



# 200 °C Series

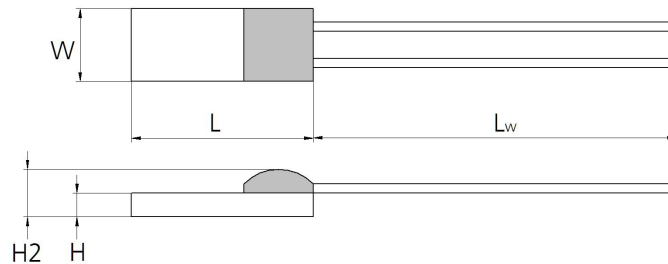
## Platinum sensor with wires

### 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>



<sup>1)</sup> 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	
	Cu/Ag wire, AWG30, PTFE insulated, insulation, wire ends stripped	
	Cu/Ag wire, AWG34, PTFE insulated black	
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)
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**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 Order code <i>Former order code</i>	5.0 x 3.8 x 0.65 / 1.3	Upon request	Upon request	P0K5.538.2I.B.035 100236 <i>010.00200</i>
102 Order code <i>Former order code</i>	10.0 x 2.0 x 0.65 / 1.3	Upon request	Upon request	P0K5.102.2I.B.070 100241 <i>010.00210</i>

**Nominal resistance: 1000 Ω at 0 °C**

202 Order code <i>Former order code</i>	1.8 x 2.0 x 0.65 / 1.0	Upon request	Upon request	P1K0.202.2I.B.100 101611 <i>010.03229</i>
202 Order code <i>Former order code</i>	1.8 x 2.0 x 0.65 / 1.0	Upon request	P1K0.202.2I.A.150 101544 <i>010.03162</i>	P1K0.202.2I.B.150 101545 <i>010.03163</i>
232 Order code <i>Former order code</i>	2.3 x 2.0 x 0.65 / 1.3	Upon request	Upon request	P1K0.232.2I.B.015 100731 <i>010.01691</i>
232 Order code <i>Former order code</i>	2.3 x 2.0 x 0.65 / 1.3	P1K0.232.2I.Y.150 101085 <i>010.02475</i>	P1K0.232.2I.A.050 101225 <i>010.02712</i>	P1K0.232.2I.B.050 100958 <i>010.02225</i>
232 Order code <i>Former order code</i>	2.3 x 2.0 x 0.65 / 1.3	Upon request	Upon request	P1K0.232.2I.B.080 101342 <i>010.02888</i>
520 Order code <i>Former order code</i>	5.0 x 2.0 x 0.65 / 1.3	Upon request	P1K0.520.2I.A.050 100392 <i>010.00566</i>	P1K0.520.2I.B.050 100391 <i>010.00565</i>
102 Order code <i>Former order code</i>	10.0 x 2.0 x 0.65 / 1.3	Upon request	Upon request	P1K0.102.2I.B.045 100453 <i>010.00699</i>
102 Order code <i>Former order code</i>	10.0 x 2.0 x 0.65 / 1.3	Upon request	Upon request	P1K0.102.2I.B.120 101286 <i>010.02810</i>

Order Information - 2I (Cu/Ag-wire, AWG30, PTFE-insulated, green, insulation strength: 250 V, wire ends 3 mm stripped)

**Nominal resistance: 1000 Ω**

520 Order code	5.0 x 2.0 x 0.63 / 1.3	Upon request	P1K0.520.2I.A.030.S Upon request	P1K0.520.2I.B.030.S 155098
520 Order code <i>Former order code</i>	5.0 x 2.0 x 0.63 / 1.3	Upon request	P1K0.520.2I.A.050.S 100526 <i>010.00976</i>	P1K0.520.2I.B.050.S 100520 <i>010.00964</i>



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)
520	5.0 x 2.0 x 0.63 / 1.3	Upon request	P1K0.520.2I.A.075.S	P1K0.520.2I.B.075.S
Order code			Upon request	155099
520	5.0 x 2.0 x 0.63 / 1.3	Upon request	P1K0.520.2I.A.085.S	P1K0.520.2I.B.085.S
Order code			100539	100826
Former order code			010.00998	010.01929
520	5.0 x 2.0 x 0.63 / 1.3	Upon request	P1K0.520.2I.A.090.S	P1K0.520.2I.B.090.S
Order code			Upon request	155100
520	5.0 x 2.0 x 0.63 / 1.3	Upon request	Upon request	P1K0.520.2I.B.110.S
Order code				155101
520	5.0 x 2.0 x 0.63 / 1.3	Upon request	P1K0.520.2I.A.145.S	P1K0.520.2I.B.145.S
Order code			100530	100600
Former order code			010.00694	010.01130
520	5.0 x 2.0 x 0.63 / 1.3	Upon request	P1K0.520.2I.A.160.S	P1K0.520.2I.B.160.S
Order code			Upon request	155102
520	5.0 x 2.0 x 0.63 / 1.3	Upon request	P1K0.520.2I.A.195.S	P1K0.520.2I.B.195.S
Order code			100450	100751
Former order code			010.00696	010.00662
520	5.0 x 2.0 x 0.63 / 1.3	Upon request	P1K0.520.2I.A.230.S	P1K0.520.2I.B.230.S
Order code			Upon request	155103
520	5.0 x 2.0 x 0.63 / 1.3	Upon request	P1K0.520.2I.A.295.S	P1K0.520.2I.B.295.S
Order code			100540	100562
Former order code			010.00999	010.01038
520	5.0 x 2.0 x 0.63 / 1.3	Upon request	P1K0.520.2I.A.340.S	P1K0.520.2I.B.340.S
Order code			Upon request	155104

### 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

#### 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 - 2I (Cu/Ag-wire, AWG34, PTFE-insulated black)

#### Nominal resistance: 100 Ω at 0 °C

308	3.0 x 0.8 x 0.6 mm	Upon request	P0K1.308.2I.A.100	P0K1.308.2I.B.100
Order code			152468	152469

#### Nominal resistance: 1000 Ω at 0 °C

308	3.0 x 0.8 x 0.6 mm	Upon request	P1K0.308.2I.A.100	P1K0.308.2I.B.100
Order code			152464	152466
308	3.0 x 0.8 x 0.6 mm	Upon request	P1K0.308.2I.A.135	P1K0.308.2I.B.135
Order code			154175	154200

### Order Information - 2I (Cu/Ag-wire, AWG34, PTFE-insulated black, ends 29.5 mm stripped)

#### Nominal resistance: 1000 Ω at 0 °C

308	3.0 x 0.8 x 1 mm	Upon request	P1K0.308.2I.A.060.S	P1K0.308.2I.B.060.S
Order code			153804	153785

### 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
Order code			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



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)
<b>Nominal resistance: 1000 Ω at 0 °C</b>				
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
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)\*

<b>Nominal resistance: 100 Ω at 0 °C</b>				
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

<b>Nominal resistance: 1000 Ω at 0 °C</b>				
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

**\*operating Temperature range: -200 °C to +200 °C**

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 $\Omega$ 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



Innovative Sensor Technology IST AG, Stegrütistrasse 14, 9642 Ebnat-Kappel, Switzerland  
Phone: +41 71 992 01 00 | Fax: +41 71 992 01 99 | Email: info@ist-ag.com | www.ist-ag.com

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