



PW Series



Platinum sensor with wires



For extended operating temperature range in class A



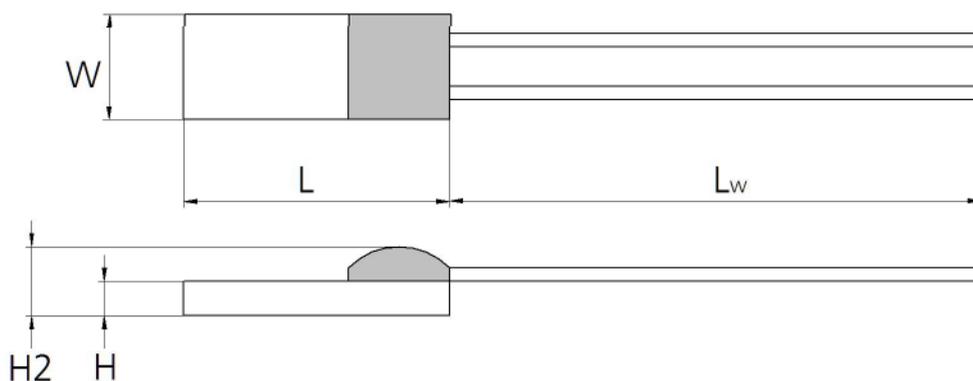
Benefits & characteristics



- Capable of measuring in class A up to +600 °C
- Increased long-term stability
- Alternative to wire-wound sensors
- Short-term applicable up to +750 °C
- Very stable characteristics curve
- Available with same dimensions as a wire-wound sensor
- Very low hysteresis
- Customer-specific sensor available upon request



Illustration ¹⁾



Dimension tolerances: $W \pm 0.2 \text{ mm}$, $L \pm 0.2 \text{ mm}$, $H \pm 0.1 \text{ mm}$, $H_2 \pm 0.3 \text{ mm}$,
 L_w (up to 30 mm) $\pm 1 \text{ mm}$

¹⁾ 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

500 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

IEC 60751 F0.3 B -200 °C to +600 °C

IEC 60751 F0.6 C -200 °C to +600 °C

IEC 60751 F0.1 Y -200 °C to +500 °C

1/5 IEC 60751 F0.3 K* -100 °C to +300 °C



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

Alternative wire construction:* Inverted wires

Recommended applied current: 0.2 mA at 100 Ω

1)Self-heating must be considered 0.09 mA at 500 Ω

0.06 mA at 1000 Ω

Other alternatives:* Housed in round ceramics (for dry environments only)
-see data sheet DTP_Round_Housing_E

Grouped and paired

* Customer-specific alternatives available



Order Information



Nominal Resistance	Size	Dimensions (L x W x H / H2; L _w in mm)	Class*	Order code	Product name (secondary reference)	Wire length in mm	Special
7W (Pt-wire, Ø 0.2 mm)							
100 Ω	216	2.4 x 1.4 x 0.45 / 0.8; 7.0	F0.1 (class Y)	101686	PW0K1.216.7W.Y.007	7	
100 Ω	216	2.4 x 1.4 x 0.45 / 0.8; 7.0	F0.15 (class A)	101700	PW0K1.216.7W.A.007	7	
100 Ω	216	2.4 x 1.4 x 0.45 / 0.8; 7.0	F0.3 (class B)	101701	PW0K1.216.7W.B.007	7	
500 Ω	216	2.4 x 1.4 x 0.45 / 0.8; 7.0	F0.1 (class Y)	101702	PW0K5.216.7W.Y.007	7	
500 Ω	216	2.4 x 1.4 x 0.45 / 0.8; 7.0	F0.15 (class A)	101703	PW0K5.216.7W.A.007	7	
500 Ω	216	2.4 x 1.4 x 0.45 / 0.8; 7.0	F0.3 (class B)	101704	PW0K5.216.7W.B.007	7	
1000 Ω	216	2.4 x 1.4 x 0.45 / 0.8; 7.0	F0.1 (class Y)	101716	PW1K0.216.7W.Y.007	7	
1000 Ω	216	2.4 x 1.4 x 0.45 / 0.8; 7.0	F0.15 (class A)	101720	PW1K0.216.7W.A.007	7	
1000 Ω	216	2.4 x 1.4 x 0.45 / 0.8; 7.0	F0.3 (class B)	101721	PW1K0.216.7W.B.007	7	

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 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

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 enameled 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. 216. 7 W. B. 007.



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