



# 600 °C Series

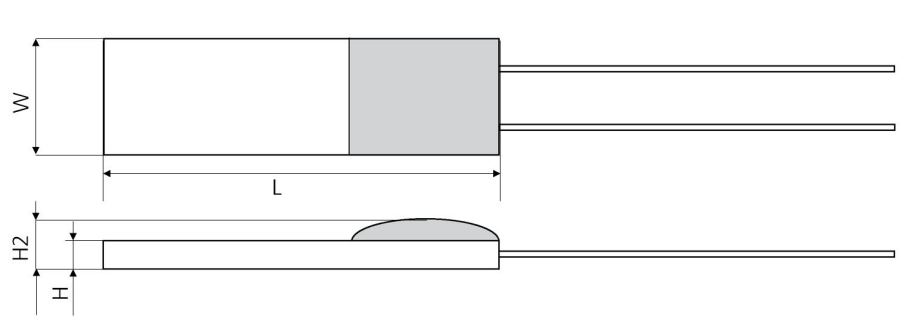
## Platinum sensor with wires

### For high temperatures

### Benefits & characteristics

- Excellent long-term stability
- Low self-heating
- Fast response time
- Small dimensions
- Vibration and temperature shock resistant
- Paired sensors available
- 1/5 IEC and 1/10 IEC available
- Customer-specific sensor available upon request

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



Dimension tolerances:  $W \pm 0.2 \text{ mm}$ ,  $L \pm 0.2 \text{ mm}$ ,  $H \pm 0.1 \text{ mm}$ ,  $H2 \pm 0.3 \text{ mm}$ ,  $L_w \text{ (up to 30 mm)} \pm 1 \text{ mm}$

1) For actual size, see dimensions in order information

### Technical data

Operating temperature range:	-200 °C to +600 °C
Nominal resistance:*	100 Ω at 0 °C 500 Ω at 0 °C 1000 Ω at 0 °C 2000 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: \* Pt-cladded Ni-wire, Ø 0.2 mm (solderable, weldable, crimpable, brazeable)



2) Design:	ESD-optimized
Alternative wire construction:*	Inverted wires
Recommended applied current: <sup>3)</sup>	1 mA at 100 Ω
<i><sup>3)</sup> Self-heating must be considered</i>	0.5 mA at 500 Ω
	0.3 mA at 1000 Ω
	0.2 mA at 2000 Ω
Other alternatives:*	Housed in round ceramics (for dry environments only) - see data sheet DTP_Round_Housing_E
	Grouped and paired
* Customer-specific alternatives available	Substrate thickness

## Order information

### 6W (Pt-cladded Ni-wire, Ø 0.2 mm)

Size	Dimensions (L x W x H / H2; L <sub>w</sub> in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
<b>Nominal resistance: 100 Ω at 0 °C</b>				
161	1.6 x 1.2 x 0.25 / 0.6; 7.0	POK1.161.6W.Y.007	POK1.161.6W.A.007	POK1.161.6W.B.007
Order code		101371	100945	100946
161	1.6 x 1.2 x 0.25 / 0.6; 10.0	POK1.161.6W.Y.010	POK1.161.6W.A.010	POK1.161.6W.B.010
Order code <sup>2)</sup>		155582	154366	154367
Former order code		100139	100138	100137
202	1.8 x 2.0 x 0.65 / 1.1; 7.0	POK1.202.6W.Y.007	POK1.202.6W.A.007	POK1.202.6W.B.007
Order code <sup>2)</sup>		153442	153741	153742
Former order code			100870	100871
202	1.8 x 2.0 x 0.65 / 1.1; 10.0	POK1.202.6W.Y.010	POK1.202.6W.A.010	POK1.202.6W.B.010
Order code <sup>2)</sup>		155762	155763	155764
Former order code		100908	100876	100877
216	2.5 x 1.6 x 0.65 / 1.3; 7.0	POK1.216.6W.Y.007	POK1.216.6W.A.007	POK1.216.6W.B.007
Order code		101401	100589	100599
216	2.5 x 1.6 x 0.65 / 1.3; 10.0	POK1.216.6W.Y.010	POK1.216.6W.A.010	POK1.216.6W.B.010
Order code		100429	100414	100419
232	2.2 x 2.0 x 0.65 / 1.1; 7.0	POK1.232.6W.Y.007	POK1.232.6W.A.007	POK1.232.6W.B.007
Order code		100579	100767	100544
232	2.2 x 2.0 x 0.65 / 1.1; 10.0	POK1.232.6W.Y.010	POK1.232.6W.A.010	POK1.232.6W.B.010
Order code <sup>2)</sup>		154005	154004	154000
Former order code		100118	100117	100116
232	2.2 x 2.0 x 0.65 / 1.1; 20.0	POK1.232.6W.Y.020	POK1.232.6W.A.020	POK1.232.6W.B.020
Order code		101357	101356	100875
516	5.0 x 1.6 x 0.65 / 1.3; 7.0	Upon request	POK1.516.6W.A.007	POK1.516.6W.B.007
Order code			100835	100836

<sup>2)</sup> ESD optimized



Size	Dimensions (L x W x H / H2; L <sub>w</sub> in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
516	5.0 x 1.6 x 0.65 / 1.3; 10.0	P0K1.516.6W.Y.010	P0K1.516.6W.A.010	P0K1.516.6W.B.010
Order code		100148	100147	100146
520	5.0 x 2.0 x 0.65 / 1.3; 10.0	P0K1.520.6W.Y.010	P0K1.520.6W.A.010	P0K1.520.6W.B.010
Order code		100165	100163	100162
538	5.0 x 3.8 x 0.65 / 1.3; 10.0	Upon request	P0K1.538.6W.A.010	P0K1.538.6W.B.010
Order code			100785	100541
102	10.0 x 2.0 x 0.65 / 1.3; 10.0	P0K1.102.6W.Y.010	P0K1.102.6W.A.010	P0K1.102.6W.B.010
Order code		100202	100201	100200

**Nominal resistance: 500 Ω at 0 °C**

161	1.6 x 1.2 x 0.25 / 0.6; 10.0	P0K5.161.6W.Y.010	P0K5.161.6W.A.010	P0K5.161.6W.B.010
Order code		100219	100218	100217
202	1.8 x 2.0 x 0.65 / 1.1; 7.0	Upon request	Upon request	P0K5.202.6W.B.007
Order code				101108
232	2.2 x 2.0 x 0.65 / 1.1; 10.0	P0K5.232.6W.Y.010	P0K5.232.6W.A.010	P0K5.232.6W.B.010
Order code		100223	100222	100221
516	5.0 x 1.6 x 0.65 / 1.3; 10.0	P0K5.516.6W.Y.010	P0K5.516.6W.A.010	P0K5.516.6W.B.010
Order code		100229	100228	100227
520	5.0 x 2.0 x 0.65 / 1.3; 10.0	P0K5.520.6W.Y.010	P0K5.520.6W.A.010	P0K5.520.6W.B.010
Order code		100235	100234	100233
102	10.0 x 2.0 x 0.65 / 1.3; 10.0	Upon request	P0K5.102.6W.A.010	P0K5.102.6W.B.010
Order code			100238	100237

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

161	1.6 x 1.2 x 0.25 / 0.6; 10.0	P1K0.161.6W.Y.010	P1K0.161.6W.A.010	P1K0.161.6W.B.010
Order code		100247	100246	100245
202	1.8 x 2.0 x 0.65 / 1.1; 7.0	P1K0.202.6W.Y.007	P1K0.202.6W.A.007	P1K0.202.6W.B.007
Order code <sup>2)</sup>		155770	154721	155771
Former order code		152582	100963	100972
202	1.8 x 2.0 x 0.65 / 1.1; 10.0	P1K0.202.6W.Y.010	P1K0.202.6W.A.010	P1K0.202.6W.B.010
Order code <sup>2)</sup>		155774	155773	155772
Former order code			100896	100897
216	2.5 x 1.6 x 0.65 / 1.3; 10.0	P1K0.216.6W.Y.010	P1K0.216.6W.A.010	P1K0.216.6W.B.010
Order code		101042	100588	100552
232	2.2 x 2.0 x 0.65 / 1.1; 7.0	P1K0.232.6W.Y.007	P1K0.232.6W.A.007	P1K0.232.6W.B.007
Order code		100545	100830	100546
232	2.2 x 2.0 x 0.65 / 1.1; 10.0	P1K0.232.6W.Y.010	P1K0.232.6W.A.010	P1K0.232.6W.B.010
Order code <sup>2)</sup>		153765	153766	153768
Former order code		100257	100256	100255
232	2.2 x 2.0 x 0.65/1.1; 20.0	Upon request	P1K0.232.6W.A.020	P1K0.232.6W.B.020
Order code			151322	100550

<sup>2)</sup> ESD optimized



Size	Dimensions (L x W x H / H2; L <sub>w</sub> in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
420	4.0 x 2.0 x 0.65 / 1.3; 7.0	Upon request	P1K0.420.6W.A.007	P1K0.420.6W.B.007
Order code			101077	101093
420	4.0 x 2.0 x 0.65 / 1.3; 10.0	Upon request	P1K0.420.6W.A.010	P1K0.420.6W.B.010
Order code			101288	101129
505	5.0 x 5.0 x 0.65 / 1.3; 10.0	Upon request	Upon request	P1K0.505.6W.B.010
Order code				101208
516	5.0 x 1.6 x 0.65 / 1.3; 7.0	Upon request	P1K0.516.6W.A.007	P1K0.516.6W.B.007
Order code			100828	100829
516	5.0 x 1.6 x 0.65 / 1.3; 10.0	P1K0.516.6W.Y.010	P1K0.516.6W.A.010	P1K0.516.6W.B.010
Order code		100270	100269	100268
520	5.0 x 2.0 x 0.65 / 1.3; 10.0	P1K0.520.6W.Y.010	P1K0.520.6W.A.010	P1K0.520.6W.B.010
Order code <sup>2)</sup>		156115	156116	156117
Former order code		100287	100285	100284
538	5.0 x 3.8 x 0.65 / 1.3; 10.0	Upon request	Upon request	P1K0.538.6W.B.010
Order code				100336
102	10.0 x 2.0 x 0.65 / 1.3; 7.0	Upon request	Upon request	P1K0.102.6W.B.007
Order code				100474
102	10.0 x 2.0 x 0.65 / 1.3; 10.0	P1K0.102.6W.Y.010	P1K0.102.6W.A.010	P1K0.102.6W.B.010
Order code		100308	100473	100307

2) ESD optimized

**Nominal resistance: 2000 Ω at 0 °C**

520	5.0 x 2.0 x 0.65 / 1.3; 10.0	Upon request	Upon request	P2K0.520.6W.B.010
Order code				100322

**6W (Pt-cladded Ni-wire, Ø 0.2 mm), packaged in full blister of 500 pcs**

**Nominal resistance: 100 Ω at 0 °C**

202	1.8 x 2.0 x 0.65 / 1.1; 7.0	Upon request	Upon request	P0K1.202.6W.B.007.S
Order code <sup>2)</sup>				155716
Former order code				151430

2) ESD optimized

**6W (Pt/Ni-wire, Ø 0.2 mm, 10 mm long, bent 90°), inverted wires**

**Nominal resistance: 100 Ω at 0 °C**

232	2.3 x 2 x 1.1		P0K1.232.6W.A.010.U.S	P0K1.232.6W.B.010.U.S
Order code			101143	100975



Size	Dimensions (L x W x H / H2; L <sub>w</sub> in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
<b>PU (TCR = 3750 ppm/K)</b>				

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

232	2.2 x 2.0 x 0.65 / 1.1; 10.0	Upon request	Upon request	PU1K0.232.6W.B.010
Order code				100260

**6W (Pt-cladded Ni-wire, Ø 0.2 mm), D (substrate thickness, 0.4 mm)**

**Nominal resistance: 100 Ω at 0 °C**

232	2.3 x 2.0 x 0.4 / 1.05; 10.0	Upon request	P0K1.232.6W.A.010.D	P0K1.232.6W.B.010.D
Order code			100463	100462
516	5.0 x 1.6 x 0.4 / 1.05; 10.0	Upon request	P0K1.516.6W.A.010.D	P0K1.516.6W.B.010.D
Order code			100334	100333
520	5.0 x 2.0 x 0.4 / 1.05; 10.0	Upon request	P0K1.520.6W.A.010.D	P0K1.520.6W.B.010.D
Order code			100169	100167
102	10.0 x 2.0 x 0.4 / 1.05; 10.0	Upon request	P0K1.102.6W.A.010.D	P0K1.102.6W.B.010.D
Order code			100855	100337

**Nominal resistance: 1000Ω at 0 °C**

516	5.0 x 1.6 x 0.4 / 1.05; 10.0	P1K0.516.6W.Y.010.D	P1K0.516.6W.A.010.D	P1K0.516.6W.B.010.D
Order code		100340	100442	100339
102	10.0 x 2.0 x 0.4 / 1.05; 10.0	Upon request	P1K0.102.6W.A.010.D	P1K0.102.6W.B.010.D
Order code			100310	100309
232	2.3 x 2.0 x 0.4 / 1.05; 10.0	Upon request	Upon request	P0K1.232.6W.B.010.D.S
Order code <sup>2)</sup>				154038
Former order code				152297

<sup>2)</sup> ESD optimized

**6W (Pt-cladded Ni-wire, Ø 0.2 mm), T (substrate thickness, 0.25 mm)**

**Nominal resistance: 100 Ω at 0 °C**

232	2.3 x 2.0 x 0.25 / 0.9; 10.0	P0K1.232.6W.Y.010.T	P0K1.232.6W.A.010.T	P0K1.232.6W.B.010.T
Order code		100121	100120	100119
516	5.0 x 1.6 x 0.25 / 0.9; 10.0	Upon request	P0K1.516.6W.A.010.T	P0K1.516.6W.B.010.T
Order code			100150	100149
520	5.0 x 2.0 x 0.4 / 1.05; 10.0	Upon request	Upon request	P0K1.520.6W.B.010.T
Order code				100166

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

232	2.3 x 2.0 x 0.25 / 0.9; 7.0	Upon request	P1K0.232.6W.A.007.T	P1K0.232.6W.B.007.T
Order code			101593	101586



Size	Dimensions (L x W x H / H2; L <sub>w</sub> in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
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**7W<sup>3)</sup> (Pt-wire, Ø 0.2 mm), D (substrate thickness, 0.4 mm)**

**Nominal resistance: 200 Ω at 0 °C**

516	5.0 x 1.6 x 0.4 / 1.05; 7.0	Upon request	P0K2.516.7W.A.007.D	P0K2.516.7W.B.007.D
Order code			150635	100880

<sup>3)</sup> Operating temperature range of -200 °C to +600 °C

**7W<sup>3)</sup> (Pt-wire, Ø 0.2 mm, (161) (232) (520) / Ø 0.15 mm (308))**

**Nominal resistance: 200 Ω at 0 °C**

161	1.6 x 1.2 x 0.25 / 0.6; 10.0	Upon request	P0K1.161.7W.A.010	P0K1.161.7W.B.010
Order code			100465	100446
232	2.3 x 2.0 x 0.65 / 1.3; 10.0	P0K1.232.7W.Y.010	P0K1.232.7W.A.010	P0K1.232.7W.B.010
Order code		100895	100511	100341
308	3.0 x 0.8 x 0.25 / 0.6; 7.0	P0K1.308.7W.Y.007	P0K1.308.7W.A.007	P0K1.308.7W.B.007
Order code		100561	100537	100538
520	5.0 x 2.0 x 0.65 / 1.3; 10.0	Upon request	P0K1.520.7W.A.010	P0K1.520.7W.B.010
Order code				100170

**7W<sup>4)</sup> (Pt-wire, Ø 0.15 mm)**

Size	Dimensions (L x W x H / H2; L <sub>w</sub> in mm)	1/10 F0.3 (class K) <sup>5)</sup>
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**Nominal resistance: 100 Ω at 0 °C**

308	3.0 x 0.8 x 0.25 / 0.6; 7.0	P0K1.308.7W.K.007
Order code		100969

<sup>4)</sup> Operating temperature range of -200 °C to +600 °C

<sup>5)</sup> 1/10 IEC 60751 in the range of +15 °C to +35 °C

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

161	1.6 x 1.2 x 0.25 / 0.6; 7.0	Upon request	P1K0.161.7W.A.007	P1K0.161.7W.B.007
Order code			101114	101115
161	1.6 x 1.2 x 0.25 / 0.6; 10.0	Upon request	P1K0.161.7W.A.010	P1K0.161.7W.B.010
Order code			100757	100759
232	2.3 x 2.0 x 0.65 / 1.3; 10.0	Upon request	P1K0.232.7W.A.010	P1K0.232.7W.B.010
Order code			100766	100258
308	3.0 x 0.8 x 0.25 / 0.6; 7.0	P1K0.308.7W.Y.007	P1K0.308.7W.A.007	P1K0.308.7W.B.007
Order code		100725	100514	100432

<sup>3)</sup> Operating temperature range of -200 °C to +600 °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

#### Connection

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.    520.    6    W.    A.    007.    D



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