.6530                |
| x | 331 | 1 x programmable transmitter, output 4 - 20mA/20 - 4mA <sup>3</sup> , see Data Sheet 95.6550 |
| x | 333 | 1 x analog transmitter, output 0 - 10V <sup>2</sup> , see Data Sheet 95.6530                 |
| x | 334 | 2 x analog transmitter, output 4 - 20mA <sup>2</sup> , see Data Sheet 95.6530                |
| x | 335 | 2 x programmable transmitter, output 4 - 20mA/20 - 4mA <sup>3</sup> , see Data Sheet 95.6550 |
| x | 337 | 2 x analog transmitter, output 0 - 10V <sup>2</sup> , see Data Sheet 95.6530                 |

Order code

(1) - (2) - (3) - (4) - (5) - (6) - (7) / (8), ...

Order example

902102/11 - 402 - 1001 - 1 - 12 - 410 - 000 / 000<sup>1</sup>

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

Note: Analog transmitter, see Data Sheet 95.6530

Programmable transmitter, see Data Sheet 95.6550

## Stock versions

| (1)       | (2) | (3)  | (4) | (5) | (6) | (7) | (8) | Sales No.   |
|-----------|-----|------|-----|-----|-----|-----|-----|-------------|
| 902102/10 | 415 | 1003 | 1   | 15  | 500 | 668 | 000 | 90/00055514 |
| 902102/10 | 402 | 1003 | 1   | 11  | 180 | 665 | 000 | 90/00055681 |
| 902102/10 | 402 | 1003 | 1   | 11  | 270 | 665 | 000 | 90/00055682 |