



# PW Series

## 4-wire platinum sensor

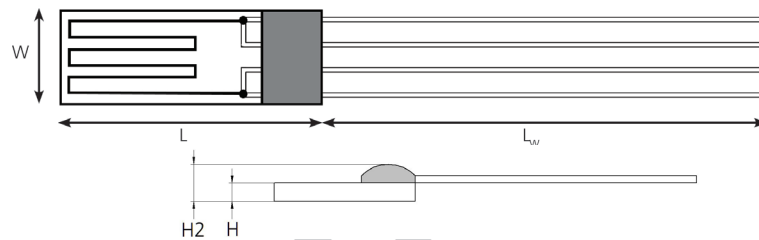
### For high-precision measurements

#### 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

#### 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 AG 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 0.06 mA at 1000 Ω

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

\* Customer-specific alternatives available



## Order Information - 7W (Pt-wire, Ø 0.2 mm)

Size      Dimensions      F0.15 (class A)  
(L x W x H / H2; L<sub>w</sub> in mm)

Nominal resistance: 100 Ω at 0 °C

5018    5.0 x 1.8 x 0.45 / 0.8; 10.0

PW0K1.5018.7W.A.010-4

Order code

104330

*Former order code*

310.01475

Nominal resistance: 1000 Ω at 0 °C

5018    5.0 x 1.8 x 0.45 / 0.8; 10.0

PW1K0.5018.7W.A.010-4

Order code

104331

*Former order code*

310.01476

## Additional Documents

Application Note:      Document name:  
ATP\_E

PRELIMINARY



# 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

#### Connection

S = SIL    FK = flat wire customer-specific  
I = insulated wire    SW = perpendicular wire  
K = customer-specific    L = insulate stranded wire  
W = wire    E = enameled Cu-wire  
FW = flat 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 (-x: number of wires)

#### 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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