

## Mineral insulated replaceable measuring inserts for temperature sensors **WM2P, WM2J, WM2K**

### Technical description

Measuring range / sensing element		
$(-50 \div 500) ^\circ\text{C}$	<b>Pt100</b>	class B; $\varnothing 3$
$(-200 \div 550) ^\circ\text{C}$	<b>Pt100</b>	class B; $\varnothing 6$
$(-40 \div 600) ^\circ\text{C}$	<b>J</b>	class 2
$(-40 \div 900) ^\circ\text{C}$	<b>K</b>	class 2; $\varnothing 3$
$(-40 \div 1200) ^\circ\text{C}$	<b>K</b>	class 2; $\varnothing 6$
Sheath		
– material: steel 1.4541 for WM2J, 1.4571 for WM2P		
– material: 2.4816 (Inconel 600) for WM2K		
– length $L_{w \min} = 100$ mm		
Options		
– Pt500, Pt1000, Ni100, Ni1000, N, T		
– 2-, 3-, 4-wire (for Pt100)		
– 2-wire (for 2xPt100)		
– measuring junction types – p. 13		
– Pt100: class A $(-100 \div 450) ^\circ\text{C}$ , class AA $(-50 \div 250) ^\circ\text{C}$ ; (for $\varnothing 6$ ) TC: class 1		
Additional accessories		
– temperature transmitters (only Pt100, 2-wire connection) – p. 237		
– compensation cables – p. 197		

#### Response time T05/T09

Sensor type	$\varnothing 9$	$\varnothing 11$
<b>Pt</b>	$\leq 33/\leq 95$	$\leq 40/\leq 120$
<b>J, K</b> insulated junction	$\leq 22/\leq 62$	$\leq 27/\leq 90$
<b>J, K</b> grounded junction	$\leq 3/\leq 8$	$\leq 6/\leq 15$

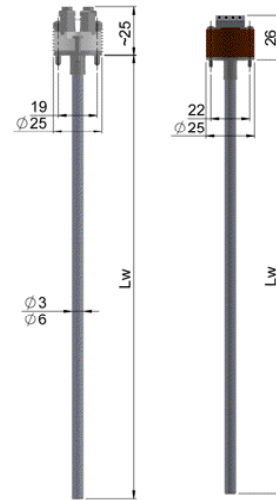
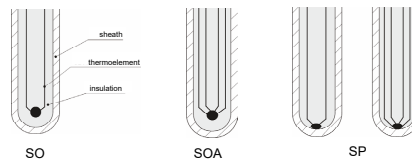
#### Resistors tolerance acc. to PN-EN 60751

Class	Wire wound resistor	
	Range [ $^\circ\text{C}$ ]	Tolerance [ $^\circ\text{C}$ ]
<b>AA</b>	$(-50 \div 250)$	$\pm(0,1+0,0017 \cdot  t )$
<b>A</b>	$(-100 \div 450)$	$\pm(0,15+0,002 \cdot  t )$
<b>B</b>	$(-196 \div 600)$	$\pm(0,3+0,005 \cdot  t )$

#### Tolerance for thermocouples class acc. to PN-EN 60584

Thermocouple	Class 1		Class 2	
	Range [ $^\circ\text{C}$ ]	Tolerance [ $^\circ\text{C}$ ]	Range [ $^\circ\text{C}$ ]	Tolerance [ $^\circ\text{C}$ ]
<b>J</b> Fe-CuNi	$(-40 \div 375)$ $(375 \div 750)$	$\pm 1,5$ $\pm 0,004  t $	$(-40 \div 333)$ $(333 \div 750)$	$\pm 2,5$ $\pm 0,0075  t $
<b>K</b> NiCr-NiAl	$(-40 \div 375)$ $(375 \div 1000)$	$\pm 1,5$ $\pm 0,004  t $	from $(-40 \div 333)$ $(333 \div 1200)$	$\pm 2,5$ $\pm 0,0075  t $

#### Types of measuring hot junction



### Ordering code

Measuring insert	...	WM2	...	/	...	-	...	-	...	-	...	-	...	-	...
Single		no sign													
Double		2													
With transmitter		AP													
Resistor Pt															P
Thermocouple Fe-CuNi															J
Thermocouple NiCr-NiAl															K
Thermowell diameter d [mm]															3, 6
Junction isolated from the sheath															SO
Double junction isolated from the sheath	dla														SOA
Grounded junction	TC														SP
Insert length $L_w$ [mm]															150*
Resistor class															A, B*
Thermocouple class															1, 2
Measuring circuit for RTD															2, 3, 4
Type of transmitter (only Pt100, 2-wire connection)															LTT-03J
Setting of transmitter temperature															$(0 \div 200) ^\circ\text{C}^*$

\* or others acc. to requirements

### Ordering example

APWM2P/6-400-B-2-LTT-03J-(0 ÷ 400)  $^\circ\text{C}$