



300 °C Series

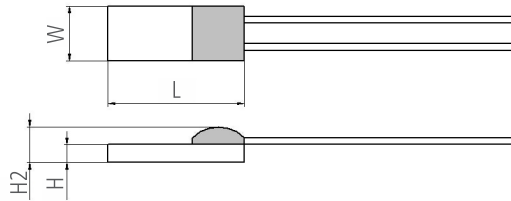
Platinum sensor with wires

For low to medium temperatures

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

Illustration¹⁾



1) For actual size, see dimensions

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⁾	1 mA at 100 Ω
¹⁾ Self-heating must be considered	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
Other alternatives:*	Metallized backside
	Housed in round ceramics (for dry environments only)
	Grouped and paired
	Substrate thickness

* Customer-specific alternatives available

Order Information - 3K (Ni-wire Au-coated, Ø 0.2 mm / Ø 0.15 mm (308))

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 x 2 x 0.65 / 1.3	Upon request	P0K1.202.3K.A.010	P0K1.202.3K.B.010
Order code			101156	101155
Former order code			010.02600	010.02599
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
Former order code			010.02754	010.02742
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
Former order code		010.02688	010.02689	010.02690
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
Former order code			010.03604	010.03605
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
Former order code			010.02737	010.02738
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
Former order code			010.02740	010.02739
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
Former order code			010.02631	010.02632



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: 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
Former order code			310.00599	310.00607
202	2 x 2 x 0.65 / 1.3	P1K0.202.3K.Y.010	P1K0.202.3K.A.010	P1K0.202.3K.B.010
Order code		101469	101189	101116
Former order code		010.03063	010.02659	010.02534

Order Information - 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		100953	100878	100850
Former order code		010.02207	010.02035	010.01983
202	2 x 2 x 0.65 / 1.1		P0K1.202.3FW.A.010	P0K1.202.3FW.B.010
Order code			101084	100997
Former order code		Upon request	010.02474	010.02292
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
Former order code		010.01119	010.01182	010.01118

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
Former order code			010.02389	010.02282
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
Former order code		010.01655	010.01656	010.01657

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		101004	100884	100849
Former order code		010.02310	010.02049	010.01982
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
Former order code			010.03195	010.02323
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
Former order code				310.01061



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)
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
Former order code		010.01121	010.01827	010.01120

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
Former order code				010.02140

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

Nominal resistance: 1000 Ω at 0 °C

161	1.6 x 1.2 x 0.25 / 0.6	Upon request	P1K0.161.3FW.A.010	P1K0.161.3FW.B.010
Order code			104056	104049
Former order code			310.00231	310.00128

Order Information - 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
Former order code		010.02623	010.02340	010.01978

Order Information - 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
Former order code				010.02817

Nominal resistance: 10'000 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
Former order code				010.01669



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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Order Information - 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
Former order code				310.01945

Order Information - 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
Former order code			010.01164	010.01176
232	2.3 x 2 x 0.65 / 1.3	Upon request	Upon request	P0K1.232.3SK.B.010.M
Order code				100509
Former order code				010.00948

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
Former order code				010.00716

Order Information - 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
Former order code			010.02509	010.02505

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
Former order code			010.02482	010.02385
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
Former order code			310.00228	310.00243



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 = 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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