



## PW Series



### 4-wire platinum sensor

For high-precision measurements



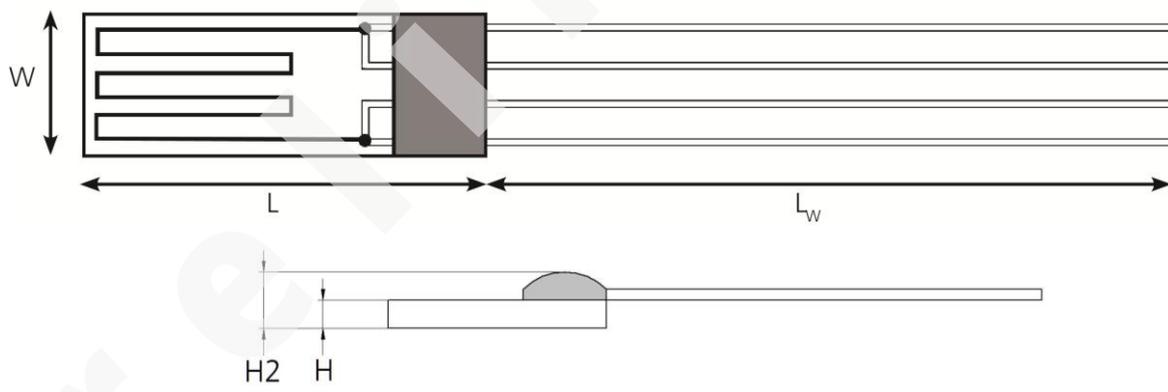
#### Benefits & characteristics

- 4-wire construction on chip
- 5x reduced hysteresis compared to standard platinum sensors <sup>1)</sup>
- Capable of measuring in class F0.15 up to +600°C
- Offset independent of extension point
- Very stable characteristics curve
- Excellent long-term stability

<sup>1)</sup> tested between -196 °C and +400 °C



#### Illustration <sup>2)</sup>



Dimension tolerances:

$W \pm 0.2 \text{ mm}$ ,  $L \pm 0.2 \text{ mm}$ ,  $H \pm 0.1 \text{ mm}$ ,  $H2 \pm 0.3 \text{ mm}$ ,  
 $L_w \text{ (up to 30 mm)} \pm 1 \text{ mm}$

<sup>2)</sup> for actual size see dimensions in order information



## Technical Data



Operating temperature range: -200 °C to +600 °C



Nominal resistance:\*  
100 Ω at 0 °C  
1000 Ω at 0 °C



Characteristics curve:\* 3850 ppm/K



Long-term stability: < 0.04 % at 1000 h at maximal operating temperature



Tolerance class: \*

iST  
reference

IEC 60751 F0.15 A -200 °C to +600 °C



Connection:\* Pt-wire, Ø 0.2 mm (solderable, weldable, crimpable, brazeable)



Recommended applied current:<sup>3)</sup> 0.2 mA at 100 Ω

<sup>3)</sup>Self-heating must be considered

0.06 mA at 1000 Ω

\* Customer-specific alternatives available

## Order Information

Nominal Resistance	Size	Dimensions (L x W x H / H2; LW in mm)	Class*	Order code	Product name (secondary reference)	Wire length in mm	Special
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### 7W (Pt-wire, Ø 0.2 mm)

100 Ω	5018	5.0 x 1.8 x 0.45 / 0.8; 10.0	F0.15 (class A)	104330	PW0K1.5018.7W.A.0104	10	
1000 Ω	5018	5.0 x 1.8 x 0.45 / 0.8; 10.0	F0.15 (class A)	104331	PW1K0.5018.7W.A.010-4	10	

## Additional Documents

Application Note

Document name: ATP\_E



## Order Information

### Platinum Sensor - Secondary reference



#### Material

P = Platinum

#### TCR

= Pt 3850 ppm/K    G = Pt 3911 ppm/K  
 U = Pt 3750 ppm/K    W = Pt 3850 ppm/K (extended operating temperature range in class A)

#### Resistance in $\Omega$ at 0°C

#### Size in mm

#### Operating temperature range

1 = -50 °C to + 150 °C	6 = -200 °C to + 600 °C
2 = -50 °C to + 200 °C	7 = -200 °C to + 750 °C
3 = -200 °C to + 300 °C	8 = -200 °C to + 850 °C
4 = -200 °C to + 400 °C	10 = -70 °C to + 1000 °C

#### Connections

S = SIL	FK = Flat wire customer specific
I = Insulated wire	SW = Perpendicular wire
K = Extended wire	L = Insulated stranded wire
W = Wire	E = Enameled Cu-wire
FW = Flat wire	SE = Perpendicular enamelled CU-wire

#### Tolerance class

A = IEC 60751 F0.15	K = Customer-specific
B = IEC 60751 F0.3	P = Pair
C = IEC 60751 F0.6	G = Group
Y = IEC 60751 F0.1	

#### Wire length in mm

#### Special

T = Substrate thickness 0.25 mm	M = Metallized backside
D = Substrate thickness 0.38 mm	U = Inverted welding
R = Round housing	S = Special
W = Sintered powder	

P W 1K0. 5018. 7 W. A. 010-4



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