



PW Series



Platinum sensor with wires



For extended operating temperature range in class A

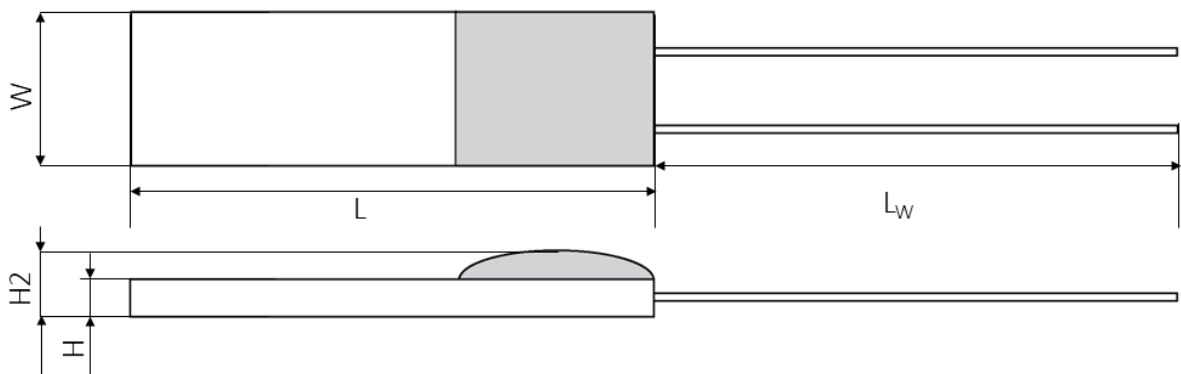


Benefits & characteristics

- 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⁾



¹⁾ for actual size see dimensions in order information

H = Substrate Height

H2 = Height

W = Width

L = Length

L_w = Wire length

Dimension tolerances:

W ±0.2 mm, L ±0.2 mm, H ±0.1 mm, H2 ±0.3 mm,

L_w (up to 30 mm) ±1 mm



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: ¹⁾	0.2 mA at 100 Ω		
	0.09 mA at 500 Ω		
	0.06 mA at 1000 Ω		
Other alternatives:*	Housed in round ceramics (for dry environments only)		
	▪ See the 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)	153521	PW0K1.216.7W.Y.007	7	ESD optimized
100 Ω	216	2.4 x 1.4 x 0.45 / 0.8; 7.0	F0.15 (class A)	153522	PW0K1.216.7W.A.007	7	ESD optimized
100 Ω	216	2.4 x 1.4 x 0.45 / 0.8; 7.0	F0.3 (class B)	153523	PW0K1.216.7W.B.007	7	ESD optimized
100 Ω	216	2.4 x 1.4 x 0.45 / 0.8; 7.0	1/5 F0.3 (class K)	153880	PW0K1.216.7W.B.007	7	ESD optimized
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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