Innovative Sensor Technology

physical. chemical. biological.

200 °C Series

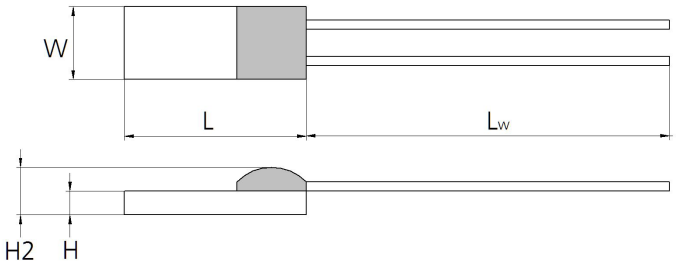
Platinum sensor with wires

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[1)]



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:[1)]	1 mA at 100 Ω	
1) Self-heating must be considered	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

* 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			101317	100894
Former 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			101092	100443
Former 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				101435
Former 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				100384
Former 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				100173
Former 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				100389
Former 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				100742
Former 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				100531
Former 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				100987
Former order code				*010.02278*

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)
538	5.0 x 3.8 x 0.65 / 1.3	Upon request	Upon request	P0K5.538.2I.B.035
Order code				100236
Former 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				100241
Former order code				*010.00210*
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				101611
Former 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			101544	101545
Former 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				100731
Former 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		101085	101225	100958
Former 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				101342
Former 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			100392	100391
Former 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				100453
Former 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				101286
Former order code				*010.02810*

Order Information - 2I (Cu/Ag-wire, AWG32, PTFE-insulated)

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				101200
Former order code				*010.02677*

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				101199
Former 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			101302	100959
Former order code			010.02833	010.02226

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

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				101043
Former 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				100522
Former 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				100405
Former 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				100394
Former 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				100914
Former 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
			Upon request	101284
Former 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				100590
Former 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				100346
Former order code				*010.00408*

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 2.0 x 0.65 / 1.3	Upon request	Upon request	P1K0.232.2L.B.200
Order code				100810
Former 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				100431
Former order code				*010.00655*

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

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			100727	100434
Former 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				101261
Former order code				*010.02768*

Additional Documents

	Document name:
Application Note:	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 0K1. 232. 2 W. A. 010. M

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