



PW series

4-wire platinum sensor

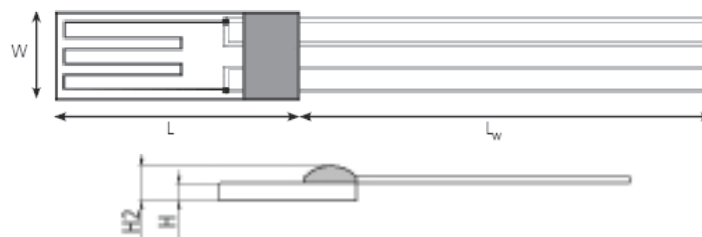
For high-precision measurements

Benefits & Characteristics

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

¹⁾ tested between -196 °C and +400 °C

Illustration²⁾



Dimension Tolerances: $W \pm 0.2$ mm, $L \pm 0.2$ mm, $H \pm 0.1$ mm, $H2 \pm 0.3$ mm, L_w (up to 30 mm) ± 1 mm

²⁾ 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:*	IEC 60751 F0.15		IST AG reference
	A	-200 °C to +600 °C	
Connection:*	Pt-wire, \varnothing 0.2 mm (solderable, weldable, crimpable, brazeable)		
Recommended applied current: ³⁾	0.2 mA at 100 Ω		
	0.06 mA at 1000 Ω		

³⁾ Self-heating must be considered

* Customer-specific alternatives available



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

Size	Dimensions (L x W x H / H2; L _w in mm)	F0.15 (class A)
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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
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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
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Order code

310.01476

Additional Documents

Application Note:	Document name: ATP_E
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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 Ω 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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