



300 °C Series

Platinum sensor with wires

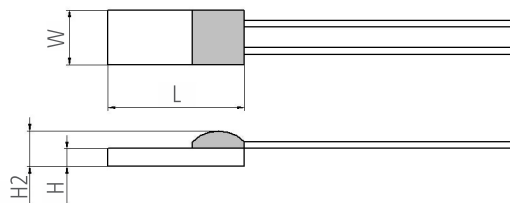
For low to medium temperatures

2) ESD-optimized

Benefits & characteristics

- Excellent long-term stability
- Low self-heating
- Optimal price/performance ratio
- Perpendicular wires available
- Au coated Ni-wire available
- Metallized backside available
- Customer-specific sensor available upon request

Illustration ¹⁾



1) For actual size, see dimensions in order information

Dimensions	L x W x H / H2 in mm
Dimension tolerance	L ±0.2 mm, W ±0.2 mm, H ±0.1 mm, H2 ±0.3 mm

Technical data

Operating temperature range:	-200 °C to +300 °C	
Nominal resistance:*	100 Ω at 0 °C 500 Ω at 0 °C 1'000 Ω at 0 °C 2'000 Ω at 0 °C 5'000 Ω at 0 °C 10'000 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:*	Ni-wire Au-coated, Ø 0.2 mm	



Ni-flat-wire Au-coated, 0.2 x 0.4 mm (HxW)
(solderable, weldable, crimpable)

Ag-wire, Ø 0.25 mm

Ni-wire, Ø 0.2 mm

Alternative wire construction:*	Inverted wires Perpendicular wires
Recommended applied current: ¹⁾ <i>¹⁾ Self-heating must be considered</i>	1 mA at 100 Ω 0.5 mA at 500 Ω 0.3 mA at 1000 Ω 0.2 mA at 2000 Ω 0.14 mA at 5000 Ω 0.1 mA at 10'000 Ω
Design:	ESD-optimized ²⁾
Other alternatives:*	Metallized backside Housed in round ceramics (for dry environments only) Grouped and paired Substrate thickness

* Customer-specific alternatives available

Order information

Size	Dimensions (L x W x H / H2 in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
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3W (Ni-wire Au-coated, Ø 0.2 mm / Ø 0.15 mm (308))

Nominal resistance: 100 Ω at 0 °C

202	2 x 2 x 0.65 / 1.3	Upon request	P0K1.202.3W.A.010	P0K1.202.3W.B.010
Order code ²⁾			155548	155549
Former order code			101156	101155
202	2 x 2 x 0.65 / 1.3	Upon request	P0K1.202.3K.A.015	P0K1.202.3K.B.015
Order code			101250	101243
216	2.5 x 1.6 x 0.65 / 1.3	P0K1.216.3K.Y.010	P0K1.216.3K.A.010	P0K1.216.3K.B.010
Order code		101209	101210	101211
308	3 x 0.8 x 0.25 / 0.6	Upon request	P0K1.308.3K.A.007	P0K1.308.3K.B.007
Order code			101941	101942
520	5 x 2 x 0.65 / 1.3	Upon request	P0K1.520.3K.A.010	P0K1.520.3K.B.010
Order code			101239	101240
102	10 x 2 x 0.65 / 1.3	Upon request	P0K1.102.3K.A.010	P0K1.102.3K.B.010
Order code			101242	101241

²⁾ ESD-optimized



Size	Dimensions (L x W x H / H2 in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
Nominal resistance: 500 Ω at 0 °C				
202	2 x 2 x 0.65 / 1.3	Upon request	P0K5.202.3K.A.015	P0K5.202.3K.B.015
Order code			101173	101174
Nominal resistance: 1000 Ω at 0 °C				
161	1.6 x 1.2 x 0.25 / 0.6	Upon request	P1K0.161.3K.A.020	P1K0.161.3K.B.020
Order code			Upon request	Upon request
202	2 x 2 x 0.65 / 1.3	P1K0.202.3W.Y.010	P1K0.202.3W.A.010	P1K0.202.3W.B.010
Order code ²⁾		156194	155750	155528
<i>Former order code</i>		<i>101469</i>	<i>101189</i>	<i>101116</i>

2) ESD-optimized

3FW (Ni-flat wire Au-coated, 0.2 x 0.4 mm (HxW))

Nominal resistance: 100 Ω at 0 °C				
202	1,8 x 2 x 0.65 / 1.1	P0K1.202.3FW.Y.007	P0K1.202.3FW.A.007	P0K1.202.3FW.B.007
Order code ²⁾		155742	155761	155743
<i>Former order code</i>		<i>100953</i>	<i>100878</i>	<i>100850</i>
202	2 x 2 x 0.65 / 1.1		P0K1.202.3FW.A.010	P0K1.202.3FW.B.010
Order code			101084	100997
232	2.3 x 2 x 0.65 / 1.3	P0K1.232.3FW.Y.007	P0K1.232.3FW.A.007	P0K1.232.3FW.B.007
Order code		100593	100631	100592

2) ESD-optimized

Nominal resistance: 500 Ω at 0 °C				
202	2 x 2 x 0.65 / 1.1	Upon request	P0K5.202.3FW.A.007	P0K5.202.3FW.B.007
Order code			101040	100990
232	2.3 x 2 x 0.65 / 1.3	P0K5.232.3FW.Y.007	P0K5.232.3FW.A.007	P0K5.232.3FW.B.007
Order code		100714	100715	100716

Nominal resistance: 1000 Ω at 0 °C				
202	2 x 2 x 0.65 / 1.1	P1K0.202.3FW.Y.007	P1K0.202.3FW.A.007	P1K0.202.3FW.B.007
Order code ²⁾		155752	155751	155041
<i>Former order code</i>		<i>101004</i>	<i>100884</i>	<i>100849</i>
202	2 x 2 x 0.65 / 1.1	Upon request	P1K0.202.3FW.A.010	P1K0.202.3FW.B.010
Order code			101577	101007
212	2 x 1.2 x 0.25 / 0.6	Upon request	Upon request	P1K0.212.3FK.B.007.T.S
Order code				Upon request
232	2.3 x 2 x 0.65 / 1.3	P1K0.232.3FW.Y.007	P1K0.232.3FW.A.007	P1K0.232.3FW.B.007
Order code		100595	100786	100594

2) ESD-optimized



Size	Dimensions (L x W x H / H2 in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
Nominal resistance: 2000 Ω at 0 °C				
232	2.3 x 2 x 0.65 / 1.3	Upon request	Upon request	P2K0.232.3FW.B.007
Order code				100924

3FW (Ni-flat wire Au-coated, 0.2 x 0.3 mm (HxW))

Nominal resistance: 1000 Ω at 0 °C				
216	2 x 1.6 x 0.65 / 1.3	P1K0.216.3FW.Y.007	P1K0.216.3FW.A.007	P1K0.216.3FW.B.007
Order code		101169	101018	100847

3FW (Ni-flat wire Au-coated, 0.2 x 0.4 mm, on thin substrate (thickness: 0.4 mm))

Nominal resistance: 5000 Ω at 0 °C				
520	5 x 2 x 1.05	Upon request	Upon request	P5K0.520.3FW.B.007.D
Order code				101290

Nominal resistance: 10000 Ω at 0 °C				
520	5 x 2 x 0.4 / 1.05	Upon request	Upon request	P10K.520.3FW.B.010.D
Order code				100718

3FK (Ni-flat wire Au coated, one lead on each side of the element)

Nominal resistance: 1000 Ω at 0 °C				
212	2 x 1.2 x 0.25 / 0.75	Upon request	Upon request	P1K0.212.3FK.B.007.T.S
Order code				150541

3SK (Ag-wire, Ø 0.25 mm, perpendicular wire, metallized backside)

Nominal resistance: 100 Ω at 0 °C				
161	1.6 x 1.2 x 0.25 / 0.85	Upon request	P0K1.161.3SK.A.010.M	P0K1.161.3SK.B.010.M
Order code			100623	100627
232	2.3 x 2 x 0.65 / 1.3	Upon request	Upon request	P0K1.232.3SK.B.010.M
Order code				100509

Nominal resistance: 1000 Ω at 0 °C				
232	2.3 x 2 x 0.65 / 1.3	Upon request	Upon request	P1K0.232.3SK.B.015.M
Order code				100457



Size	Dimensions (L x W x H / H2 in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
3W (Ni-wire, Ø 0.2 mm / Ø 0.15 mm (308))				
Nominal resistance: 100 Ω at 0 °C				
202	2 x 2 x 0.65 / 1.3		P0K1.202.3W.A.010	P0K1.202.3W.B.010
Order code			101104	101101
Nominal resistance: 1000 Ω at 0 °C				
202	2 x 2 x 0.65 / 1.3	Upon request	P1K0.202.3W.A.007	P1K0.202.3W.B.007
Order code			101088	101038
308	3 x 0.8 x 0.25 / 0.6	Upon request	P1K0.308.3W.A.025	P1K0.308.3W.B.025
Order code			104055	104059

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 = 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. 3 FW. A. 010. U



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