



# 200 °C Series

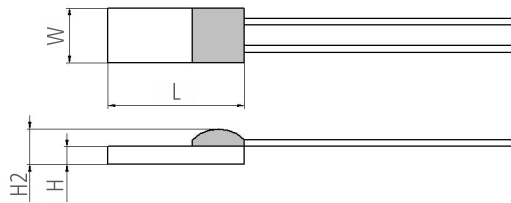
## Platinum sensor with wires

### For low temperatures

#### Benefits & Characteristics

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

#### Illustration<sup>1)</sup>



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, metallized backside	
Alternative wire construction:*	Inverted wires	
	Extended wires	
Recommended applied current: <sup>1)</sup>	1 mA at 100 Ω	
	0.5 mA at 500 Ω	
	0.3 mA at 1000 Ω	

<sup>1)</sup> Self-heating must be considered



Other alternatives:*	Metallized backside Housed in round ceramics (for dry environments only) Grouped and paired Substrate thickness
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\* 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)
Nominal resistance: 100 Ω at 0 °C				
232	2.3 x 2.0 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 2.0 x 0.65 / 1.3	Upon request	P0K1.232.2I.A.050	P0K1.232.2I.B.050
Order code			010.02487	010.00678
420	4.0 x 2.0 x 0.65 / 1.3	Upon request	Upon request	P0K1.420.2I.B.015
Order code				010.03022
516	5.0 x 1.6 x 0.65 / 1.3	Upon request	Upon request	P0K1.516.2I.B.030
Order code				010.00508
520	5.0 x 2.0 x 0.65 / 1.3	Upon request	Upon request	P0K1.520.2I.B.100
Order code				010.00110
538	5.0 x 3.8 x 0.65 / 1.3	Upon request	Upon request	P0K1.538.2I.B.060
Order code				010.00527
102	10.0 x 2.0 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	5.0 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	5.0 x 1.6 x 0.65 / 1.3	Upon request	Upon request	P0K5.516.2I.B.080
Order code				010.02278
538	5.0 x 3.8 x 0.65 / 1.3	Upon request	Upon request	P0K5.538.2I.B.035
Order code				010.00200
102	10.0 x 2.0 x 0.65 / 1.3	Upon request	Upon request	P0K5.102.2I.B.070
Order code				010.00210



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				
202	1.8 x 2.0 x 0.65 / 1.0	Upon request	Upon request	P1K0.202.2I.B.100
Order code				010.03229
202	1.8 x 2.0 x 0.65 / 1.0	Upon request	P1K0.202.2I.A.150	P1K0.202.2I.B.150
Order code			010.03162	010.03163
232	2.3 x 2.0 x 0.65 / 1.3	Upon request	Upon request	P1K0.232.2I.B.015
Order code				010.01691
232	2.3 x 2.0 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 2.0 x 0.65 / 1.3	Upon request	Upon request	P1K0.232.2I.B.080
Order code				010.02888
520	5.0 x 2.0 x 0.65 / 1.3	Upon request	P1K0.520.2I.A.050	P1K0.520.2I.B.050
Order code			010.00566	010.00565
102	10.0 x 2.0 x 0.65 / 1.3	Upon request	Upon request	P1K0.102.2I.B.045
Order code				010.00699
102	10.0 x 2.0 x 0.65 / 1.3	Upon request	Upon request	P1K0.102.2I.B.120
Order code				010.02810

### Order Information - 2I (Cu/Ag-wire, AWG32, 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)
Nominal resistance: 100 Ω at 0 °C				
161	1.6 x 1.2 x 0.25 / 0.6	Upon request	Upon request	POK1.161.2I.B.050
Order code				010.02677
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



### Order Information - 2L (Cu/Ag-stranded wire, AWG28/7, 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)
Nominal resistance: 100 Ω at 0 °C				
202	2.0 x 2.0 x 0.65 / 1.3	Upon request	Upon request	P0K1.202.2L.B.010
Order code				010.02392
232	2.3 x 2.0 x 0.65 / 1.3	Upon request	Upon request	P0K1.232.2L.B.050
Order code				010.00966
232	2.3 x 2.0 x 0.65 / 1.3	Upon request	Upon request	P0K1.232.2L.B.100
Order code				010.00609
232	2.3 x 2.0 x 0.65 / 1.3	Upon request	Upon request	P0K1.232.2L.B.150
Order code				010.00574
232	2.3 x 2.0 x 0.65 / 1.3	Upon request	Upon request	P0K1.232.2L.B.1500
Order code				010.02115
520	5.0 x 2.0 x 0.65 / 1.3	Upon request	P0K1.520.2L.A.100	P0K1.520.2L.B.100
Order code			010.02802	010.02803
520	5.0 x 2.0 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 2.0 x 0.65 / 1.3	Upon request	Upon request	P1K0.232.2L.B.150
Order code				010.00408
232	2.3 x 2.0 x 0.65 / 1.3	Upon request	Upon request	P1K0.232.2L.B.200
Order code				010.01884
102	10.0 x 2.0 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, metallized 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 2.0 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 2.0 x 0.65 / 1.3	Upon request	Upon request	P1K0.232.2W.B.010.M
Order code				010.02768



## Additional Documents

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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 $\Omega$ 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



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