150 °C Series

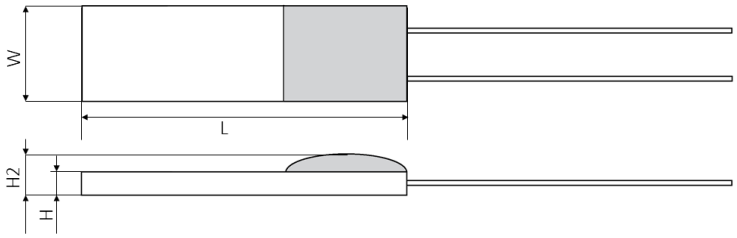
Platinum temperature sensor with wires

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 ±0.2 mm, L ±0.2 mm, H ±0.1 mm, H2 ±0.3 mm, LW (up to 30 mm) ±1 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: * (dependent on temperature range)		**iST reference**
	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)self-heating must be considered	1 mA at 100 Ω 0.5 mA at 500 Ω 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
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

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		0K1.	232.	1	E.	B.	010.	M

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