



200 °C series

Platinum sensor with wires

For low temperatures

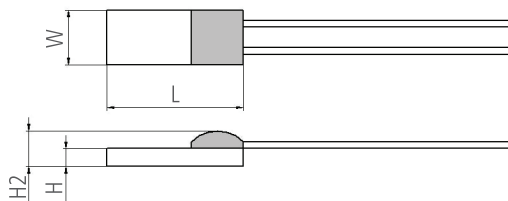


INNOVATIVE SENSOR TECHNOLOGY

Benefits & Characteristics

- Excellent long-term stability
- Low self-heating
- Long isolated wires
- Stranded wires available
- Fast response time
- Metalized backside available
- Customer-specific sensor available upon request

Illustration¹⁾



¹⁾ For actual size, see dimensions

Technical Data

Operating temperature range:	-50 °C to +200 °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 AG reference	
	IEC 60751 F0.15	A
	IEC 60751 F0.3	B
	IEC 60751 F0.6	C
	IEC 60751 F0.1	Y
Connection:*	Cu/Ag-single wire with PTFE (solderable, weldable, crimpable)	
	Cu/Ag-stranded wire with PTFE (solderable, weldable, crimpable)	
	Ag-wire, Ø 0.25 mm, metalized backside	
Alternative wire construction:*	Inverted wires	
	Extended wires	
Recommended applied current: ¹⁾	1 mA at 100 Ω	
	0.5 mA at 500 Ω	
	0.3 mA at 1000 Ω	

¹⁾ Self-heating must be considered



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Other alternatives:*

Metalized backside

Housed in round ceramics (for dry environments only)

Grouped and paired

Substrate thickness

* Customer-specific alternatives available

Order Information - 2I (Cu/Ag-wire, AWG30, PTFE-insulated)

Size	Dimensions (L x W x H / H2 in mm) L ±0.2 mm, W ±0.2 mm, H ±0.1 mm, H2 ±0.3 mm	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
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Nominal resistance: 100 Ω at 0 °C

161	1.6 x 1.2 x 0.25 / 0.6	Upon request	Upon request	P0K1.161.2I.B.050
Order code				010.02677
232	2.3 x 2 x 0.65 / 1.3	Upon request	P0K1.232.2I.A.030	P0K1.232.2I.B.030
Order code			010.02857	010.02071
232	2.3 x 2 x 0.65 / 1.3	Upon request	P0K1.232.2I.A.050	P0K1.232.2I.B.050
Order code			010.02487	010.00678
420	4 x 2 x 0.65 / 1.3	Upon request	Upon request	P0K1.420.2I.B.015
Order code				010.03022
516	5 x 1.6 x 0.65 / 1.3	Upon request	Upon request	P0K1.516.2I.B.030
Order code				010.00508
520	5 x 2 x 0.65 / 1.3	Upon request	Upon request	P0K1.520.2I.B.100
Order code				010.00110
538	5 x 3.8 x 0.65 / 1.3	Upon request	Upon request	P0K1.538.2I.B.060
Order code				010.00527
102	10 x 2 x 0.65 / 1.3	Upon request	Upon request	P0K1.102.2I.B.050
Order code				010.01710

With substrate thickness 0.4 mm (D)

516	5 x 1.6 x 0.4 / 1.05	Upon request	Upon request	P0K1.516.2I.B.1000.D
Order code				010.00987

Nominal resistance: 500 Ω at 0 °C

516	5 x 1.6 x 0.65 / 1.3	Upon request	Upon request	P0K5.516.2I.B.080
Order code				010.02278
538	5 x 3.8 x 0.65 / 1.3	Upon request	Upon request	P0K5.538.2I.B.035
Order code				010.00200
102	10 x 2 x 0.65 / 1.3	Upon request	Upon request	P0K5.102.2I.B.070
Order code				010.00210



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Size	Dimensions (L x W x H / H2 in mm) L ±0.2 mm, W ±0.2 mm, H ±0.1 mm, H2 ±0.3 mm	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
Nominal resistance: 1000 Ω at 0 °C				
161	1.6 x 1.2 x 0.25 / 0.6	Upon request	Upon request	P1K0.161.2I.B.150
Order code				010.02674
161	1.6 x 1.2 x 0.25 / 0.6	Upon request	P1K0.161.2I.A.750	P1K0.161.2I.B.750
Order code			010.02833	010.02226
202	1.8 x 2.0 x 1	Upon request	Upon request	P1K0.202.2I.B.100
Order code				010.03229
202	1.8 x 2.0 x 1	Upon request	P1K1.202.2I.A.150	P1K0.202.2I.B.150
Order code			010.03162	010.06163
232	2.3 x 2 x 0.65 / 1.3	Upon request	Upon request	P1K0.232.2I.B.015
Order code				010.01691
232	2.3 x 2 x 0.65 / 1.3	P1K0.232.2I.Y.150	P1K0.232.2I.A.050	P1K0.232.2I.B.050
Order code		010.02475	010.02712	010.02225
232	2.3 x 2 x 0.65 / 1.3	Upon request	Upon request	P1K0.232.2I.B.080
Order code				010.02888
520	5 x 2 x 0.65 / 1.3	Upon request	P1K0.520.2I.A.050	P1K0.520.2I.B.050
Order code			010.00566	010.00565
102	10 x 2 x 0.65 / 1.3	Upon request	Upon request	P1K0.102.2I.B.045
Order code				010.00699
102	10 x 2 x 0.65 / 1.3	Upon request	Upon request	P1K0.102.2I.B.120
Order code				010.02810

Order Information - 2L (Cu/Ag-stranded wire, AWG28/7, PTFE-insulated)

Size	Dimensions (L x W x H / H2 in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
Nominal resistance: 100 Ω at 0 °C				
202	2 x 2 x 0.65 / 1.3	Upon request	Upon request	P0K1.202.2L.B.010
Order code				010.02392
232	2.3 x 2 x 0.65 / 1.3	Upon request	Upon request	P0K1.232.2L.B.050
Order code				010.00966
232	2.3 x 2 x 0.65 / 1.3	Upon request	Upon request	P0K1.232.2L.B.100
Order code				010.00609
232	2.3 x 2 x 0.65 / 1.3	Upon request	Upon request	P0K1.232.2L.B.150
Order code				010.00574
232	2.3 x 2 x 0.65 / 1.3	Upon request	Upon request	P0K1.232.2L.B.1500
Order code				010.02115



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Size	Dimensions (L x W x H / H2 in mm) L ±0.2 mm, W ±0.2 mm, H ±0.1 mm, H2 ±0.3 mm	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
Nominal resistance: 100 Ω at 0 °C				
520	5 x 2 x 0.65 / 1.3	Upon request	P0K1.520.2L.A.100	P0K1.520.2L.B.100
Order code			010.02802	010.02803
520	5 x 2 x 0.65 / 1.3	Upon request	Upon request	P0K1.520.2L.B.250
Order code				010.01116
Nominal resistance: 1000 Ω at 0 °C				
232	2.3 x 2 x 0.65 / 1.3	Upon request	Upon request	P1K0.232.2L.B.150
Order code				010.00408
232	2.3 x 2 x 0.65 / 1.3	Upon request	Upon request	P1K0.232.2L.B.200
Order code				010.01884
102	10 x 2 x 0.65 / 1.3	Upon request	Upon request	P1K0.102.2L.B.270
Order code				010.00655

Order Information - 2W (Ag-wire, Ø 0.25 mm, metalized backside)

Size	Dimensions (L x W x H / H2 in mm) L ±0.2 mm, W ±0.2 mm, H ±0.1 mm, H2 ±0.3 mm	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
Nominal resistance: 100 Ω at 0 °C				
232	2.3 x 2 x 0.65 / 1.3	Upon request	P0K1.232.2W.A.010.M	P0K1.232.2W.B.010.M
Order code			010.01684	010.00661
Nominal resistance: 1000 Ω at 0 °C				
232	2.3 x 2 x 0.65 / 1.3	Upon request	Upon request	P1K0.232.2W.B.010.M
Order code				010.02768

Additional Documents

Application Note:	Document name: ATP_E
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Order Information

Platinum sensor

Secondary reference



INNOVATIVE SENSOR TECHNOLOGY

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 = 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

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. 2 W. A. 010. M



INNOVATIVE SENSOR TECHNOLOGY

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