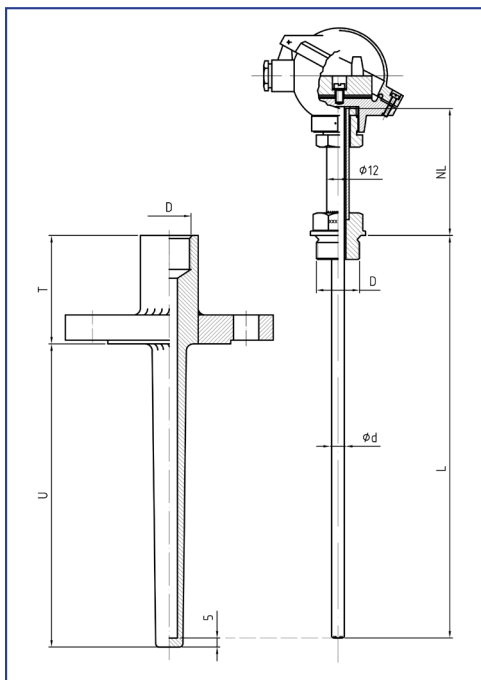


# TOP-PKG-158

## Resistance Thermometer Pt100 for high pressure application



Resistance thermometer type TOP-PKG-158 is a sensing device for temperature measurement of process gases and liquids in cases with high pressure, temperature fluctuation and harmful medium appears. Thermometer consists of spring loaded replaceable sensor insert type WP-OP-01-PS with 1 or 2 transmitters in head connection. Flanged, welded and screwed thermowell models are available.

| Type              | Execution                                        |
|-------------------|--------------------------------------------------|
| TOP-PKG-158       | Basic - acc to catalog card                      |
| TOP-PKG-158/ExiM1 | Intrinsic safe for mining purposes – acc to ATEX |
| TOP-PKG-158/Exi   | Intrinsic safe – acc to ATEX                     |
| TOP-PKG-158/Exe   | Increased safety – acc to ATEX                   |

## Technical specification

| RTD type                | Version                      | Characteristic | Measuring range<br>(standard/*shockproof) | Accuracy<br>class | Max. sensor<br>current | Lead wire config. |
|-------------------------|------------------------------|----------------|-------------------------------------------|-------------------|------------------------|-------------------|
| 1xPt100<br>/<br>2xPt100 | standard<br>/<br>*shockproof | acc. EN-60751  | -200°C..+600°C / *(-70°C..+500°C)         | B                 | 8 mA                   | 2, 3, 4 wire      |
|                         |                              |                | -100°C..+450°C / *(-50°C..+300°C)         | A                 | 5 mA                   | 3, 4 wire         |
|                         |                              |                | -50°C..+250°C / *(0°C..+150°C)            | 1/3B (AA)         | 3 mA                   |                   |

| Sheathed protection tube<br>diam. d, d <sub>2</sub> /d <sub>1</sub> [mm] | Material<br>acc. DIN/AISI | Length L [mm] | Process connection thread D                                           |
|--------------------------------------------------------------------------|---------------------------|---------------|-----------------------------------------------------------------------|
| ø3, ø4, ø6/5, ø8/6                                                       | 1.4571/316Ti              | on request    | on request<br>(e.g. M20x1,5, M24x1,5, G1/2", G3/4", 1/2"NPT, 3/4"NPT) |

| Extension tube diam. d | Material<br>acc. DIN/AISI | Max operating<br>temp. | Connection head                      | Transmitter |
|------------------------|---------------------------|------------------------|--------------------------------------|-------------|
| ø12                    | 1.4571 / 316Ti            | +700°C                 | on request<br>(e.g. NA, DANA, DANAW) | on request  |

| Additional thermowell                                                                       |
|---------------------------------------------------------------------------------------------|
| on request, acc. to catalog card –<br><i>THERMOWELLS for thermometers and thermocouples</i> |

Non-standard models available.

## Ordering Information

|              |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TOP- PKG-158 | A | B | C | D | E | F | G | H | I | J | K | L | M |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|

| A Execution |                                                            |
|-------------|------------------------------------------------------------|
| U           | with non-replaceable insert                                |
| PS          | with replaceable insert                                    |
| PS/ExiM1    | Intrinsic safe for mining purposes with replaceable insert |
| PS/Exi      | Intrinsic safe with replaceable insert                     |
| PS/Exe      | Increased safety with replaceable insert                   |

| B Resistor |              |
|------------|--------------|
| 1xPt100    | Single Pt100 |
| 2xPt100    | Double Pt100 |

| C Class |           |
|---------|-----------|
| B       | B         |
| A       | A         |
| 1/3B    | 1/3B (AA) |

| D Lead wire configuration |        |
|---------------------------|--------|
| 2p                        | 2-wire |
| 3p                        | 3-wire |
| 4p                        | 4-wire |

| E Sheathed insert diameter $d_2$ ( $d_2/d_1$ -option) |                             |
|-------------------------------------------------------|-----------------------------|
| 3                                                     | $d_2 = 3$ mm                |
| 4                                                     | $d_2 = 4$ mm                |
| 6/5                                                   | $d_2 = 6$ mm ; $d_1 = 5$ mm |
| 8/6                                                   | $d_2 = 8$ mm ; $d_1 = 6$ mm |

| F Process connection thread D |                        |
|-------------------------------|------------------------|
|                               | specify type of thread |

| G Length L |                 |
|------------|-----------------|
|            | specify in [mm] |

| H Neck tube length NL |                 |
|-----------------------|-----------------|
|                       | specify in [mm] |

| I Connection head |                   |
|-------------------|-------------------|
|                   | specify head type |

| J Operating temperature |               |
|-------------------------|---------------|
|                         | specify in °C |

| K Transmitter |                                    |
|---------------|------------------------------------|
|               | specify type and temp. range in °C |

| L Version |                                       |
|-----------|---------------------------------------|
| Z         | Standard (ceramic wire wound element) |
| W         | Shockproof (thin-film element)        |

| M Additional thermowell |                                                          |
|-------------------------|----------------------------------------------------------|
|                         | on request, acc. to catalog card –<br><b>THERMOWELLS</b> |

### Ordering Example

#### TOP-PKG-158-PS-1xPt100-A-3p-6/5-M20x1,5-400-145-NA-Z

stands for: Resistance thermometer, with replaceable insert, with resistor 1xPt100 class A, configuration 3-wire, sleeve diam.  $d_2 = 6$  mm and sheath diam.  $d_1 = 5$  mm, thread M20x1,5, insert length  $L = 400$  mm, neck tube length  $NL = 145$  mm, connection head type NA, w/o transmitter, standard sensor version (ceramic wire wound element), w/o additional thermowell.