

Flameproof replaceable measuring inserts for temperature sensors WP-Exd, WJ-Exd, WK-Exd

Technical description



| Measuring range / sensing element | | |
|-----------------------------------|--------------|-------------|
| (-50 ÷ 500) °C | Pt100 | class B; ø3 |
| (-200 ÷ 600) °C | Pt100 | class B; ø6 |
| (-40 ÷ 700) °C | J | class 2 |
| (-40 ÷ 1200) °C | K, N | class 2 |
| (-40 ÷ 350) °C | T | class 2 |

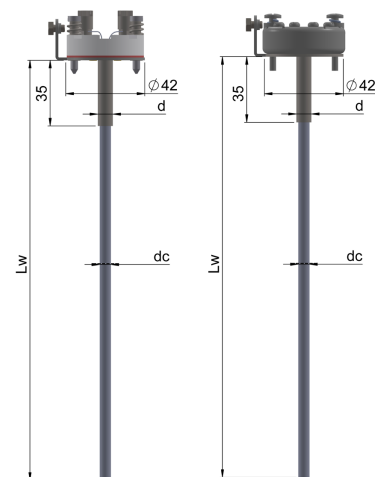
| Max. operating temperature | | | | |
|---|--------|---------|---------|---------|
| mineral insulated diameters d_c [mm]: | ø3 | ø4,5 | ø6 | ø8 |
| thermocouple T mat. 1.4541: | 350 °C | – | 350 °C | – |
| thermocouple J mat. 1.4541: | 450 °C | 550 °C | 700 °C | – |
| thermocouple K mat. INCONEL600: | 900 °C | 1000 °C | 1200 °C | 1200 °C |
| thermocouple N mat. INCONEL600: | 900 °C | – | 1200 °C | – |
| resistor Pt100 mat. 1.4541: | 500 °C | – | 600 °C | – |
| length L [mm]: acc. to requirements (min. 100 mm) | | | | |

Construction version
 – mineral insulated design
 – for flameproof temperature sensors (Exd) designed by Limatherm Sensor Sp. z o.o.

Options
 – Pt500, Pt1000
 – Pt100: class A (-100 ÷ 450) °C, class AA (-50 ÷ 150) °C;
 TC: class 1
 – measuring junction types – p. 13

Additional accessories
 – temperature transmitters – p. 225+241

| Diameter d_c [mm] | Diameter d [mm] | |
|---------------------|-----------------|-------|
| ø3 | ø6 | +0,06 |
| | | -0,03 |
| ø4,5 | ø6 | +0,06 |
| | | -0,03 |
| ø6 | ø8 | +0,06 |
| | | -0,02 |
| ø8 | ø10 | +0,06 |
| | | -0,03 |



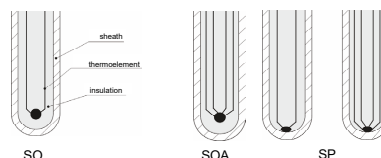
Resistors tolerance acc. to PN-EN 60751

| Class | Wire wound resistor | |
|-------|---------------------|-----------------------------|
| | Range [°C] | Tolerance [°C] |
| AA | (-50+250) | $\pm(0,1+0,0017 \cdot t)$ |
| A | (-100+450) | $\pm(0,15+0,002 \cdot t)$ |
| B | (-196+600) | $\pm(0,3+0,005 \cdot t)$ |

Tolerance for thermocouples class acc to. PN-EN 60584

| Thermocouple | Class 1 | | Class 2 | |
|--------------------|-------------------------|------------------------------|---------------------------------|-------------------------------|
| | Range [°C] | Tolerance [°C] | Range [°C] | Tolerance [°C] |
| J Fe-CuNi | (-40+375) (375+750) | $\pm 1,5$ $\pm 0,004 t $ | (-40+333) (333+750) | $\pm 2,5$ $\pm 0,0075 t $ |
| K, Na NiCr-NiAl | (-40+375) (375+1000) | $\pm 1,5$ $\pm 0,004 t $ | from (-40+333) (333+1200) | $\pm 2,5$ $\pm 0,0075 t $ |

Types of measuring hot junction



Ordering code

| Measuring insert | ... | W | ... | ... | ... | ... | ... | ... | ... | ... | Exd |
|--|--------------|---|-----|-----|-----|-------|-----|-----|------------------|----------|---------------|
| Single without transmitter | no sign | | | | | | | | | | |
| Double without transmitter | 2 | | | | | | | | | | |
| With transmitter | AP | | | | | | | | | | |
| Resistor Pt100; Pt500; Pt1000 | P1; P5; P10 | | | | | | | | | | |
| Thermocouple Fe-CuNi; NiCr-NiAl | J; K | | | | | | | | | | |
| Thermocouple Cu-CuNi; NiCrSi-NiSi | T; N | | | | | | | | | | |
| Outer diameter of the measuring insert d_c | 3; 4,5; 6; 8 | | | | | | | | | | |
| Insert length L [mm] | 1000* | | | | | | | | | | |
| Resistor class | | | | | | A, B* | | | | | |
| Thermocouple class | | | | | | 1, 2 | | | | | |
| Measuring circuit for RTD | | | | | | | | | 3, 4 | | |
| Hot junction type for TC | | | | | | | | | SO, SP, SOA, SOB | | |
| Type of transmitter | | | | | | | | | | TxBLOCK* | |
| Setting of transmitter temperature | | | | | | | | | | | (0 ÷ 100) °C* |
| For temperature sensors with flameproof sheath | | | | | | | | | | | |

* or others acc. to requirements

Ordering example

APWK-3-1000-1-SO-TxBLOCK-(0 ÷ 300)°C-Exd