



150 °C Series



Platinum temperature sensor with wires

For low temperatures

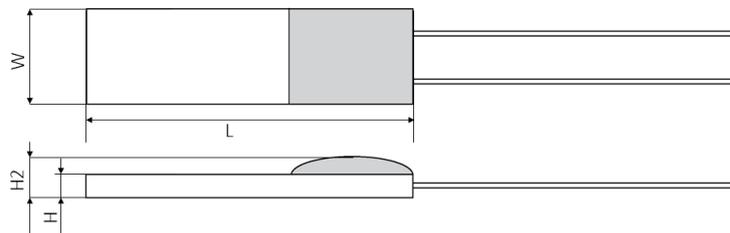


Benefits & characteristics

- Excellent long-term stability
- Low self-heating
- Fast response time
- Metallized backside available
- Customer-specific sensors available upon request



Illustration ¹⁾



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

¹⁾ for actual size see dimensions in order information



Technical data



Operating temperature range: -50 °C to +150 °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
(dependent on temperature range)

IEC 60751 F0.15 A

IEC 60751 F0.3 B

IEC 60751 F0.6 C

IEC 60751 F0.1 Y



Connection: * Enameled Cu-wire, Ø 0.2 mm

Alternative wire construction: *
Inverted wires
Extended wires

Recommended applied current: ¹⁾
1 mA at 100 Ω
0.5 mA at 500 Ω

¹⁾self-heating must be considered 0.3 mA at 1000 Ω

Other alternatives: *

- Metallized backside
- Housed in round ceramics (for dry environments only)
- Grouped and paired
- Substrate thickness
- Wire length
- Temperature range

* Customer-specific alternatives available



Order Information



Nominal Resistance at 0 °C	Size	Dimensions (L x W x H / H2 in mm) L ±0.2, W ±0.2, H ±0.1, H2 ±0.3 mm	Class*	Order code	Product name (secondary reference)	Wire length in mm	Special
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1E: Enameled Cu-wire Ø 0.2 mm

100 Ω	161	1.6 x 1.2 x 0.25 / 0.6	F0.15 (class A)	100748	P0K1.161.1E.B.200	200	
1000 Ω	161	1.6 x 1.2 x 0.25 / 0.6	F0.3 (class B)	150634	P1K0.161.1E.A.040	40	
1000 Ω	161	1.6 x 1.2 x 0.25 / 0.6	F0.3 (class B)	101010	P1K0.161.1E.B.020	20	
1000 Ω	202	2.2 x 2.0 x 0.65 / 1.3	F0.3 (class B)	101553	P1K0.202.1E.B.120	120	
100 Ω	232	2.3 x 2.0 x 0.65 / 1.3	F0.3 (class B)	101064	P0K1.232.1E.B.015.M		Metallized backside

1E: Enameled Cu-wire Ø 0.15 mm

100 Ω	308	3.0 x 0.8 x 0.25 / 0.6	F0.15 (class A)	101805	P0K1.308.1E.A.025	25	
100 Ω	308	3.0 x 0.8 x 0.25 / 0.6	F0.3 (class B)	100720	P0K1.308.1E.B.100	100	
1000 Ω	308	3.0 x 0.8 x 0.25 / 0.6	F0.15 (class A)	101324	P1K0.308.1E.A.025	25	
1000 Ω	308	3.0 x 0.8 x 0.25 / 0.6	F0.3 (class B)	101559	P1K0.308.1E.B.035	35	

*Alternative class for each product is available upon request

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

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 OK1. 232. 1 E. B. 010. M



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